

THE TWO FACES OF CHAMPIONSHIP: AN EXAMINATION OF THE  
BEHAVIORAL AND INDIVIDUAL-DIFFERENCES CHARACTERISTICS OF  
THE CHAMPION

by

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## ABSTRACT

The purpose of the present research was to examine the behavioral and individual-differences characteristics of a key figure in the innovation process—the *champion*. The champion, also known as corporate entrepreneur (Kanter, 1982), and intrapreneur (Pinchot, 1985) is an individual who emerges informally in an organization to introduce and promote innovation. These individuals have been described as forceful, driven, energetic, and visionary and have been found to be critical players in the success of organizational innovation.

The majority of research on the champion has not, however, been conducted with a focus on this key figure. Rather, the emphasis of much of the previous research has typically been on the *process* of innovation, with the champion acknowledged and discussed, but not featured or described in detail. Given the importance of the champion in promoting innovation, it would be desirable to conduct research in which this figure was the focus of attention. The three studies carried out as part of this research project were designed with this purpose in mind. Methods of individual-differences assessment were applied to the study of the champion.

The present research began with a study of the champion's behavior. Techniques from the act frequency approach (Buss & Craik, 1980) were used to develop a comprehensive behavioral profile of the champion in order to establish a structural model of championship. Acts describing championship were generated by panels of middle- and senior-level managers and these items were factor analyzed separately in two samples, involving over 600 managers from seven Western Canadian organizations. Ultimately, 10 first- and two second-order factors were identified and named by subject matter experts. Evidence was found for a *heroic* and a *dark* side to championship at the second-order factor level.

In Study 2, the focus turned to predictor measurement. Supervisory ratings of championship on the criterion dimensions identified in Study 1 were obtained for 174 middle- and senior-level managers. These same managers had been participants in a three-day Assessment Center in which they were administered: (a) cognitive ability tests, (b) personality inventories, (c) management simulations, and (d) a structured interview. Correlations computed between the Assessment Center measures, on the one hand, and the criterion dimensions on the other, led to the conclusion that the dark side of championship could be predicted, but that, unfortunately, the heroic side could not. On the basis of the Assessment Center scale correlations with the dark side, the champion was found to be: dominant, assertive, exhibitionistic, aggressive, independent, competitive, driven, impulsive, impatient, and likely to break rules and take risks.

The results of Study 3 led to the development of a low-fidelity simulation, based on the behavioral consistency model (Wernimont & Campbell, 1968). This simulation, called the *Management Practices Simulation* (MPS), was administered to the Assessment Center participants involved in Study 2 and scores on the MPS were correlated with scores on the criterion dimensions from Study 1. Two higher-order MPS scales were found to correlate significantly with the two second-order criterion factor scales identified in Study 1. Moreover, the criterion-related validity of these scales surpassed that achieved with any component of the Assessment Center.

The results of Studies 1, 2, and 3 indicate that championship is a multi-dimensional construct that, at a higher-order level, can be described with reference to two orthogonal dimensions, labeled the *dark* and *heroic* side. Individuals can be ordered along a continuum on these dimensions and this scaling reflects meaningful differences in behavior. Psychological tests can be used to predict ratings of championship, at least those associated with the dark side. Finally, application of the behavioral consistency model to the development of a low-fidelity simulation, led to the creation of a new



instrument—the *Management Practices Simulation*—whose scales correlated significantly and at a slightly higher-level with the criterion than any of the Assessment Center battery scales.

## TABLE OF CONTENTS

ABSTRACT .....	ii
LIST OF TABLES.....	xix
LIST OF FIGURES .....	xxiii
ACKNOWLEDGMENT .....	xxiv
INTRODUCTION .....	1
Overview .....	1
Objectives of The Present Research .....	5
LITERATURE REVIEW .....	7
I. An Historical Sketch of the Study of Innovation and Entrepreneurship.....	7
Entrepreneurship .....	8
Corporate Entrepreneurship.....	8
Innovation.....	9
Summary .....	10
II. Evidence For the Role of the Champion in Innovation Success .....	10
Overview.....	10
Descriptive Studies.....	11
Empirical Studies .....	12
III. Toward a Definition and Understanding of the Champion Role.....	15
Overview.....	15
The Champion Role Defined .....	17
Elements of the Definition .....	17
Champions, Innovators, Entrepreneurs, Corporate Entrepreneurs, and Intrapreneurs .....	22
A Two-Dimensional Conceptualization of the Champion Role.....	23
Summary .....	25
IV. Champions of Innovation: Their Individual-Differences Characteristics .....	26

Overview .....	26
Personality/Motivational Traits .....	28
Interpersonal Effectiveness .....	28
Components of Interpersonal Effectiveness .....	30
Interpersonal Influence .....	30
Interpersonal Awareness .....	31
Summary .....	31
Determined Achievement Orientation.....	32
Openness/ Willingness to Change.....	33
From Personality to Ability .....	34
Cognitive Ability .....	34
Innovative Idea Generator .....	35
Analytical Evaluative Ability .....	35
Effective Communication Skills .....	36
Summary .....	36
RATIONALE AND HYPOTHESES .....	38
Section I: Evaluation of Research on the Role of the Champion and Development of Hypotheses Related to Criterion Measurement.....	38
Limitations of Past Research .....	38
Hypotheses.....	39
Hypothesis 1 .....	39
Hypothesis 2.....	40
Section II: Implications of Research on the Individual-Differences Characteristics of the Champion and Development of Hypotheses Related to Predictor Measurement .....	40
Limitations of Past Research .....	40
Hypotheses.....	42

Personality/Motivational Characteristics .....	42
Interpersonal effectiveness.....	42
Determined achievement orientation .....	42
Openness/willingness to change .....	43
Cognitive Abilities .....	43
Innovativeness.....	43
Analytical evaluative ability .....	43
Effective communication skills.....	44
Summary .....	44
<b>STUDY 1: THE STRUCTURE OF CHAMPIONSHIP AND THE</b>	
<b>DEVELOPMENT OF CHAMPION CRITERION SCALES .....</b>	<b>46</b>
Overview and Rationale for Methods .....	46
Hypotheses .....	49
Hypothesis 1 .....	49
Hypothesis 2 .....	49
Hypothesis 3 .....	50
Hypothesis 4 .....	50
Phase I: The Generation of Champion Acts .....	50
Method .....	50
Participants .....	50
Developmental Steps .....	51
Step 1 .....	51
Step 2 .....	53
Step 3 .....	53
Results.....	53
Phase II: The Scaling of the Acts for Social Desirability.....	54
Overview.....	54

Method .....	54
Participants .....	54
Design of the Questionnaire .....	55
Calculation of Item Social Desirability .....	55
Results.....	55
Phase III: Sample 1 Factor Analysis With Self-Report Data .....	55
Overview .....	55
Method .....	56
Participants and Data Collection .....	56
Data Analysis .....	57
Structural analysis .....	58
Scale development .....	58
Results.....	59
The Component Solution .....	59
The Development of Preliminary Championship Scales.....	61
Social desirability and the balancing of champion and non-	
champion items .....	62
Scale reliability .....	64
Phase IV: Sample 2 Factor Analysis With Supervisory Report Data and the	
Application of Meredith's (1964) Method One Procedure in the Derivation of a	
Common Factor Pattern .....	65
Overview .....	65
Method .....	65
Participants .....	65
The Rating Form .....	66
Distribution of The Rating Form.....	68
Data Analysis .....	68

First-order factor structure .....	69
First-order factor congruence .....	70
Scale development .....	70
Second-order factor structure .....	72
Results .....	72
First-Order Factor Congruence .....	72
The First-Order Championship Factor Scales .....	75
Scale social desirability .....	75
Scale internal consistency reliability .....	77
Second-Order Factors of Championship .....	77
Second-order factor congruence .....	81
Summary .....	81
Phase V: Conceptualization of the Factor Structure of Championship .....	83
Overview .....	83
Method .....	84
Participants .....	84
Data Analysis .....	86
Factor labels .....	86
Prototypicality of the factors .....	86
Criterion measurement of championship .....	86
Overall management performance (OMP) .....	87
Results .....	87
Labels for the First-Order Factor Scales of Championship .....	87
Persistent Dominance (PD) .....	88
Impatient Expediency (IE) .....	92
Rebellious Drive (RD) .....	93
Self Promotion (SP) .....	94

Confrontive Candor (CC) .....	95
Influence and Political Savvy (IPS) .....	95
Driven Commitment (DC) .....	96
Immediate Responsiveness (IR) .....	97
Collaboration and Support (CS).....	97
Visibility and Growth Seeking (VGS).....	98
Labels for The Two Second-Order Factor Scales of	
Championship.....	99
Forceful Drive and Expediency (FDE) .....	100
Influence and Visible Drive (IVD).....	100
Prototypicality of the First- and Second-Order Factor Scales .....	102
Correlates of the Dimensions of Championship.....	105
The 3-item and 5-item self-report measures of	
championship .....	105
The championship factor scales and overall management	
performance (OMP) .....	107
Discussion.....	108
Overview .....	108
A Two-Factor Conceptualization of Championship .....	112
Agency and communion .....	112
A Closer look at Forceful Drive and Expediency .....	116
The dark side of leadership .....	116
Narcissism and Forceful Drive and Expediency .....	119
Psychopathy and Forceful Drive and Expediency .....	121
Summary .....	123
A closer look at Influence and Visible Drive.....	123

The relationship between transformational leadership and IVD.....	125
Summary .....	127
The Prototypicality of The First- and Second-Order Factor Scales.....	127
Correlates of Championship.....	129
The 5-item supervisory-report criterion measure of championship and the factor scales .....	129
OMP and the factor scales .....	130
Summary.....	132
<b>STUDY 2: AN EXAMINATION OF THE INDIVIDUAL-DIFFERENCES</b>	
<b>CHARACTERISTICS OF THE CHAMPION .....</b>	<b>133</b>
Overview .....	133
Hypotheses .....	135
Method .....	135
Participants and Setting .....	135
The Assessment Center Measures .....	135
Cognitive Ability (Intellectual Measures) .....	135
Personality Inventories and Measures of Temperament.....	141
Management Simulations: In-Basket Exercises .....	142
The Telephone Supervisor In-Basket Exercise (TSIB).....	142
The Consolidated Fund In-Basket Test.....	142
Management Simulations: Role-plays.....	142
The Employee Performance Role-play .....	143
Industrial Relations Role-play.....	143
The Marketing Role-play .....	143
The New Manager Role-play .....	144



Summary Role-play Dimension Scores .....	144
Structured Interview .....	144
Biographical Information Form.....	145
Criterion Measurement .....	145
Data Analysis .....	145
Correlational Analyses Involving the AC Measures and the Championship Criteria .....	145
Contrasted Groups Analyses Involving the AC Battery Scales and the Championship Criteria.....	146
Analysis of the biographical information forms .....	148
Inter-rater agreement.....	149
Category frequency counts.....	150
A Case Study Analysis of Championship.....	151
Results .....	152
The Criterion Rating Scales .....	152
Correlational Analyses: Predictor-Criterion Correlations.....	154
Cognitive Ability .....	154
Measures of Personality and Temperament.....	156
California Psychological Inventory (CPI).....	156
The 16 Personality Factor Questionnaire (16PF).....	159
The Personality Research Form (PRF) .....	161
Rahim Organizational Conflict Inventory (ROCI-II).....	163
Jenkins Activity Survey .....	165
Management Simulations: In-Basket Exercises .....	166
The Consolidated Fund In-Basket Test.....	166
The Telephone Supervisor In-Basket Exercise (TSIB).....	166
Management Simulations: The Role Plays.....	166

The Structured Interview .....	169
Summary.....	171
Correlational Analyses: Criterion Correlations of Optimal Linear	
Combinations of AC Battery Scales .....	172
Regression Analyses Involving The CPI Scales.....	173
Regression Analyses Involving The 16PF Scales .....	173
Regression Analyses Involving The PRF Scales.....	173
Regression Analyses Involving The JAS Scales .....	177
Regression Analyses Involving The Role play Scales.....	177
Regression Analyses Involving The Interview Scales.....	177
Regression Analyses Involving The CPI, 16PF, PRF, and	
JAS Scales .....	181
Stepwise results for FDE .....	181
Stepwise results for IVD .....	183
Summary .....	183
A Contrasted Groups Analysis.....	183
A Discriminant Analysis For FDE .....	184
Conceptualization of the discriminant function.....	184
Classification based on the discriminant function .....	188
A Championship Profile Based on the Biodata Form .....	190
Inter-rater agreement.....	190
Category proportion comparisons .....	190
Question 6. What is your own approach to supervision, i.e.,	
your management style?.....	192
Question 12. How do your leisure and social activities relate	
to your career?.....	195

Question 13. What are your most outstanding personal qualities? .....	196
Question 14b. What are your shortcomings; your areas for development? .....	196
Summary.....	197
The Two Cases .....	197
The case of Mr. A: high FDE.....	197
The case of Mr. W: low FDE.....	201
Summary .....	203
Discussion.....	204
Overview .....	204
Correlational Findings .....	205
Cognitive ability.....	209
Personality.....	210
Management simulations .....	211
Structured interview .....	213
Regression Analyses.....	214
Contrasted Groups Analysis .....	216
The Case Studies .....	218
Overall Summary.....	218
<b>STUDY 3: DEVELOPMENT AND VALIDATION OF A LOW-FIDELITY SIMULATION .....</b>	<b>220</b>
An Overview of The Behavioral Consistency Model.....	220
Work Samples and Simulations .....	221
Low-Fidelity Simulations.....	225
An Overview of the Development of the Management Practices Simulation (MPS) .....	226

Method .....	229
Participants and Setting .....	229
Development of the Management Practices Simulation .....	230
Scripting of the scenarios .....	230
Generating the initial pool of response options .....	231
Fitting the response options to the scenarios .....	231
Drafting of instructions .....	232
Pilot testing the simulation .....	232
Rating of the MPS response options for social desirability ....	233
Distribution of the MPS to the assessment center participants .....	233
The Criterion Measure .....	234
Data Analysis .....	234
Scale Development .....	234
Examination of Primary and Secondary Scale Construct Validity ..	235
Results .....	236
Psychometric Properties of the Primary and Secondary MPS Scales .....	236
Social Desirability .....	238
Internal Consistency Reliability .....	239
MPS Scale-Criterion Correlations .....	239
Incremental Validity of the MPS Scales .....	241
Construct Validity of the MPS .....	244
Substantive Considerations .....	245
Structural Considerations .....	246
Inter-item structure .....	246
Structural Fidelity .....	247
External Considerations .....	250

A multitrait-multimethod examination of championship .....	250
Cross-correlations between the MPS scales and scales from the AC battery .....	255
The MPS primary scales .....	261
The MPS measure of Forceful Drive and Expediency .....	263
The MPS measure of Influence and Visible Drive .....	265
Summary and Discussion .....	269
Overview .....	269
The Meaning of High Scores on the Management Practices Simulation .....	270
The Predictive Usefulness of the Management Practices Simulation .....	272
Low-Fidelity Simulations as Measures of Multi-Dimensional Constructs .....	275
Application of the Management Practices Simulation .....	276
SUMMARY AND CONCLUSIONS .....	279
Study 1 .....	279
Replication of the Factor Structure of Championship .....	281
Validation of the Criterion Dimensions .....	282
Championship and Psychopathy .....	283
Study 2 .....	284
Individual-Differences Characteristics and The Two Faces of Championship .....	286
Study 3 .....	287
The Criterion-Related Validity of the Management Practices Simulation .....	288
Construct Validity of the Management Practices Simulation .....	289

Innovations in Low-Fidelity Simulation Design .....	290
An Overall Summary and Synthesis of the Three Studies .....	291
Implications for Application and Theory .....	293
REFERENCES .....	297
APPENDICES .....	314
Appendix A Booklets Used In First Two Panels To Generate The Behavioral Incidents or Acts.....	314
Appendix B Booklets Used In The Third Panel To Generate The Behavioral Incidents or Acts.....	320
Appendix C List of Edited Non-Redundant Behavioral Incidents, Organized Into Four Groups: (a) Champion Undesirable, (b) Champion, (c) Non-Champion, and (d) Non-Champion Desirable.....	326
Appendix D Booklets Used To Obtain Social Desirability Ratings.....	339
Appendix E Booklets Used To Obtain Self-Report Data For the First Factor Analysis .....	355
Appendix F Company and Participant Feedback Reports .....	370
Appendix G Scale Composition at the Conclusion of Phase III.....	390
Appendix H BCTel Company Feedback Report .....	401
Appendix I Booklet Used to Obtain Supervisory-Report Data For the Second Factor Analysis.....	413
Appendix J The Twelve Dimensions and Their Items Used to Measure Overall Management Performance (OMP).....	423
Appendix K Scale Composition at the Conclusion of Phase IV .....	426
Appendix L The Rating Booklet Used to Obtain the Factor Labels and Prototypicality Ratings from the Subject Matter Experts .....	432

Appendix M	The 5-item and 4-item Criterion Measures of Championship .....	448
Appendix N	The Scoring Form for the Biographical Information Form.....	449
Appendix O	Sample Feedback Report for the Management Practices Simulation .....	454
Appendix P	Form B of the Management Practices Simulation Used to Obtain the Item Social Desirability Means .....	462
Appendix Q	The Management Practices Simulation.....	474
Appendix R	Item Content of the Primary and Secondary Scales of the Management Practices Simulation.....	487
Appendix S	Cross-Correlations Between the Assessment Center Battery Scales and The Primary and Secondary Scales From the Management Practices Simulation.....	493

## LIST OF TABLES

Table 1	Champion, Corporate Entrepreneur, and Intrapreneur Definitions.....	18
Table 2	Dimensions of Championship.....	24
Table 3	Logically-Derived Trait Dimensions of the Champion .....	27
Table 4	Psychometric Properties of the Preliminary Championship Scales at the Conclusion of Phase III.....	63
Table 5	Congruence Coefficients Among The Three Pattern Matrices For The Eleven First-Order Factor Scales.....	74
Table 6	Psychometric Properties of the Final First-Order Factor Scales.....	76
Table 7	Primary Common-Factor Pattern Matrices for the Aggregated and Separate Samples and the Related Primary-Factor Correlation Matrices for the Second-Order Factors (Decimal Points Omitted) .....	80
Table 8	Congruence Coefficients Among the Three Pattern Matrices For the Two Second-Order Factor Scales .....	82
Table 9	The Subject Matter Experts .....	85
Table 10	A Listing and Description of the First-Order Factor Scales .....	89
Table 11	Meredith's Common Factor Pattern and a Synthesis of the Labels Generated By the Raters.....	101
Table 12	Mean Prototypicality Ratings For the Factor Scales, Listed in Descending Order .....	103
Table 13	Bivariate Correlations Between the 3-item and 5-item Champion- ship Criteria (3CC and 5CC), the Overall Management Performance (OMP) and the Championship Factor Scales .....	106
Table 14	A Summary of Hypotheses on the Individual-Differences Characteristics of the Champion.....	136
Table 15	Measures Used in the Assessment Center (AC) Battery .....	138



Table 16	Descriptive Statistics for the Championship Criterion Scales .....	153
Table 17	Correlations Between the Scales From the Cognitive Ability Tests and the 13 Championship Criteria (Decimal Points are Omitted) and Scale Descriptive Statistics.....	155
Table 18	Correlations Between the CPI Scales and the 13 Championship Criteria (Decimal Points are Omitted) and Scale Descriptive Statistics....	157
Table 19	Correlations Between the 16PF Scales and the 13 Championship Criteria (Decimal Points are Omitted) and Scale Descriptive Statistics....	160
Table 20	Correlations Between the PRF Scales and the 13 Championship Criteria (Decimal Points are Omitted) and Scale Descriptive Statistics .....	162
Table 21	Correlations Between the Rahim Organizational Conflict Inventory (ROCI-II) and the Jenkins Activity Survey (JAS) Scales and the 13 Championship Criteria (Decimal Points are Omitted) and Scale Descriptive Statistics.....	164
Table 22	Correlations Between Scales From The Two In-Basket Exercises and the 13 Championship Criteria (Decimal Points are Omitted) and Scale Descriptive Statistics.....	167
Table 23	Correlations Between the Role-play Scales and the 13 Championship Criteria (Decimal Points are Omitted) and Scale Descriptive Statistics .....	168
Table 24	Correlations Between the Interview Scales and the 13 Championship Criteria (Decimal Points are Omitted) and Scale Descriptive Statistics .....	170
Table 25	Multiple Regression Analyses Involving the CPI: Optimal Variable Sets .....	174
Table 26	Multiple Regression Analyses Involving the 16PF: Optimal Variable Sets .....	175

Table 27	Multiple Regression Analyses Involving the PRF: Optimal Variable Sets .....	176
Table 28	Multiple Regression Analyses Involving the JAS: Optimal Variable Sets .....	178
Table 29	Multiple Regression Analyses Involving the Role-play: Optimal Variable Sets .....	179
Table 30	Multiple Regression Analyses Involving the Interview: Optimal Variable Sets .....	180
Table 31	Multiple Regression Analyses Involving the CPI, 16PF, PRF, and JAS Scales: Optimal Variable Sets .....	182
Table 32	Results of the Discriminant Analysis For FDE.....	185
Table 33	Classification Results From the Discriminant Analysis of FDE .....	189
Table 34	Results of The Inter-Rater Agreement Analysis Based on Flanders' $\pi$ .....	191
Table 35	Results From the Analysis of the Biodata Form.....	193
Table 36	Psychometric Properties of the Primary and Secondary MPS Scale .....	237
Table 37	Multiple Regression Analyses Involving the CPI, 16PF, PRF, and MPS Secondary Scales: Incremental Validity.....	242
Table 38	Two-Factor Exploratory and Oblique Procrustes Solutions for The MPS.....	249
Table 39	A MultiTrait-Multimethod Matrix For The MPS Primary Scales and The First-order Factor Criterion Scales .....	252
Table 40	A MultiTrait-Multimethod Matrix Analysis of The MPS Secondary Scales and The Second-order Factor Criterion Scales.....	254
Table 41	A Comparison of Correlates For the MPS Primary Scales and the First-Order Criterion Factor Scales.....	256

<b>Table 42</b>	<b>A Comparison of Correlates For the MPS Secondary Scales</b>	
	<b>and the Second-Order Criterion Factor Scales.....</b>	<b>259</b>

**LIST OF FIGURES**

<b>Figure 1</b>	<b>Management Simulations in the Larger Context of Work Samples .....</b>	<b>222</b>
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## INTRODUCTION

The purpose of the present research, outlined in three studies, is to further our understanding of a central figure in the innovation process—the *champion*. Although champions have been found to be critical players in the success of organizational innovation (e.g., Rothwell, Freeman, Horlsey, Jervis, Robertson, & Townsend, 1974), their characteristics have not been carefully studied. Past research on the champion has been primarily anecdotal and descriptive (e.g., Delbecq & Mills, 1985; Schon, 1963), based on researchers' general impressions of the champion's personality traits and, to a lesser extent, abilities. As well, the reports have been generally "glowing" with little mention of undesirable traits related to championship. With one recent exception (Howell & Higgins, 1990a), the characteristics of the champion have not been studied using well-established, reliable and valid methods of individual-differences assessment.

The present research builds on and tests the validity of the descriptive conclusions forwarded by organizational researchers over the past several years. A structural model of championship is developed in which champion *behavior* is featured. Next, the individual-differences characteristics of the champion are examined using well-established assessment instruments. Finally, the present research goes a step further by developing a simulation designed to measure behaviors specifically related to the role of the champion. Notwithstanding its contribution to theory-building on championship, this research is of relevance to organizations wishing to develop methods of identifying, selecting, placing, and developing champions, initiatives that could result in substantial utility for organizations seeking to improve their competitiveness through the promotion of innovation (Schuler, 1986).

### *Overview*

The topics of corporate entrepreneurship and innovation have enjoyed ever-increasing attention in the management literature. Rogers (1983) noted that over 3,000 articles on innovation had been published at that time. The recent surge in interest, noted

by Frost and Egri (1991), likely means that this number has increased substantially. Popular business writers like Kanter (1989) and Pinchot (1985) have joined the fray as well, predicting that innovation and entrepreneurship are the new competitive strategies of the 1990's and beyond.

Why has the topic of innovation—at the core of corporate entrepreneurship (e.g., Burgelman, 1984)—enjoyed such popularity in the organizational behavior literature? Briefly, it is because innovation has been linked to a whole host of positive organizational outcomes, like productivity, growth, and survival (e.g., Morgan, 1988; Nayak & Ketteringham, 1986; Peters & Waterman, 1982; Pettigrew, 1985; Zaltman, Duncan, and Holbek, 1973). Although some have noted a pro-innovation bias<sup>1</sup> in innovation research (e.g., Frost & Egri, 1991; Rogers, 1983), the majority of studies have pointed to the desirability of innovation in fostering organizational productivity.

Given its importance, organizational researchers have attempted to develop models of organizational innovation. Toward this objective, many have investigated the role of *organizational* variables (e.g., formalization and specialization) in the implementation and adoption of innovation. The disappointing consensus opinion has been that findings are unstable across studies (Damanpour, 1987; Downs & Mohr, 1976). The field has coped with this instability by proposing sub theories of innovation. Thus the following distinctions have been made: (a) administrative vs. technical innovation (Ettlie, Bridges, & O'Keefe, 1984), (b) radical vs. incremental innovation (Nord & Tucker, 1987), and (c) stage of adoption (Zmud, 1982).

In a recent meta-analysis, Damanpour (1991) challenged the validity of these sub theories. His findings revealed the consistent importance of, among other things, high internal and external communication (exchange of ideas), team and interdepartmental exchange, decentralization of decision making, and the presence of a managerial staff

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<sup>1</sup> Rogers (1983) defined a pro-innovation bias as follows: "...the implication of most diffusion research that an innovation should be diffused and adopted by all members of a social system..." (p. 92).

supportive of change. In their review, Frost and Egri (1991) made similar observations, stressing the importance of enhanced communication within organic structures in the context of an organizational culture that supports innovation and risk taking.

The role of key individuals in the innovation process has also been studied (e.g., Smith, McKeon, Hoy, Boysen, Shechter, & Roberts, 1984), although less frequently. In one of the most exhaustive and extensive comparative studies of innovation success and failure (Project SAPPHO<sup>2</sup>), Achilladelis, Jervis, and Robertson (1971) and Rothwell et al. (1974) reported that key individuals (i.e., sponsors, champions) were central to innovation success. Freeman (1982) noted that key individuals and accurate communication were more important for success than organizational structure or process variables. More than any other key individual, the champion has emerged as a central figure in the innovation process (Schon, 1963; Galbraith, 1982). His/her presence has been linked to innovation success in a number of studies (e.g., Burgelman, 1983; Ettlie et al., 1984).

The champion, also referred to as *corporate entrepreneur* (Kanter, 1982; Kierulff, 1979) and *intrapreneur* (Pinchot, 1985)<sup>3</sup> is the individual who emerges informally in an organization to introduce and promote an innovation (Schon, 1963). Schon, the first to identify the role of the champion in innovation success, noted that such individuals are needed to overcome the indifference and resistance that technological change provokes. He remarked that "...the new idea either finds a champion or dies" (p. 84).

Although the role of the champion in the innovation process has been identified and acknowledged, her/his characteristics—basic traits and skills—have been described, primarily, on the basis of researcher's general impressions, with one recent exception (Howell & Higgins, 1990a). What we currently know about the individual-differences characteristics of the champion is based, primarily, on descriptive reports of their

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<sup>2</sup> SAPPHO stands for Scientific Activity Predictor from Patterns with Heuristic Origins.

<sup>3</sup> Knight (1985) used all three terms interchangeably.



personality from either personal or second-hand observation. Although such qualitative and descriptive accounts provide great depth and richness of information, it is difficult to know, from such research, whether champions possess certain traits *more than* other managers. The methods and tools of psychological assessment have rarely been used in the study of this role. It seems likely that their use would aid greatly in the identification of champions and the description of their behavior and characteristics.

When we consider the importance of innovation for today's organizations and the established importance of the champion for innovation success, research aimed at developing a better understanding of: (a) the role of the champion, and (b) the individual-differences characteristics of individuals demonstrating championship, would have obvious relevance and importance. The development of assessment procedures to identify and predict individuals likely to emerge as champions would have particular importance and application in the areas of personnel selection, placement, and, potentially, training.

The potential for such an application has been noted in the past (Galbraith, 1982; Howell & Higgins, 1990b; Schuler, 1986), but work in pursuit of these objectives has not been reported, at least in the research literature. Galbraith noted, prematurely it seems, that the attributes of successful champions were known. He stated that "...the ability of the innovating organization to generate new business ideas can be increased by systematically developing and selecting those people who are better at innovating than others." (p. 21). Howell and Higgins (1990b) remarked that "...individuals who have champion potential can be identified through validated personality and leadership measures or by observing behavior in interviews or assessment centers. Management could use the results of such assessment to select individuals with the requisite qualities for undertaking innovation." (p. 54).

### *Objectives of The Present Research*

The individual was the unit of analysis in the present research. Although organizational-level variables may be significantly related to aspects of innovation, the focus here was a psychological one. The role of the champion was featured. The purpose of this study was to develop assessment procedures to: (a) reliably identify individuals who behave as champions in the work setting, and (b) identify individual-differences characteristics predictive of champion behavior. These two purposes correspond to criterion and predictor measurement, respectively.

As a first step in developing a prediction system, a careful criterion analysis was performed. In past research on the champion, researchers have glossed over the issue of champion identification. Little information has been supplied on how these individuals behave; that is, how they act when they are carrying out their role as a champion. Past operational definitions have assumed a dichotomy: individuals have been classified as either champions or non-champions; no recognition of a middle ground—the notion of a continuum—has been considered. In the present research, dimensions of championship were identified and scaled as *continuous* variables.

Before adequate prediction of championship can be accomplished, more careful attention must be focused on the behavioral description of championship. It is time to "junk the criterion" (Dunnette, 1963) in research on the characteristics of the champion and instead explore the possibility that this role is likely multi-dimensional.

In summary, the main purposes of the present research were to:

1. Develop a comprehensive behavioral profile of the champion to be used to:
  - (a) establish a structural model of championship, and
  - (b) serve as criteria in the identification and validation of predictor measures.

2. Develop a comprehensive psychological profile of the champion in order to:
  - (a) test the validity of previous descriptive profiles of the champion, and
  - (b) assemble a reliable and valid battery of psychological tests for use in personnel selection and classification.
3. Develop and explore the reliability and validity of a behaviorally-based championship simulation.

In the next section, a review of research on the champion is provided. The purposes of this review are to: (a) give an historical overview of innovation research and, in the process, define key terms, (b) provide evidence to demonstrate the importance of the champion role in the innovation process, (c) define and describe the champion role, and (d) develop a psychological profile of the champion.

## LITERATURE REVIEW

Two central issues are addressed in the review. One, the role of the champion is examined in order to answer the question "what does the champion do?" A definition of the champion role is developed from previous researchers' descriptions. As well, a model of championship is proposed. Secondly, studies in which the traits and characteristics of the champion have been reported are reviewed. The outcome of this review is the organization of the champion's traits into logically-derived dimensions. This analysis, based primarily on anecdotal reports of champion traits, will serve as a tentative guide toward the generation of hypotheses relating to the individual-differences characteristics of the champion.

Before moving to the central themes of this literature review, two issues must first be addressed. First, a brief historical overview is provided in which key terms are defined. The study of innovation occurring in corporations (and the individuals who play key roles in innovation) can be traced to the earlier (largely econometric) literature on the small-business innovator—the entrepreneur. The relatively recent literature on corporate entrepreneurship and the intrapreneur is built on a foundation whose constructs and definitions were first articulated some 250 years ago. Next, a rationale for the study of the champion is given; evidence relating to the centrality of the champion role in innovation and his/her importance toward the success of the process is presented.

### I. An Historical Sketch of the Study of Innovation and Entrepreneurship

In the study of innovation, the following terms have often been used interchangeably: entrepreneurship, corporate entrepreneurship, and innovation. They do, however, have unique meanings which follow from their definitions as originally proposed.

### *Entrepreneurship*

Entrepreneurship was first conceived of and defined by theoretical economists. The first formal theory of entrepreneurship was forwarded by Richard Cantillon (Long, 1983) who saw entrepreneurship as self-employment of any and every kind. He defined entrepreneurship as an economic function which involved risk since goods were purchased at *certain* prices but sold at future *uncertain* prices. He described the entrepreneur as a rational decision maker who assumed risk and provided management for the firm (Kilby, 1971).

In contrast to Cantillon, Schumpeter (1934)—often referred to as the father of modern entrepreneurial thought—argued that risk taking was not necessarily a characteristic of the entrepreneur. He observed that, although risk taking may be inherent in ownership, not all entrepreneurs are owners. Instead, Schumpeter focused on innovation and initiative as central components of entrepreneurship. Distinct from speculators and inventors, entrepreneurs were seen by Schumpeter as creators of new business combinations.

### *Corporate Entrepreneurship*

Schumpeter (1934) recognized that innovation was not necessarily limited to the small business context. Conversely, all persons who own a small business are not necessarily entrepreneurial (Martin, 1982). More recently, large corporations have been described as engaging in entrepreneurial behavior; the notion of Corporate Entrepreneurship (CE) was born in the late 1970's and developed in the 1980's and 90's (e.g., Jennings & Lumpkin, 1989; Schollhammer, 1982).

Corporate entrepreneurship refers to the entrepreneurial activities of the *firm* that receive organizational sanction. It is conceived of as a multi-dimensional construct involving: (a) innovation, (b) risk taking, and (c) proactiveness *on the part of the firm* (Miller, 1983). These three dimensions are clearly not unique to the CE literature.

Instead, they are dimensions (most notably the first two) that overlap with those introduced in the context of small business entrepreneurship.

It has been argued that, at the core of corporate entrepreneurship is innovation. Burgelman (1984), who developed a model to explain the CE process, argued that the definition of CE parallels the Schumpeterian (1934) definition of individual entrepreneurship, the central component of which is innovation. Drucker (1985) described the process of innovation as central in both the corporate and small-business contexts. As well, Zahra (1986) summarized the various definitions of CE as revolving around: "entrepreneurial activities which receive organizational sanction and resource commitment for the purpose of *innovative* corporate endeavors" (p. 71).

### *Innovation*

Numerous definitions of innovation have been proposed. A sampling of four follow: (a) organizational innovation is the successful implementation of creative ideas within an organization; it can refer to ideas for new products, processes, services within the organization's line of business, or new policies or procedures within the organization itself (Amabile, 1988), (b) "...any idea, practice, or material artifact perceived to be new by the relevant unit of adoption" (Zaltman et al. 1973), (c) the "...creation of any product, service or process which is new to a business unit" (Tushman and Nadler, 1986, p. 75), and (d) "...a significant change within the organization or its line of services or products that (a) requires a substantial adjustment in functions and/or structures, and (b) is successfully introduced, decided upon, and incorporated into the organization" (Delbecq & Mills, 1985, p. 25). Synthesizing these definitions, the reader will note a common theme: a novel idea is proposed and application/implementation is attempted. Innovations may or may not be successful, in other words, developed through to commercialization.

### *Summary*

The distinction between entrepreneurship in the two contexts—small-business founder/owner and corporate-wide entrepreneurship—is clear. As well, the centrality of innovation to entrepreneurship, in either context, is well recognized. Definitions become less clear, however, when the focus shifts to the individuals involved in the processes of entrepreneurship and innovation—the key players. Some clarity can, however, be achieved by examining closely the terms used to describe the functions and roles of the champion/corporate entrepreneur/intrapreneur. This is done in Section III of the literature review. First, research on the importance of the role of the champion in innovation is reviewed.

## II. Evidence For the Role of the Champion in Innovation Success

### *Overview*

Innovation is a process involving many people at the various initiation and implementation stages. It is a process driven by economic, social, and political forces (Frost & Egri, 1991). It is not always rational, it unfolds over time, and typically fails (i.e., is not implemented through to commercialization). With a multitude of variables potentially influencing the success of a given organizational innovation, it is not surprising that one variable—the champion—cannot, alone, consistently account for the success or failure of a given innovation. It is, therefore, surprising to see the number of researchers who have found the champion to be an integral part of innovation success.

Recently, both Frost and Egri (1991) and Howell and Higgins (1990a) pointed to the importance of the champion as a critical factor related to innovation success. The following review documents efforts to identify and relate the role of the champion to innovation success. This review begins with the seminal work of Schon (1963) on military innovation and concludes with the work of Smith et al. (1984). The reader will

note that, in some cases, authors point out the importance of the champion in innovation success but fail to present data to support their claims (e.g., Schon). In other cases, more quantitative evidence is presented (e.g., Rothwell et al., 1974). Taken together, there is evidence for the importance of the champion in moving invention to application.

### *Descriptive Studies*

Evidence for the role of the champion in innovation success has been reported informally by a number of researchers. Schon (1963), who is generally credited with introducing the term *product champion*, reported the findings of 25 case studies of innovation in the military. He argued for the primary importance of the product champion in opposing organizational inertia and resistance to change. He stated: "where radical innovation is concerned, the emergence of a champion is required" (p.84). Langrish, Gibbons, Evans, and Jevons (1972), cited in Parker (1978), in a study of 84 British companies that had won the Queen's Award for Technological Innovation between 1966 and 1967, reported that the most important factor related to the successful management of innovation, across all industry types studied, was the champion.

Fernelius and Waldo (1980) studied 78 case histories of successful commercial industrial innovations. By analyzing the case histories to isolate the various organizational, technical, and economic factors associated with the innovation process, the authors were able to identify eighteen key factors. These were rank-ordered; the first and third most important factors were: (a) the recognition of a technical opportunity by an individual, and (b) the recognition of a market opportunity by an individual. Both of these functions are typically carried out by the project champion. Fernelius and Waldo concluded by pointing out that "...almost without exception, there was a project champion for the cases involved in this study...although the same person might not have been the champion in all phases of the innovation process, there was a champion at all times" (p. 39).



Daft and Bradshaw (1980), in a study of horizontal differentiation—the formation of new organizational departments in five universities (a form of administrative innovation)—identified *idea champions* as instrumental in the formation of new departments. An idea champion was identified in all but 2 of the 30 innovations. The authors concluded that "...without idea champions, few new departments would be formed" (p.450). The authors noted that the idea champions' role seemed similar to that of the entrepreneur: the idea champion provides energy to move the system to gain acceptance for a change.

Others have also noted the importance of the champion toward the success of organizational innovation (e.g., Burgelman, 1983; Curley & Gremillion, 1983; Galbraith, 1982; Quinn, 1979; Smith et al., 1984). Popular business writers have stressed that, for organizations to remain competitive, *all* employees must become champions: "...we need many more people to sign up for projects with much lower odds for success just to stay even. In short, we need impassioned champions by the thousands" (Peters, 1987, p. 248). Although Peters may be overstating the case, his message is one that places the responsibility for championship on the shoulders of *all* employees.

### *Empirical Studies*

The most compelling evidence for the importance of the champion would come from research in which successful and unsuccessful innovations were compared. Such studies avoid the potential methodological shortcomings of single-sample studies in which only successful innovations are considered. Ideally, such studies would also report data indicating differences between the two groups (successful and unsuccessful) on critical variables (i.e., the presence of champions); alternately, correlations between the number of champions and innovation success would also give evidence for the importance of the champion. With regard to the latter method, it would seem unlikely that the relationship between the number or presence of champions, on the one hand, and

a global, complex, organizational outcome like innovation, on the other, could be captured in the form of a linear relationship. Nevertheless, there is some evidence for such a relationship.

The most thorough and widely-cited study into the variables related to innovation success was carried out under the name of Project SAPPHO. Achilladelis et al. (1971) and Rothwell et al. (1974), in studies of product and process innovations in the chemical and instrument industries, made paired-comparisons of successful and unsuccessful commercial innovations. In Phase I of the study, Achilladelis et al. compared 29 pairs of successful and unsuccessful innovations. In Phase II, Rothwell et al. reported findings on a new sample of 43 pairs. Success in both studies was defined as an innovation which obtained a worthwhile market share and profit. The authors reported data on 122 independent variables in an attempt to discover key elements related to innovation success. Although in both studies the authors stressed that their results indicated that no single factor could, by itself, explain the success/failure of an innovation, one of the most important variables to emerge in the innovation process was the role played by key managers and technologists, especially the business innovator and the product champion.

In the first of the two Project SAPPHO studies, Achilladelis et al. (1971) reported that the business innovator—the individual actually responsible within the management structure for the overall progress of the project—was an important factor in the success of the innovation. Six characteristics of the business innovator were found to distinguish significantly successful from unsuccessful innovations. The authors included only one variable related to the product champion: "Can a single individual be regarded as the product champion?" The presence of a product champion was found to be related to success/failure of innovation only for the instruments industry. The presence of a product champion was particularly critical when s/he also played the role of the business innovator.

It was in Phase II of the SAPPHO project, that Rothwell et al. (1974) found

stronger evidence that product champions—the individuals who make decisive contributions to the innovation by actively and enthusiastically promoting its progress through critical stages—played a significant role in differentiating between successful and unsuccessful innovations. The presence of a product champion was judged to weigh in favor of success in 16 of the 43 innovations; in 22 of the innovations, their presence was found to be unrelated to success, while in 5 of the 43 innovations they were judged to be inversely related to success.

Rothwell et al. (1974) also reported a significant role for the business innovator: the individual responsible within the management structure for the overall progress of the project. The presence of a product champion who also played the role of business innovator was judged to weigh in favor of success in 15 of the 43 innovations; in 26 of the innovations, they were judged not to be related to success, while in only 1 of the 43 innovations were they judged to be inversely related to success. Interestingly, the authors found that "...neither the presence of a single, nor several, technical innovators (inventors) significantly distinguished between success and failure" (p. 279).

In summary, the Project SAPPHO findings lend partial support to the key individual—in this case, champion—explanation. The champion's presence cannot be used to explain *all* cases of innovation success or failure, however. Not surprisingly, Rothwell et al. (1974) found other variables to be important for success. Among them, the degree of communication—both internal and external—was significantly related to innovation success. This finding was echoed much later by Damanpour's (1991) meta-analysis (described earlier) in which he reported the consistent importance of, among other things, high internal and external communication. An open exchange of ideas will involve team and interdepartmental exchange and decentralization of decision making. Of course, such an organizational environment would be an excellent forum for the efforts of the champion.

Ettlie et al. (1984) studied product innovation in 192 firms in meat, canning, and

fish industries. All firms were implementing a new technological innovation: a Consumer Retort Pouch technology (a new way of packaging instant foods). Product champions were identified by one interview question: "Is there a person in your firm who is currently advocating consumer retortable pouch technology?" The authors measured a number of other variables through both questionnaire and interview methods. They reported a correlation of .45 ( $p < .01$ ) between the dichotomous champion variable (presence/absence) and the stage of adoption of the given innovation (this latter variable ranged from "implemented" to "rejected"). Ettlie et al. concluded that the stage of adoption (a necessary development condition for innovation success) of a radical innovation is significantly promoted by the presence of an innovation champion.

Taken together, the above research demonstrates a degree of consistency in pointing to: (a) the omnipresence of the champion role, and (b) the importance of this role in the movement of organizational innovation toward implementation and success. Although the champion is clearly not the only and, typically, not the most important variable in predicting the success of organizational innovation, his/her role has been consistently identified and described as critical by those who carry out research on innovation in organizations.

In the next section, a comprehensive definition and profile of the champion role is developed. Past research is reviewed and synthesized and the terms entrepreneur, corporate entrepreneur, innovator, intrapreneur, and champion are discussed.

### III. Toward a Definition and Understanding of the Champion Role

#### *Overview*

In this section a definition of the champion role is developed based on a review of 25 studies in which the role of the champion has been identified and examined. A profile or model of the champion role is proposed, drawing on the definition as a foundation.

Before proceeding to this discussion, it should be acknowledged that much of the research to be reviewed in this section does not feature the study of the champion as the primary focus. Much of the research on the champion has been conducted by researchers more interested in organizational-level correlates or predictors of innovation success or stage of implementation. The importance and existence of the champion is recognized and discussed in such research, but not in detail. Past researchers often have not been careful to communicate clearly how the champion was identified. When such information has been supplied, the identification methods employed appear to have been less than thorough.

For example, Smith et al. (1984) used only one interview question to identify the champions in their study: "How were you involved in this case?" (p. 24). Similarly, Ettlie et al. (1984), in an interview, used the question: "Is there a person in your firm who is currently advocating consumer retortable pouch technology?" (cited in Howell & Higgins, 1990a, p. 319). Others simply neglected to report how the champions in their studies were identified (e.g., Burgelman, 1983; Chakrabarti, 1974; Galbraith, 1982; Knight, 1985; Schon, 1963). Such omissions could, potentially, call into question the validity of the trait descriptions given to such "champions", an issue discussed in more detail in Section IV of the literature review.

Having recognized the apparent methodological limitations of the literature to be reviewed, it is, nevertheless, clear that the various *definitions* used for the champion role have, over time, converged significantly. Thus, although past researchers have not typically been either: (a) diligent in detailing the manner in which champions were identified, or (b) methodical in establishing criteria for role identification, a common figure in the innovation process does appear to have been consistently identified. And that figure is the champion.

### *The Champion Role Defined*

In Table 1 is a listing of definitions that have been used to describe the champion. These definitions are given in chronological order. The primary label used is given as well (e.g., champion, internal entrepreneur). Various labels have been applied to describe the individual who performs this key role in the innovation process: champion, corporate entrepreneur, entrepreneur, intrapreneur, innovator. Interestingly, the definitions converge to describe a common set of key functions. The term *champion* has been chosen for use in the present study because: (a) this label, more than the others, has been linked to the innovation process, and (b) in the context of corporate innovation this term can be traced further back in the historical development of the topic<sup>4</sup>.

Synthesizing the results in Table 1, it is clear that the champion takes creative/inventive ideas and promotes their implementation. The champion role brings together the inventive efforts of the idea generator with the business needs of the organization. Thus, s/he serves a coordinating function, by uniting the autonomous efforts of the inventor with the strategic management objectives of the organization. In the present study, the following definition for the champion role was used. This definition has been gleaned from the definitions and descriptions listed in Table 1.

*The champion is an individual who takes a new idea for either an administrative or technical innovation (an idea s/he may or may not have generated) and introduces, pushes, promotes, and sells the idea to others in the organization.*

#### *Elements of the Definition*

The reader should be aware of the following points that combine to make up the definition. Typically, the champion will emerge *informally* to take up the responsibility

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<sup>4</sup> Although the entrepreneur was the focus of study well before the champion role was identified (Cantillon, c. 1730), the role of the entrepreneur has typically been equated with that of the small-business owner (see, Carland, Hoy, Boulton, & Carland, 1984).

Table 1

*Champion, Corporate Entrepreneur, and Intrapreneur Definitions*


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Schon (1963)

**Product Champion:** informally emerges--is not appointed; identifies with a new idea as his/her own; see its promotion as a cause that goes beyond their job; pushes and promotes against the prevailing opposition to change in the organization interests must cut across various departments.

Knight (1967)

**Innovator/Entrepreneur:** introduces and carries out the introduction of a new idea; possesses desire and means to implement idea; sells idea to organization.

Roberts (1968)

**Internal Entrepreneur/Product Champion** used interchangeably: the individual who champions the translation of science and technology into use.

Achilladelis, Jervis, and Robertson (1971)

**Project Champions:** distill creative ideas from information sources and then enthusiastically promote them within the organization.

Langrish, Gibbons, Evans, and Jevons (1972) cited in Parker (1978)

**Champion:** the individual who initiated the project, who promoted it enthusiastically, who took a personal interest in the project, and who ensured that funds were available.

Chakrabarti (1974).

**Product Champion:** sells idea to management and gets management sufficiently interested in the project.

Rothwell, Freeman, Horlsey, Jervis, Robertson, and Townsend (1974)

**Product Champion:** any individual who made a decisive contribution to the innovation by actively and enthusiastically promoting its progress through critical stages.

Frohman (1974;1978)

**Product Champion/Entrepreneur:** recognizes and pushes a new technical idea, approach, or procedure for formal management approval. Takes risks. Works to get support and resources for his/her idea. Is an advocate for the idea. Tends to be aggressive and persistent.

Cox (1976)

**Corporate Entrepreneur:** perform a coordinating function; they bring science and technology into the marketplace; they get things done, are risk takers.

*Table 1 cont.*

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Kierulff (1979)

**Corporate Entrepreneur:** examines potential new market opportunities, obtains resources to meet attractive opportunities, and initiates production and sales; starts a new business venture within the company.

Quinn (1979)

**Champion:** bring forward, market new ideas to management team; compete against others for approval of idea.

Fernelius & Waldo (1980)

**Project Champion:** someone who thoroughly believes in the project, works hard at it, inspires others to do the same, and defends the project even to the point of risking his own standing.

Roberts & Fusfield (1981)

**Entrepreneur/Champion:** the individual who recognizes, proposes, pushes, and demonstrates a new technical idea, approach or procedure for formal management approval; gets resources needed; takes risks.

Galbraith (1982)

**Idea Champion:** the inventor of the idea, the entrepreneur, or risk taker. Dedicated person whose success or failure depends on developing the idea/**Sponsor:** promotes idea through to implementation; gives authority and resources to an idea to carry toward implementation; usually middle managers; functions of sponsor similar to those of champions identified by others.

Kanter (1982; 1988)

**Corporate entrepreneur/Innovative manager:** envision an accomplishment beyond the scope of their job; acquire power needed; seek and find additional strength needed for new initiatives--build coalitions; possess political savvy.

Burgelman (1983)

**Product Champions:** turn a new idea into a concrete new project in which technical and marketing development begin to take shape; mobilizes resources to do what conventional corporate wisdom classifies as impossible.

Curley & Gremillion (1983)

**System Champion:** demonstrate commitment to, and enthusiasm for, the system (MIS) in a variety of ways. Internal change agents or missionaries; influence the attitudes of others toward the system and aid them in understanding and using it; support, sell, lead, urge use of the system; respond to and help overcome resistance to change involved in its adoption.

Ettlie, Bridges, and O'Keefe (1984)

**Innovation Champion:** an individual who is an advocate for a new technology.



*Table 1 cont.*

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Smith, McKean, Hoy, Boysen, Shechter, & Roberts (1984)

**Process/Product Champion/Entrepreneur:** takes idea from the creative scientist/engineer and takes it to the stage at which it is attractive for business sponsorship.

Knight (1985)

**Intrapreneur:** "...a corporate employee who introduces and manages an innovative project within the corporate environment, as if he or she were an independent entrepreneur.

Pinchot (1985)

**Intrapreneurs:** take new ideas (which they may or may not have generated) and turn them into profitable realities; take project to the stage at which they are functioning and solid businesses and then turn over project to a manager; are leaders, have good team building skills; go outside job description to accomplish goals; decisive, risk taking, action-oriented, dedicated; have vision and long-term perspective.

Tushman & Nadler (1986)

**Champions/Internal Entrepreneurs:** take creative ideas (which they may or may not have generated) and bring the ideas to life. They possess aggressiveness, energy, and are risk takers.

White (1988)

**Intrapreneur:** entrepreneurs operating in large companies; take risks, implement ideas; self-confident; innovative self-starters; team leaders; able to visualize solutions.

Price & Bailey (1989)

**Corporate Entrepreneur/Intrapreneur:** test new ideas in the marketplace and launch new ventures. Authors do not give a specific behavioral definition but likens the intrapreneur to Kanter's (1982) definition of the corporate entrepreneur/innovative manager.

Howell & Higgins (1990a)

**Project Champion:** same definition used as Achilladelis et al. (1971).

for pushing and promoting innovation. Rarely are individuals appointed to champion an innovation. Thus, their role in the innovation process has typically not been defined as a formal, necessary component of the job, as in a job description, for example. Champions can, potentially, emerge from any department, in any type of organization. Most researchers have argued that formalizing the function and responsibilities of the champion role would serve to undermine the intrinsic motivation assumed to underlie and drive individuals to champion innovation (Howell & Higgins, 1990a; Tushman & Nadler, 1986).

Secondly, most authors stated that champions need not be the original inventor of an idea. Their role is to take an idea for an invention and develop it to the stage at which it becomes acceptable to upper management as a viable corporate initiative. Galbraith's (1982) definition for the idea champion included the notion of invention, although his sample of innovators were lower-level personnel than those typically studied.

Third, virtually all definitions of the champion converge in stressing the importance of the champion's role in promoting and selling ideas to management. The champion uses his/her skills to take a given innovation to the stage at which it becomes attractive for business sponsorship. The importance of their role is summarized emphatically by Schon (1963): "...the new idea either finds a champion or it dies" (p. 84).

Fourth, the degree of radicalness of the innovation is not explicitly stated in the above definition. Schon's (1963) original use of the term champion was based on a sample of champions of radical innovations. Since that time, champions have also been studied in the context of more incremental innovation (Howell & Higgins, 1990a; Kanter, 1982; Knight, 1985). Given the substantially-lower base rate of radical vs. incremental innovation, the potential utility of personnel selection in the context of the latter is likely considerably greater.

Fifth, both *technical* and *administrative* innovations were included in the present study in the interests of completeness. Briefly, the former innovations pertain to new

developments in products, services, and production process technology; technical innovations relate to basic work activities and are the more commonly-occurring (and studied) form of innovation than are administrative innovations (Damanpour & Evan, 1984; Damanpour, 1991). Administrative innovations involve organizational structure and administrative processes (i.e., a re-organization of a department or company); such innovations are not directly related to basic work activities, but are, instead, more directly related to an organization's management (Damanpour, 1991). Since the champion has been identified as instrumental in both types of innovation, the champion's activities in both contexts will be examined in the present study.

*Champions, Innovators, Entrepreneurs, Corporate Entrepreneurs, and Intrapreneurs*

The many labels that have been used to describe the champion role can lead to confusion and ambiguity in definition. Since an inclusive definition was gleaned from Table 1, it may be that the variety of labels do not reflect heterogeneity of meaning. Instead, it may be that the more current labels of *corporate entrepreneur* and *intrapreneur*, are recent re-iterations on a theme whose arrival may have more to do with a surge in interest in innovation research than in the discovery of substantively new roles in the innovation process.

Frost and Egri (1991) noted that the use of the term intrapreneur (and entrepreneur) to refer to the champion role is potentially misleading. The term entrepreneur has typically been used in the small business context (see Carland et al., 1984), although it need not be limited to this. Small-business entrepreneurs are innovators who operate more autonomously than does the champion. It is very likely that individuals who operate as entrepreneurs within a large organization—those who champion, promote, and sell innovation—will be different from persons who establish their own business (Hill, 1987).

By referring to the champion as an entrepreneur or using the term corporate

entrepreneur, researchers are borrowing from the more extensive psychological literature on the small-business entrepreneur (see, Brockhaus & Horwitz, 1986, for a review on the psychological characteristics of the small-business entrepreneur) and, implicitly, sometimes explicitly, applying this knowledge to the study of her/his corporate counterpart. Although there may be some similarities in the psychological characteristics of the small-business entrepreneur and the champion, the degree of overlap is, at present, difficult to determine, given the scarcity of information on the individual-differences characteristics of the champion. The extent to which the characteristics of the corporate entrepreneur and the small business entrepreneur overlap is an empirical issue which has not, to date, been addressed adequately.

#### *A Two-Dimensional Conceptualization of the Champion Role*

In the previous section a summary definition of the champion role was gleaned from the literature review. This definition can be understood as containing two components. These are presented in Table 2. The two components or dimensions have been labeled: (a) *Conceptualizing, Developing, and Designing Innovation*, and (b) *Working to Promote Innovation*. They correspond to the two main components of the definition: (a) the conceptualization and development of an idea into a potentially viable innovation, and (b) the promoting and selling of that idea to upper management. The behavioral statements reported for each dimension are included to serve as examples to illustrate representative behaviors for each dimension.

A two-dimensional framework is proposed in recognition of the champion's role as a coordinator, between the inventive efforts of the innovator, on the one hand, and the business and strategic priorities of upper management, on the other (e.g., Burgelman, 1983; Pinchot, 1985). The champion must be aware of new technologies and approaches and be capable of envisioning new applications. At the same time, champions must be able to communicate their vision to others—to encourage, inspire, persuade, and

*Table 2**Dimensions of Championship*

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**I. Conceptualizing/Developing/Designing Innovation**

- generating a new idea for either a technical or administrative innovation.
- developing an idea proposed by someone else.
- gathering needed information to develop idea.
- visualizing application/market opportunity.
- developing a scheme to market or promote idea.
- planning for adoption of innovation.

**II. Working to Promote Innovation**

- Promoting/selling/advocating ideas within the organization.
  - securing upper management support; using political contacts.
  - coordinating activities of various divisions...working cooperatively.
  - competing against others for approval of ideas.
  - using resources and contacts from outside of own job responsibilities to promote.
  - mobilizing needed resources: cash, personnel, equipment, time, etc.
-

promote. Thus, the champion must be capable of working with and developing ideas, determining which ideas/proposals may be most appropriate and marketable *as well as* selling and promoting those ideas to the strategic decision makers.

It may be possible for some individuals to envision, design, and develop an innovation, but fall short in their efforts to convince others of its importance. Such *innovators* will be valuable sources of new ideas for an organization, but may lack the skills to convince others of their importance. Similarly, some managers may be excellent *salespersons*, capable of promoting ideas and securing support, but fall short in their ability to evaluate the initial appropriateness of new ideas (or even generate new ideas in the first place). Such managers would likely have a strong voice and perhaps yield considerable power and influence but would need to rely on others to develop the conceptual groundwork. It is likely that organizations would find both types of managers valuable. Individuals who excel in both—who have the ability to envision new opportunities and the skills to promote them—will likely be most valuable of all. These are the *champions*, those who distill creative ideas from information sources and then enthusiastically promote them within the organization (Achilladelis et al., 1971).

### *Summary*

The proposed two-dimensional model of championship was rationally, not empirically, derived. It must be seen, therefore, as speculative. No prior research has been conducted in this area; no previous dimensional models of championship have been proposed. Thus, a key objective of the present research is to systematically study the champion role; the rationally-derived model will be empirically tested.

In the next section, research on the individual-differences characteristics of the champion is reviewed. The focus shifts from the identification and definition of championship to the description of the champion's abilities and traits. In the context of the present study, this represents a shift from the criterion to the predictor.

#### IV. Champions of Innovation: Their Individual-Differences Characteristics

##### *Overview*

The characteristics of the champion have been an object of speculation since this special breed of innovator was first identified by Schon (1963). With few exceptions, the majority of studies in which the traits of the champion have been described, suffer from methodological shortcomings; much of what has been reported in the past has been largely anecdotal. Described as energetic, persistent, visionary, and politically-astute, for example (e.g., Burgelman, 1983; Chakrabarti, 1974; Schon, 1963), the *methods* used to arrive at these descriptions have been largely unstructured and often unreported. The champion has been described based on researchers' impressions. With one exception (Howell & Higgins, 1990a), the characteristics of the champion have not been carefully studied using reliable and valid standardized assessment instruments.

Major findings of the reviewed literature are summarized in Table 3. Trait descriptions have been rationally clustered into four dimensions: three related to personality traits and the fourth related primarily to aspects of cognitive ability. This clustering reflects the present author's dimensionalization of the literature around global individual-differences dimensions<sup>5</sup>. The intent of the clustering was to present a tentative psychological framework—an organization of the research to date—in a form amenable to empirical testing.

Using largely qualitative, rather than quantitative methods, the majority of researchers whose studies are referenced in Table 3 reached similar conclusions about the individual-differences characteristics of the champion. Considerable consistency emerges, pointing to promising areas which could contribute to a meaningful profiling of

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<sup>5</sup> The reader will likely note the similarity of these dimensions to the Big Five (Tupes & Christal, 1961) personality factors of Extraversion, Openness, Conscientiousness, and Intellectance; conspicuous by its absence is Neuroticism. Clearly the flavor of the trait profile is decidedly positive. We are left with the impression that the champion must be a decidedly excellent manager and person.

Table 3

*Logically-Derived Trait Dimensions of the Champion***A. PERSONALITY/MOTIVATIONAL TRAITS****INTERPERSONAL EFFECTIVENESS**

- I. Interpersonal Influence: influences others, exercises power, persuades; possesses confidence, assurance (Burgelman, 1983; Chakrabarti, 1974; Galbraith, 1982; Kanter, 1982; Price & Bailey, 1989).
- II. Interpersonal Awareness: tact, sensitivity, able to work with others, participative-collaborative style (Chakrabarti, 1974; Kanter, 1982; Kierulff, 1979).

**DETERMINED ACHIEVEMENT-ORIENTATION**

- III. Persistent Drive: achievement orientation, drive, persistence, determination, dedication (Chakrabarti, 1974; Galbraith, 1982; Howell & Higgins, 1990a; Kierulff, 1979; Pinchot, 1985; Price & Bailey, 1989; Roberts, 1968; Schon, 1963; Smith et al., 1984).
- IV. Action-Oriented Competition: energy, aggressiveness, competitive, decisive (Chakrabarti, 1974; Kierulff, 1979; Pinchot, 1985; Price & Bailey, 1989; Schon, 1963).

**OPENNESS/WILLINGNESS TO CHANGE**

- V. Openness to Change/Visionary: irreverence for status quo, willingness to try new things; orientation toward the future and constant change (Galbraith, 1982; Kierulff, 1979; Pinchot, 1985; Price & Bailey, 1989).
- VI. Willingness to Take Risks: opportunistic, bends rules (Galbraith, 1982; Howell & Higgins, 1990a; Kierulff, 1979; Pinchot, 1985; Price & Bailey, 1989; Schon, 1963).

**B. COGNITIVE ABILITIES**

- VII. Innovative Idea Generator: creative, inventive, innovative (Galbraith, 1982; Howell & Higgins, 1990a; Kierulff, 1979; Price & Bailey, 1989).
- VIII. Analytical Evaluative Ability: good evaluative skills; ability to conceptualize ideas in new ways (Burgelman, 1983).
- IX. Effective Communication Skills: good negotiator, bargainer, open/willing to communicate with others (Burgelman, 1983; Chakrabarti, 1974; Galbraith, 1982; Kanter, 1982; Kierulff, 1979; Price & Bailey, 1989).



the champion. With regard to the champion's personality traits, elements of interpersonal effectiveness, achievement-orientation or drive, and openness to change have been reported consistently. Specific references to cognitive abilities have been less frequently made. When intellectual abilities have been mentioned, it is difficult to determine if the author intended to refer to a trait or an ability. For example, Howell and Higgins (1990a) discussed the innovativeness of the champion, but measured this characteristic as a personality trait using the Jackson Personality Inventory (JPI; Jackson, 1976). In summary, the potential importance of cognitive variables has not been carefully examined to date.

In the following four sections—corresponding to the four main dimensions in Table 3—research on the champion is reviewed. This is not intended to represent an empirically-based or definitive profile of the champion. Instead, the profile has been organized in order to identify patterns of consistency in the literature that can be used to generate hypotheses to be subjected to empirical testing.

### *Personality/Motivational Traits*

#### *Interpersonal Effectiveness*

Champions have repeatedly been described as possessing good interpersonal skills (e.g., Price & Bailey, 1989). They have been characterized as politically astute (Burgelman, 1983; Chakrabarti, 1974; Kanter, 1982). Demonstrating self-confidence and assurance (Price & Bailey, 1989), they have been described as able to inspire and influence others (e.g., Galbraith, 1982; Howell & Higgins, 1990a).

Running throughout this dimension appears to be a theme of extraversion—a people orientation. The champion accomplishes objectives *through* others. At times, this may involve persuading and exerting influence. At other times, the champion may be required to encourage and inspire more collaboratively, less forcefully. To know when to use each style, it is likely that the champion will need to be interpersonally aware. Thus,

two aspects of interpersonal effectiveness are identified in Table 3: (a) Interpersonal Influence, and (b) Interpersonal Awareness.

Burgelman (1983), described the champion as fulfilling a linking or coordinating function between the *autonomous* strategic efforts and ideas of inventors, on the one hand, and the *induced* strategic behavior of upper management, on the other. He noted that successful champions were able to tap into, and use effectively, the organizational power structure. Since their projects typically cut across organizational lines, champions must be able to call upon others (in powerful and influential positions) to help. At the same time, they must remain influential among employees operating in the autonomous strategic loop (the inventors and technical specialists). They must know when to use various means of relating to and influencing others.

Howell and Higgins (1990a) noted that the champion is frequently described as capable of instilling enthusiasm in others; as possessing a special quality that enables him/her to sell their vision to others. They found their sample of champions to be significantly higher on the two transformational leadership factors (Bass, 1985) of charisma and inspiration than a matched sample of non-champions [mean differences were particularly significant ( $p < .001$ ) for the inspiration dimension]. Charisma was defined by Bass as the leader's ability to communicate a compelling vision, to inspire and encourage strong effort in others, while inspiration was defined as the leader's ability to use emotional appeals, communicate in a vivid and persuasive manner, and enhance followers' confidence and motivation to go after challenging goals.

Anecdotal evidence of traits related to charisma and the ability to inspire have been noted by others. Kierulff (1979), in a survey of 91 executives, found that enthusiasm, on the part of the corporate entrepreneur or champion was rated as necessary for success. The champion's success in building a coalition of supporters (as noted by Kanter, 1982) depends, in part, on his/her ability to inspire others with the potential of his/her vision. Price and Bailey (1989) found that enthusiasm was one of the more

frequently rated traits of the intrapreneur. Pinchot (1985) also stressed the importance of the champion's ability to inspire and motivate others in his case studies of successful intrapreneuring. Clearly, the champion is able to share his/her vision with others in a way that encourages, motivates, and inspires people.

What specific interpersonal skills, then, allow the champion to inspire and encourage others? What specific traits allow the champion to be effective in his/her dealings with individuals from various departments occupying different levels in the organizational hierarchy? In general, it appears that champions must be extroverts. In order to fulfill their coordinating function, in order to initiate and maintain their network of contacts, in order to persuade and influence, and in order to understand other peoples' point of view, they must be oriented toward people.

#### *Components of Interpersonal Effectiveness*

A more finely-grained analysis of the interpersonal style of the champion is given below. Research in which elements of ascendance or forcefulness have been reported is presented first. Next, evidence for the role of interpersonal awareness will be presented.

*Interpersonal Influence.* Kanter (1982), in a study of effective innovative middle managers (whom she termed corporate entrepreneurs; see Table 1), reported that innovative managers were more persuasive than their more conventional counterparts. She reported that the corporate entrepreneurs were capable of acquiring the power and influence they needed to accomplish their objectives. Galbraith (1982) reached a similar conclusion to Kanter in his study of radical innovation in an electronics firm. He also stressed the ability of champions to persuade and push. Chakrabarti (1974), reporting the findings of 45 case studies of technical innovation, described champions as aggressive. A common theme emerging from these studies is the champion's ability to influence

others through persuasive or forceful means.<sup>6</sup>

In addition to being characterized frequently as dominant and assertive, the champion has also been described as interpersonally aware, as possessing tact and sensitivity. Kanter (1982) emphasized the champion's ability to work collaboratively with others. The champion has been described as capable of changing, of adapting his/her style to new situations and people. Of course, a precursor to such adaptations is an initial awareness of people and their needs.

*Interpersonal Awareness.* Serving a coordinating function, the champion must be careful not to alienate others and, thus, lose contacts and influence in the organization. The champion has frequently been described as an interpersonally-aware manager, possessing tact and sensitivity. Burgelman (1983) noted that "...astute organizational champions learned what the dispositions of top management were and made sure that the projects they championed were consistent with the current corporate strategy" (p. 238).

Going beyond the formal limits of their position, the champion will need to tread softly, carefully, and tactfully (Chakrabarti, 1974). They must be capable of working well with others. Kierulff (1979) found that executives rated an inability to work with others as the most detrimental trait for a champion to possess. Kanter (1982) found that managers known for their innovative accomplishments were more likely than the less-innovative managers to employ a participative-collaborative management style. She stressed that such a management style allows the innovative manager to influence, motivate, and encourage others in the process of building a team or coalition of supporters.

*Summary.* Considered together, the research reported in this section paints the picture of a manager who is interpersonally skilled. S/he is likely outgoing, sociable, and

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<sup>6</sup> Champions are also noted for their ability to influence others through less forceful means; this will be discussed under the heading of Interpersonal Awareness.

warm. As well, they possess a degree of dominance or ascendancy.

### *Determined Achievement Orientation*

Some of the most frequently-cited traits of the champion can be understood as falling within a dimension labeled here as Determined Achievement Orientation (DAO). Paralleling the psychological literature on the small-business entrepreneur, a number of researchers have described the champion as driven to achieve (e.g., Chakrabarti, 1974; Roberts, 1968; Schon, 1963). S/he possesses dedication to the task at hand and persistence and resolve in the face of challenge and opposition. The champion has also been described as action-oriented, independent, and aggressive—as able to cut to the heart of an issue and take action.

The two components of DAO—Persistent Drive (PD) and Action-Oriented Competition (AOC)—can be distinguished in the following ways. The first component can be understood as work ethic. Individuals scoring high on Persistent Drive would be determined and resolved to achieve. They would remain focused on the task at hand and maintain their energies on accomplishing what they set out to do. The second component, Action-Oriented Competition, refers to the individual's work style—how s/he accomplishes objectives. Individuals scoring high in this area could be described as possessing great energy and zeal. Such persons may come across to others as aggressive and passionate. They are oriented to compete against others and are able to decide on a course of action quickly. They may be focused on work and accomplishments, to the point of impatience and pre-occupation.

Since the seminal work of McClelland (1961) on the need characteristics of the small-business entrepreneur, a number of scholars have described entrepreneurs and corporate entrepreneurs to be driven to achieve (e.g., Chakrabarti, 1974; Howell & Higgins, 1990a). Described variously as determined, persistent, and dedicated, these descriptive characteristics appear to converge on a common theme: a strong and

ambitious achievement ethic. The above finding in the championship literature is a very robust one. In a variety of samples and industry and innovation types, champions have consistently been described as driven to achieve. A similar link between achievement and entrepreneurial status has been demonstrated in a number of studies of the small-business entrepreneur as well (e.g., Hornaday & Aboud, 1971; Komives, 1972; McClelland, 1965).

Champions have also typically been characterized as possessing great energy and focus characterized by an action-oriented management style (Chakrabarti, 1974; Pinchot, 1985; Schon, 1963). What is labeled here as Action-Oriented Competition relates to the champion's *style* of pursuing objectives. They have been described as aggressive, competitive, independent, and decisive (Kierulff, 1979; Price & Bailey, 1989). Champions are able to see a clear course of action, make a decision, and then aggressively stand behind their decision. They push and fight to meet their objectives.

#### *Openness/ Willingness to Change*

By definition, a champion is actively involved in a major change process. S/he is the motivational spark behind innovation. Champions have been described as open to change (e.g., Pinchot, 1985), as willing to try new things and experiment with new ideas. Not satisfied with the status quo, the champion has often been described as possessing an orientation toward the future. Price and Bailey (1989) described the champion as possessing vision.

Having visualized a commercial opportunity, the champion must be willing to take the risk of rallying behind a product or idea and promoting it to others in the organization (e.g., Pinchot, 1985). Thus, it is not surprising to find that the champion has been described frequently as willing to take risks (e.g., Galbraith, 1982; Schon, 1963). A propensity toward risk taking is one of the most frequently-reported traits found in studies of the small-business entrepreneur (see Brockhaus & Horwitz, 1986 for a review).

### *From Personality to Ability*

This section of the review is notably brief. Few researchers have commented on the potential role that cognitive factors might play in determining champion success or in differentiating champions from non-champions. It may be that cognitive abilities have little to do with championship. Alternately, the brevity of this section may reflect the narrow focus of past research.

### *Cognitive Ability*

The relative neglect of cognitive explanations of champion behavior may represent a significant omission, since reliable and valid measures of intellectual ability have been found to be valid predictors of overall managerial performance, typically more powerful than personality traits (e.g., Ghiselli, 1973; Hunter & Hunter, 1984; Reilly & Chao, 1982). Although *general* management performance is not the concern in the present study, it is possible that selected cognitive variables may possess some validity as predictors of championship. Given the essentially innovative nature of the role of the champion, of special interest may be cognitive abilities related to cognitive flexibility.

Taxonomies or models of intelligence have developed over the years in much the same manner as have taxonomies of personality. Building on the work of Thurstone (1938) who first demonstrated the existence of primary abilities (components of Spearman's *g*), others have sought to identify an exhaustive list of primary abilities (e.g., Hakstian & Cattell, 1978). Recently, Cattell (1987) summarized past research on primary abilities as demonstrating 20 empirically-based (but tentative) primary ability concepts. Of relevance to the next section, are the two primary abilities *word fluency* and *ideational fluency*.

### *Innovative Idea Generator*

The champion is frequently described as an innovative idea generator—as one who is able to visualize how an idea or product might generate revenue for the organization (Galbraith, 1982; Howell & Higgins, 1990a). The champion may be the individual to generate the original idea, but not always. In some cases, they may rely on the technical inventions of others. Thus, the champion is innovative, but not always inventive. In other words, the champion's creative act comes not necessarily in generating the original idea for a new product or process, but, instead, in visualizing how a new product or process might be applied in the marketplace in order to generate revenue.

Although the champion has often been described as innovative (e.g., Galbraith, 1982; Howell & Higgins, 1990a), this characterization appears to have been targeted at the champion's personal style. Thus, innovativeness has been conceived of in terms of personality not ability. For example, in the Howell and Higgins study, champions were found to score significantly higher than non-champions on the JPI Innovation scale. Defined as "...develops novel solutions to problems", innovation was conceived of as a style of approaching problems. It was not measured as a cognitive ability—a capacity for innovation.

Price and Bailey (1989), in polling 2,400 managers about the characteristics of the intrapreneur, reported that the second-most-frequently cited attribute of the intrapreneur was that s/he was creative/innovative/inventive. Similarly, Kierulff (1979) reported that the 91 executives he surveyed also stressed the importance of creativity for success in the corporate entrepreneurial role.

### *Analytical Evaluative Ability*

Burgelman (1983) noted that the champion typically possesses good evaluative skills. He remarked that the champion must be able to evaluate the appropriateness of



technological proposals. Burgelman's observation stands alone in the champion literature; no other mention of the champion's general ability was discussed.

### *Effective Communication Skills*

Champions must be capable of selling their ideas to others. Thus, they have been described as possessing good communication skills (Price & Bailey, 1989). Kanter (1982) described the corporate entrepreneur as able to seek out and communicate information to others effectively. Galbraith (1982) noted the importance of persuasive bargaining and negotiating. Finally, Kierulff (1979) stressed that corporate entrepreneurs must be able and willing to communicate freely and openly.

### *Summary*

Research on the role of the champion and his/her characteristics has been featured in the literature review. Limitations of the research have been noted. At present, our knowledge of the champion is based primarily on descriptive, albeit rich and detailed, accounts of his/her characteristics. The present research was designed to expand our knowledge of championship through a careful and exhaustive empirical study of the champion's role and characteristics.

Such a program of research has both theoretical and practical appeal. A study of the champion role would add considerably to the present use of simplistic (uni-dimensional) models of championship. The development of a more comprehensive, empirically-based model could be used to standardize the identification of champions. At the very least, such a model would provide a starting point (or comparative standard) for future research.

Naturally, the identification of dimensions of championship would be useful for Industrial/Organizational Psychologists and other practitioners involved in selection work who, in various organizational contexts, are asked the question: How does our company become more innovative? If a comprehensive model of championship were developed

and replicated, it could be used as a blueprint to develop rating scales to aid organizations in the identification of current employees already demonstrating aspects of championship. A central purpose of the present research is the development of such a rating scale.

A careful study of the individual-differences characteristics of the champion would serve to test the validity of findings from past research. Standardized psychological assessment procedures could be used to study the champion with reference to some well-established taxonomies of personality and ability. Such research has been conducted with the small-business entrepreneur, but is lacking in connection with the champion.

If tests could be found that correlated with dimensions of championship, there would be justification for using those tests to screen applicants for champion potential. In those organizations seeking to become more innovative, one approach would be to hire individuals whose predicted scores on dimensions of championship are high. Carefully developed and normed, a battery of "champion tests" would have tremendous utility to organizations seeking to increase the number of champions in their work force.

Before moving to a detailed discussion of the present research, a brief evaluation of the literature review is presented. This evaluation is used to develop a more detailed rationale for the present research. Hypotheses related to the role and characteristics of the champion are gleaned from this evaluation and are presented in the next section as well.

## RATIONALE AND HYPOTHESES

The literature review was divided into four main sections. The first two were provided to define key terms and present evidence on the importance of the champion role in the innovation process. The latter two sections—corresponding to an examination of the role of the champion and his/her individual-differences characteristics—provided the foundation for the present research. In the paradigm of personnel selection and, more generally, assessment, the latter two sections correspond to criterion and predictor measurement, respectively.

This chapter is divided into two sections, corresponding to the role and characteristics of the champion. In both, a summary and discussion of the literature is provided. Limitations of past research are discussed and gaps in knowledge identified. Finally, hypotheses are presented to address these limitations and gaps.

### Section I: Evaluation of Research on the Role of the Champion and Development of Hypotheses Related to Criterion Measurement

#### *Limitations of Past Research*

Previous research on the champion can be criticized with respect to two assumptions underlying the methods used to identify the champion role. Past researchers have not explicitly acknowledged that the champion role may be a multi-dimensional one. As well, it has not been recognized that championship may also be a matter of degree; we may be losing significant information by conceiving of individuals as *either* champions *or* non-champions, with no recognition of gradations or degrees.

An implicit assumption of past researchers has been that the champion role can be adequately characterized by a summary dimension called championship. It seems likely that the role of the champion is a complex one that may be subsumed by a number of dimensions (e.g., risk taking, political skill). Understanding of the complexity of

championship cannot be furthered as long as researchers ignore the possibility that championship may represent a multi-dimensional role. This possibility will be examined directly in the present study.

A second assumption has been that individuals can be sorted into one of two categories: champion and non-champion. No attempt has been made to conceive of and measure championship as a continuous variable. Just as managers are not either leaders or non-leaders, it is likely that individuals vary in the degree to which they demonstrate championship. Thus, more information might be gained by placing or ordering individuals along a continuum reflecting the degree to which they exhibit championship.

Even more information could be gained by assuming a multi-dimensional criterion with continuous measurement within dimension. Individuals could be placed along a continuum reflecting their level of participation on dimensions of championship. Such a continuum would run from individuals of extraordinary inventive and persuasive abilities (to name just two of the frequently-identified components of championship) at one end, through persons of more typical and modal propensities, to persons who demonstrate none of such attributes. Such an approach to criterion development would permit the testing of some important hypotheses related to the nature of the champion role. These are outlined below.

### *Hypotheses*

#### *Hypothesis 1*

It is hypothesized that the construct of championship can be meaningfully represented by a hierarchical factor model. Three levels or strata are hypothesized to exist. The highest level, in this case a third-order construct, is labeled *Championship*. This higher-order construct will subsume two second-order constructs, paralleling the two dimensions in the model of championship (see Table 2). Thus, the two second-order constructs will relate to elements of innovativeness, on the one hand, and salesmanship

and promotion, on the other. Each of these two second-order constructs will further subdivide into a number of more specific first-order or primary constructs.

### *Hypothesis 2*

Secondly, past researchers have tended to stress the salience of salesmanship and promotion over innovation, for the champion. For example, it is clear from the definition that the champion need not have been the one to *originally generate* the new idea. The relative importance of salesmanship and promotion is also apparent from the attention given to personality traits related to extraversion, ascendancy, and persistence by past researchers, to the relative neglect of cognitive abilities. It is hypothesized that dimensions of overall championship related to salesmanship and promotion will be found to be the most central or characteristic aspects of the general construct.

## Section II: Implications of Research on the Individual-Differences Characteristics of the Champion and Development of Hypotheses Related to Predictor Measurement

### *Limitations of Past Research*

Research on the individual-differences characteristics of the champion was reviewed earlier. Four main clusters of characteristics were identified, each roughly corresponding to a type of ability or trait described as characteristic of the champion. Evidence of consistency was found, especially with respect to personality characteristics. Numerous researchers converged in identifying common traits as characteristic of the champion.

In spite of the apparent consistency, the studies and, hence, the findings, have several shortcomings. First, the reviewed studies give little evidence that would enable one to conclude that champions possess the cited traits and abilities *to a greater degree* than do non-champions. With the exception of the Howell and Higgins (1990a) study, researchers have not typically included a control or comparative sample. Thus, it is

difficult to know if dominance, for example, is a trait that distinguishes champions from non-champions. If most managers are dominant, then managers identified as champions will also tend, on average, to be dominant. But this trait will not distinguish them from other managers, and, thus, scores on a test measuring such a trait could not be used to predict group membership.<sup>7</sup>

Secondly, to repeat a concern cited earlier, most of the findings from studies reported in Table 3 were not obtained using standardized measurement tools. With the exception of the Howell and Higgins (1990a) study, previous researchers appear to have formed *impressions* of the champion personality. They typically do not, however, report how those impressions were formed. The descriptively-based profiles presented by previous researchers serve as a rich source of data. Our knowledge in this area would be on more methodologically-solid footing, however, if more rigorous methods were used to profile the champion.

Thirdly, previous research can be criticized in that very little attention has been focused on the cognitive abilities of the champion. Instead, in the vast majority of previous research, the personality characteristics of the champion have been the sole focus. Only a few anecdotal reports on the general or specific skills of the champion can be found, accounting for the brevity in this section of the literature review.

The final primary concern, not raised before, relates to the issue of gender differences. Virtually all past research on the champion appears to have been limited to a study of the *male* champion. Some authors do not describe the gender composition of their samples (e.g., Price & Bailey, 1989). Others, perhaps revealing the now-historical nature of their work, merely assume that the reader must recognize that male champions are the obvious focus (e.g., Roberts, 1968; Schon, 1963). More recently, Howell and Higgins (1990a) acknowledged that all 50 participants in their study were males.

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<sup>7</sup> For the sake of simplicity, a dichotomous criterion has been assumed here.

The issue of gender differences will be addressed in the present research. Given the absence of past research in this area, no specific hypotheses are proposed. Rather analyses on gender differences will be conducted in an exploratory spirit.

### *Hypotheses*

#### *Personality/Motivational Characteristics*

*Interpersonal effectiveness.* The consistency of findings from studies reviewed within this dimension gives strong evidence that aspects of interpersonal effectiveness are likely related to championship. It is hypothesized that individuals who demonstrate many of the behaviors associated with championing will tend to be more: (a) extraverted, and (b) dominant than individuals who demonstrate fewer of the champion behaviors.

Related to the issue of interpersonal effectiveness is the champion's style of dealing with interpersonal conflict; this specific aspect of the champion profile has not been mentioned in past research. It is likely that, in promoting ideas, champions will remain focused on their objectives; they will tend to use conflict resolution strategies that reflect a high concern for their own needs and initiatives. At times this may involve pushing an idea, through a *dominating* strategy. In other situations, the champion will seek to maximize his/her own gains while at the same time, showing concern for others, thus employing an *integrating* strategy. It is hypothesized that individuals high in championship will tend to use strategies that show a paramount concern for their own needs and initiatives in resolving interpersonal conflict to a greater extent than individuals low in championship.

*Determined achievement orientation.* Drive, ambition, and determination are frequently-cited characteristics of the champion. These findings are similar to those reported in the literature on the small-business entrepreneur. It is hypothesized, therefore, that individuals high in championship will tend to be more: (a) achievement oriented, (b) independent, and (c) driven and competitive than individuals low in championship.

*Openness/willingness to change.* The champion has been described as open to new ways of thinking and behaving. Indeed, some writers have characterized the champion as restless and unwilling to tolerate the status quo. Thus, it is hypothesized that individuals high in championship will tend to be more: (a) tolerant, (b) flexible, and (c) imaginative than individuals low in championship. They will be open to experimentation and new approaches and experiences.

### *Cognitive Abilities*

The paucity of research on the cognitive abilities of the champion was noted earlier. Thus, unlike the above hypotheses on the personality traits of the champion, the hypotheses presented in this section have limited foundation. They are presented, nonetheless, on rational grounds. Given the established validity and utility of cognitive abilities in the context of personnel selection (see, for example, Hunter & Hunter, 1984), it seems likely that selected specific abilities (as well as overall cognitive ability) may have a significant role to play in ordering individuals along a continuum on dimensions of championship, assuming, of course, that championship is related to overall performance.

*Innovativeness.* Although researchers of the champion have, in the past, often defined innovation as a personality trait, the construct of innovation in the present study will be understood and measured as a cognitive ability. It is hypothesized that individuals high in championship will tend to be more innovative than individuals low in championship.

*Analytical evaluative ability.* There has been very little discussion of the champion's general analytical abilities in the literature. The general cognitive demands of either generating or applying new ideas seem to be substantial, however. Thus, it is hypothesized that individuals high in championship will tend to possess a level of general ability that is superior to individuals low in championship.



*Effective communication skills.* Limited mention has been made of the champion's communication skills. When discussed, the focus is often on the champion's ability to persuade and bargain. In addition to persuasiveness, however, it is likely that the champion will need to possess a solid profile of English language skills. Thus, it is hypothesized that individuals high in championship will tend to possess English language skills (e.g., writing skills, grammar, etc.) that are superior to individuals low in championship.

### *Summary*

Drawing on the results of the literature review, a series of hypotheses related to both the role and characteristics of the champion have been presented. In the next three chapters, three studies are described that: (a) address these hypotheses<sup>8</sup>, and (b) develop new methods of measuring and predicting championship. The goals of the present research are, therefore, both theoretical and applied, as noted earlier. To reiterate, the overarching purpose of the present research is the description and prediction of championship.

In Study 1, champion behavior is the focus. The emphasis is on criterion measurement. Job-analytic and factor-analytic techniques are used to identify critical dimensions of championship. A rating form is developed and administered to close to 200 managers in order to obtain supervisory ratings of championship on the identified dimensions. The development of this scale permits the testing of Hypotheses 1 and 2. As well, the supervisory ratings obtained would serve as criterion data for Studies 2 and 3.

Methods related to the prediction of championship are presented in Studies 2 and 3. The focus of these studies is on the predictor side of the prediction equation. The two main objectives of Study 2 are to: (a) address hypotheses related to the individual-differences characteristics of the champion, and (b) develop a championship scale—a

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<sup>8</sup> These hypotheses are articulated in more detail in the following chapters.

linear combination of test scales predictive of dimensions of championship. Naturally, these two objectives overlap to some degree. If the hypothesis of a correlation between extraversion and championship, for example, is not rejected, then the test(s) used to measure extraversion will be likely candidates for the championship scale.

An extensive battery of standardized tests and simulation exercises are used in Study 2 [e.g., the California Psychological Inventory (CPI); Gough, 1975). These assessment devices were designed to measure a broad range of abilities, traits, and skills *beyond those needed to test the hypotheses articulated in this section*. Given the scarcity of carefully-conducted research in this area, a comprehensive approach to measurement was deemed important so that relevant traits, abilities, or skills would not be overlooked in the development of the championship scale.

Study 3 features the development of a management simulation. This simulation is grounded in the logic of the behavioral consistency model (Wernimont & Campbell, 1968) and was designed to correlate with dimensions of championship identified in Study 1. The psychometric properties of this simulation are examined and its validity is compared with that of the various predictor devices employed in Study 2.

## STUDY 1: THE STRUCTURE OF CHAMPIONSHIP AND THE DEVELOPMENT OF CHAMPION CRITERION SCALES

### Overview and Rationale for Methods

To accomplish the objectives of Study 1, a careful and programmatic study of the criterion—championship—was carried out. Established methods of instrument development were brought to bear on this measurement challenge. The present author enlisted the aid of industrial/organizational psychologists, management consultants, professors of management and business and roughly 700 managers from a variety of organizations in the development and refinement of the dimensional structure of championship.

Criterion development work in the present study followed the recommended steps set forth by Guion (1961). It began with input from managers who defined the behavioral domain. Three panels of managers composed several hundred behavioral statements reflecting the domain of championship. The concern at this stage was with content validity (comprehensiveness) and relevance. Next a search for *dimensions* of championship was undertaken. Two separate factor analyses were carried out involving over 600 managers in order to identify generalizable dimensions of championship. Finally, common dimensions arising from the two factor analyses were named by subject matter experts (professionals knowledgeable about championship and corporate innovation) using a method called the Recaptured Item Technique (RIT; Meehl, Lykken, Schofield, & Tellegen, 1971) and each factor was rated for prototypicality (Buss & Craik, 1980).

The present study made use of aspects of techniques developed for performance appraisal, like Behaviorally Anchored Rating Scales (BARS; Smith & Kendall, 1963) and Behavioral Observation Scales (BOS; Latham & Wexley, 1981). Selected procedures from the *act frequency* approach (Buss & Craik, 1980; 1981), developed in the context of

personality research, were used as well. Although the precise steps that go into developing rating scales vary across these approaches, they share some common elements. All feature a behavioral specification of the criteria. This is accomplished through the use of panels, familiar with the construct(s) or job dimension(s) under study. Finally, all share a concern for establishing homogeneous clusters of behaviors.

More specifically, the development of BARS and BOS involve the use of panels of job experts who: (a) identify and define critical performance dimensions, and (b) script behavioral incidents reflecting various levels of performance on each dimension. BARS behavioral incidents are assigned scale values by panel members (numbers that range typically from 1 to 5), while BOS behavioral incidents are scaled as either effective or ineffective. Both BARS and BOS result in the development of rating scales designed by job experts to measure relevant performance dimensions.

BARS are *graphically* distinct from BOS in that raters are typically presented with a vertical 5-point rating scale *anchored* by roughly four to seven behavioral incidents inserted at points along the vertical scale according to their scaled numerical value. Unlike the BARS layout, a 5-point rating scale is attached to *each* of the BOS behavioral incidents. Raters then indicate the *frequency* with which they have observed the ratee engage in the various behaviors.

Unlike BARS and BOS, the act frequency method was not developed as a performance appraisal technique but, instead, was designed as a means of describing dispositional categories, like dominance. In a series of articles, Buss and Craik (1980; 1981; 1983a) outlined the *act frequency* approach to personality. With this approach, dispositions are understood to be cognitive categories of *acts* or behaviors. Buss and Craik saw dispositions as summaries of act frequencies—behaviors in which individuals engage. One can arrive at a dispositional statement about a person if s/he engages in a high frequency of acts belonging in a given category. The logic is similar to that associated with BOS in that, if one engages in a high frequency of behaviors indicative of

high levels of leadership, for example, that person will likely be rated as high on leadership.

Buss and Craik drew on the work of Rosch & Mervis (1975) invoking the notion of prototypicality—that acts differ in terms of their membership within a dispositional category. Some acts are more central, ideal examples of the dispositional category than others. For example, the act of striking someone is likely to be seen as more prototypic of the dispositional category of aggression than is the act of wringing one's hands.

The BARS, BOS, and act frequency approaches each contain features that were seen as desirable and were, therefore, applied in the methodology of Study 1. Specifically, the instructions given to subjects used by Buss and Craik (1980) in generating acts (or behavioral incidents) were adapted in the present study. As well, behavioral statements were scripted to represent the opposite pole of championship in order to anchor the low end of the opposing conceptual space. Such an approach parallels Buss and Craik's (1983b) efforts to apply the Wiggins (1979) circumplex model of interpersonal dispositions to the examination of act bipolarity.

One key difference in the present study, however, is the absence of a clear model to define, for the construct of championship, the opposing conceptual space. This challenge is discussed in more detail below. The additional step of anchoring the opposing pole of the championship continuum was carried out in recognition of the final purpose of rating scale development; raters presented with examples of only high (largely desirable) levels of championship would likely fall into a response set (e.g., acquiescence, social desirability).

Behavioral statements were identified with dimensions empirically (using factor analysis), rather than rationally. Such an approach is different from that used in the development of BARS, but consistent with both the BOS and act frequency approach. Finally, prototypicality ratings, as used by Buss and Craik (1980), adapted from research in cognitive psychology (e.g., Rosch and Mervis, 1975) were obtained at the scale (rather

than item) level. The purpose of this step was to examine the relative prototypicality of the *factors* to the category of championship.

The methodology used and results obtained in Study 1 will be outlined below in five phases. This organizational structure was deemed necessary in light of both the complexity and sequential nature of Study 1. In Phase I, the generation of several hundred behavioral statements will be described. The rating of the behavioral statements for social desirability will then be described in Phase II. In Phase III, the first factor analysis, involving self-report data, will be outlined. In Phase IV, a second factoring, involving, this time, supervisory-report data, will be described. As well, a common, summary structure of championship will be derived. Finally, in Phase V the dimensions of championship arising from the factor (and item) analyses above will be named, rated for *prototypicality* by subject matter experts, correlated with two criterion measures, and discussed.

## Hypotheses

### *Hypothesis 1*

The two factor analyses will demonstrate that behavioral statements written to describe championship can be understood in terms of homogeneous and meaningful factors, each representing unique (but not orthogonal) first-order dimensions of championship. Moreover, the factors identified will be similar across the two factor analyses.

### *Hypothesis 2*

Two second-order factors will emerge from the intercorrelations among the first-order factors identified in both factor solutions. These two second-order factors will correspond to the dimensions presented in Table 2: (a)

Conceptualizing/Developing/Designing Innovation, and (b) Working to Promote Innovation.

### *Hypothesis 3*

First-order factors that relate to aspects of salesmanship and promotion will be judged by a panel of subject matter experts to be more *prototypic* of championship than the factors related to other aspects of the champion role.

### *Hypothesis 4*

Finally, it is hypothesized that first-order factors related to salesmanship will be seen as more *important* components of championship than will first-order factors related to innovation. First-order factors related to salesmanship will show positive and significant correlation with a criterion championship scale (containing items drawn from the definition of championship) that exceed the correlations of first-order factors related to innovation.

## Phase I: The Generation of Champion Acts

### *Method*

#### *Participants*

Panel member participants were nine female and 17 male managers from the British Columbia Telephone Company (BC Tel). Participants came from a variety of divisions in the company: New Business Initiatives (3 panel members), Finance and Administration (2), Human Resource Development (1), Corporate Planning (1), Business Customer Operations (2), Business Division (2), Strategic Customer Relations (1), Business Planning (1), Corporate Performance (1), General Business Sales (1), Marketing (3), Emerging Business (e.g., BC Tel Mobility) (4), Residential Sales and Services (2), Telecommunication Operations (1), and Engineering (1). Panel members came from entry-, middle-, and senior-level management groups.

Participants were recruited by a manager from Human Resources Development (HRD).<sup>9</sup> This HRD representative selected managers if she knew them to be: (a) knowledgeable about corporate innovation and championship, (b) champions of innovation themselves (either on the basis of past or present activity), or (c) involved in work projects that had given them first-hand experience with innovation and championship.

### *Developmental Steps*

Behavioral incidents (or acts) describing championship were generated by three panels of managers. The objective at this initial stage of criterion development was to obtain a large number of behavioral statements that would later serve as the foundation for dimension (scale) generation. Thus, both relevance and comprehensiveness of the champion behaviors obtained were concerns. Relevance was built into the process by involving managers in the scale construction process. Concerns of comprehensiveness were addressed by soliciting input from managers working in a variety of functional areas at different levels of responsibility and by soliciting a large number of behavioral statements. The precise sequence of steps involved in the criterion development is outlined below.

*Step 1.* Two panels of 10 managers each from BC Tel were convened in order to generate *behavioral incidents* (Smith & Kendall, 1963), analogous to *acts* (Buss & Craik, 1980; 1981)<sup>10</sup> that reflected both: (a) high levels of championship, and (b) the polar opposite of championship. The procedure used to generate behaviors highly characteristic of championship was identical to the process of act generation employed by Buss and Craik. The additional generation of statements reflecting the absence of

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<sup>9</sup> Pauline Elliott, Human Resource Development Coordinator at BC Tel, was an invaluable ally and sponsor in securing the support of participants at this stage and throughout the research project.

<sup>10</sup> For simplicity, henceforth, the term *act* will be used to refer to the behavioral statements. The reader should understand that the terms *behavioral incident* and *act* can be used interchangeably.



championship was carried out in order to permit measurement at the other end of the championship continuum.

In order to accomplish the objectives of Step 1, managers underwent a training process. First, they were introduced to the role of the champion in the innovation process. Managers were provided with the definition used in the present study: *The champion is an individual who informally emerges to take a new idea for either an administrative or technical innovation (an idea s/he may or may not have generated) and introduces, pushes, promotes, and sells the idea to others in the organization.*

Aspects of the definition were discussed in an open forum. The distinction between technical and administrative innovation was, for example, pointed out and panel members were encouraged to generate acts that pertained to both. The notion that the champion need not have been the original inventor of the idea was also stressed. The two-dimensional conceptualization of championship (Table 2) was introduced and discussed in detail. Time was provided for group debate. Most managers were very familiar with the notion of championship and there was little confusion among the panel members about the role of the champion.

Next, these same managers were asked to compose acts using a modification of the directions used by Buss and Craik (1980): *Please think of two people you know who you would describe as champions, ideally, one man and one woman. With these individuals in mind, write down 15 or 20 statements describing behaviors they might perform that would reflect their status as a champion.* The notion of a *behavioral incident* (or act) was stressed to panel participants. Panel members were instructed to compose the behavioral statements and record them in a booklet provided for the rating process (See Appendix A).

Panel members were then asked to consider the individual whom they would consider to be entirely lacking in the characteristics of the champion. Such a person would never engage in any of the behaviors characteristic of the champion. Raters were

given the following instructions: *Now, consider the individual whom you would consider to be entirely lacking in the characteristics of the champion. Such a person would never engage in any of the behaviors characteristic of the champion. Think of two people you know who you would describe as completely lacking in any of the characteristics of the champion. Such individuals would never have engaged in any of the behaviors you have just scripted. These people could, however, be very good-performing managers, valued people in the company operating at junior or senior levels.*

*Step 2.* Roughly four weeks later, a third panel of six managers was convened. After studying the acts generated by the first two panels, the present author found that the majority of championship behaviors generated appeared to be very desirable behaviors (e.g., "...volunteers for task forces or other projects where they can be a change agent"), while the majority of non-championship behaviors were generally undesirable (e.g., ".....puts up barriers to change; keeps a closed mind"). In the interests of ultimately balancing the final rating form for social desirability, the task for the third panel was to generate *desirable* non-championship acts and *undesirable* championship acts. Panel members were instructed to record their behavioral statements in the booklet provided (see Appendix B).

*Step 3.* The behavioral statements were edited (and reduced) by eliminating: (a) obvious redundancies, (b) non-act statements (e.g., adjectives), (c) vague statements, and (d) grammatical errors. Editing followed the recommendations of Buss and Craik (1981).

### *Results*

A total of 363 acts survived the editing described in Step 3 above. The 20 managers from the first two panels generated 171 non-redundant acts reflecting high levels of championship and 110 non-championship acts. After editing for redundancy, the six managers in the third panel composed 48 champion acts and 34 non-champion

acts. Thus, across all panels, 219 champion and 144 non-champion behavioral statements were written, for a total of 363 (see Appendix C for a listing of the 363 acts).

## Phase II: The Scaling of the Acts for Social Desirability

### *Overview*

Since a subset of the 363 acts would, eventually, comprise a criterion rating form (to obtain supervisory ratings of championship for Studies 2 and 3), the social desirability of these behavioral statements was a concern. Looking ahead to a multi-dimensional rating form, each dimension would, ideally, be measured by the same number of champion and non-champion acts (to control for acquiescence). Further, the average social desirability of champion and non-champion acts would be very similar. Otherwise, ratings of individuals on championship could reflect the bias of social desirability; ratees could obtain high scores on dimensions of championship because their rater judged them, generally, to be good, "likable" managers (assuming that champion acts are more socially desirable than non-champion acts). Achieving a balance on social desirability for champion and non-champion items would mean that the influence of social desirability would be neutralized or held constant. In order to obtain the item-level social desirability data needed for later decision-making during scale construction, Phase II was undertaken.

### *Method*

#### *Participants*

Participants were 14 managers from a variety of organizations in the Lower Mainland and six Ph.D. students in organizational behavior at the University of British Columbia (UBC). Participants agreed to take part in rating the social desirability of behaviors describing different types of "management activity". Participants were not told that the behavioral statements they were rating were designed to measure championship.

### *Design of the Questionnaire*

The 363 edited acts (hereafter referred to as *items*) obtained in Phase I were scripted in the third person, assembled into a questionnaire (see Appendix D), and administered to the 20 participants who rated each item for social desirability. The judges used a 9-point rating scale, ranging from 1 = *extremely desirable* to 9 = *extremely undesirable*. Participants were instructed to judge whether each statement reflected a generally desirable or undesirable activity as performed by a manager in a large company in North America. They were told that they should judge the desirability of these activities as they would seem if performed by *other managers* and not how desirable they would be if performed by the rater him/herself.

### *Calculation of Item Social Desirability*

Mean social desirability figures were computed for each of the 363 items across the 20 raters. Item social desirability standard deviations were also computed in order to check for the degree of agreement among the raters.

### *Results*

Item social desirability means were obtained for all 363 items. They ranged from a low of 1.4 to a high of 8.55. Item social desirability standard deviations were generally below 2.0, indicating that the majority of judges were in general agreement as to the social desirability of each item. These mean social desirability figures were archived for use during scale development in Phases III and IV and will be reported in the Results section of Phase III.

### *Phase III: Sample 1 Factor Analysis With Self-Report Data*

#### *Overview*

The 363 items obtained at the conclusion of Phase I (and rated for social desirability in Phase II) were then assembled into a questionnaire. Each of the items was

scripted in the first person, and champion and non-champion items were cycled throughout (see Appendix E). These questionnaires were distributed to 433 managers who rated themselves on each of the 363 items. These data, obtained via self-report ratings, were used to conduct a principal component analysis and a series of item analyses on this initial pool of 363 items.

Two important scale development processes began in Phase III. First, an initial factoring of the data resulted in the development of a preliminary structure of championship. Secondly, a series of item analyses conducted following the structural analyses, began the process of scale development. A large number of items were eliminated following these two main analyses, setting the stage for a more refined re-factoring of the data involving a new sample in Phase IV.

### *Method*

#### *Participants and Data Collection*

Participants were 292 male and 141 female managers from seven Canadian organizations: The British Columbia Hydroelectric Corporation (BC Hydro), Manitoba Telephone System (MTS), the Insurance Corporation of British Columbia (ICBC), The British Columbia Transit Corporation (BC Transit), the Ministry of Transportation and Highways, H.A. Simons Ltd., and the University of British Columbia (UBC). Participation rates for each company, broken down by gender were as follows: (a) 71 men and 20 women from BC Hydro, (b) 8 men and 21 women from MTS, (c) 31 men and 42 women from UBC, (d) 40 men and 2 women from H.A. Simons, (e) 40 men and 4 women from B.C. Transit, (f) 34 men and 3 women from the Ministry of Transportation and Highways, (g) 68 men and 49 women from ICBC.

Organizational support was initially solicited by mail. The present author obtained the names and addresses of Human Resource (HR) managers from roughly three dozen organizations. A request was sent out by mail, asking for the support of the

company in the present research. A covering letter and a research proposal was enclosed. This initial request was followed up by a phone call to the HR contact person.

The HR contact person from each company was promised two things in exchange for the organization's support of the project: (a) each participant would receive a personalized, feedback report in which his/her standing on a number of dimensions related to championship would be featured, and (b) the company would receive a summary feedback report, in which the *organization's* overall standing on the championship dimensions would be reported, relative to the other participating companies (see Appendix F). Five organizations agreed to support the project. The support of the two other organizations was obtained through more informal means (personal contacts), bringing the total number of participating organizations to seven.

Data collection began in the spring of 1993 and continued into the late summer of that year. Questionnaires were distributed through internal mail in each of the seven organizations. Questionnaires were accompanied by a covering letter from both the HR project coordinator and the present researcher. Confidentiality was assured by having participants choose a 6-digit code number to identify themselves. They were not required to place their name anywhere on the questionnaire. Participants were told that, in order to obtain their feedback report, they would, of course, need to remember their code number, since this would be the only identifying information that would appear on the feedback form.

### *Data Analysis*

The analyses in Phase III were organized around the two primary and related objectives of Study 1: (a) the identification of the structure of championship, and (b) the development of criterion rating scales for Studies 2 and 3. Thus, in the pursuit of the first objective, the 363 items were subjected to a principal component analysis. This structural analysis was followed by an item analysis conducted within each component. Items were

identified and retained within a component if they possessed desirable psychometric properties. These structural and item-level analyses will now be described in more detail.

*Structural analysis.* In order to pool the data from the seven organizations, the scores were mean-deviated, within each organization, in order to eliminate the possibility of between-groups correlation. The 363 items were then subjected to a principal component analysis in order to obtain the eigenvalues needed to address the number-of-factors issue, through the scree test (Cattell, 1966) and the Kaiser-Guttman number of eigenvalues greater than unity rule. A third approach was also used to examine the number-of-factors issue. A number of different component solutions were chosen (for numbers of components ranging from 5 to 15 inclusive) and each unrotated pattern was transformed via a Harris-Kaiser transformation at three different degrees of obliquity ( $c = 0, .25, \text{ and } .5$ ), and the best solution chosen on the basis of complexity and hyperplanar count. Each of these 11 best rotated component patterns was then examined for conceptual clarity. More detail on the component analysis is given in the results.

*Scale development.* Once the component analysis was complete, the transformed component pattern was examined and a series of analyses performed to identify a subset of psychometrically sound items to measure each component. Naturally, it was neither desirable (nor possible) to retain the original set of 363 items used in the component analysis. Thus, the objective was to identify and retain a much smaller subset of items that: (a) loaded significantly on a component, and (b) possessed desirable psychometric properties.

First, factorially-complex items were identified and retained on the component where they had the highest loading (and made the most conceptual sense). Secondly, and concurrent with the previous analysis, items were identified and eliminated that had not successfully "retranslated" in the component analysis, i.e., items that were originally written as, for example, *champion* items that subsequently loaded on the *non-champion*

end of a scale (or items originally written as non-champion items that loaded on the champion end of a scale).

Next, the following results were considered, concurrently, in choosing the items for each component: (a) item-scale correlations (to maximize internal consistency), (b) item-total championship correlations<sup>11</sup> (to ensure that the items retained were related to overall championship), (c) mean social desirability of the items (items were retained such that, within a scale, the mean social desirability value for all champion items was close to the mean social desirability value for all non-champion items), and (d) balance of the number of champion and non-champion items within each scale (to control for acquiescence). Obvious item redundancies were eliminated and an attempt was made to eliminate items that, although retained in only one scale, were factorially complex (had loaded on one of the other components). Finally, items were examined for conceptual clarity and considered for elimination if apparently inconsistent with the general theme of the component.

## *Results*

### *The Component Solution*

Standard number-of-factors rules were difficult to follow in arriving at an optimal component solution, given the vast number of variables in the analysis. Cattell's (1966) scree test was inconclusive, indicating 3, 6, and 11 components. The Kaiser-Guttman number of eigenvalues greater than unity rule indicated 107 components. A maximum-likelihood solution was not possible, precluding the examination of this source of information on the number-of-factors issue.<sup>12</sup>

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<sup>11</sup> A total championship score (TCS) was calculated by summing all 363 items (with the non-champion items reflected). Then, item-TCS correlations were computed.

<sup>12</sup> A maximum likelihood solution could not be obtained because the correlation matrix could not be inverted. With 363 items, the eigenvalues of the last few items were very close to 0; thus, the determinant—the product of all the eigenvalues—approached 0. Therefore, a likelihood ratio significance test could not be conducted to examine the optimal number of common factors to extract.



Ultimately, the number of factors issue was settled by means of the third approach described briefly in the Method section. Eleven component solutions were obtained (for numbers of components ranging from 5 to 15 inclusive) and each was rotated, via a Harris-Kaiser transformation, at three different degrees of obliquity ( $c = 0, .25$ , and  $5$ ). Within each of the 11 solutions, the "best" transformed solution was obtained according to the criteria for simple structure (Thurstone, 1947). Specifically, simple structure was operationalized by two methods: (a) the number of complex, and (b) the number of hyperplanar (values  $< .10$  in absolute value) coefficients in the transformed pattern. The one optimal transformation for each of the 11 solutions was then examined with respect to component homogeneity and conceptual clarity. Thus, the final decision on the number of factors to retain was made according to the interpretability and parsimony of the overall solution.

Ultimately, a 12-component solution was chosen. A fair degree of factor fusion was apparent with small numbers (5 to 8) of components. That is, large components were identified that appeared to measure more than one conceptual theme. At the other end of the continuum (13 to 15 components), *homogeneous* components began to divide (factor fission). Solutions for 9 through 13 components resulted in the emergence of eight core components—components that appeared in all five solutions. In the 11-component solution, a new component emerged, and in the 12-component solution, a heterogeneous component split into two clearly interpretable components, a desirable outcome. The 13-component solution resulted in the emergence of a new heterogeneous, "non-champion" component (all items were non-champion statements). At the 14- and 15-component solutions, splitting of homogeneous components continued to occur.

The components contained in the 12-component solution were easily interpretable and relatively homogeneous; as well, each component contained a sufficient number of items, such that item deletion would be possible following an item analysis (in the 14 and

15-component solutions, some small—8 to 10-item—components were identified that would likely have been reduced down to 4 or 5 items following an item analysis).

For the 12-component solution chosen, the most orthogonal transformation ( $c = .50$ ) resulted in the greatest number of hyperplanar entries in the pattern (2546) and the lowest complexity count (88). Thus, this transformation of the 12-component solution was chosen and served as the starting point for the item-level analyses described below.

### *The Development of Preliminary Championship Scales*

The second objective of Phase III was to build on the results of the structural analyses described above in order to develop scales that possessed superior psychometric properties (e.g., high internal consistency). At the conclusion of Study 1, it was desired that each of the scales: (a) contain equal numbers of champion and non-champion items, (b) be balanced for social desirability, and (c) possess high internal consistency.

Ultimately, the 363 items were reduced to 119 items that possessed the most desirable psychometric properties. Decisions on item elimination were made with regard to a number of considerations noted earlier in the Method section (e.g., item-scale correlations). Following an initial culling of complex items and items that failed to "retranslate", the 363 items were pared down to 250 items. An additional 131 items were deleted following the various item-level analyses (e.g., item-scale correlations). In some cases, candidates for deletion were obvious, while in other cases, the choice was made difficult by the fact that, for example, item-scale correlations might have been high (indicating an item that would contribute positively toward internal consistency), but social desirability ratings on the item would lead one to eliminate the item in order to better balance the scale for social desirability.

Following the item-level analyses, 11 scales measured by a total of 119 items were retained. One of the 12 components was eliminated because: (a) it was made up of only nine items, (b) contained only non-championship items, and (c) posed interpretive

difficulties. A complete listing of the items retained in each scale is presented in Appendix G, along with item social desirability figures, item loadings, scale alpha coefficients, and preliminary, "working" scale labels, the latter generated by the author with the assistance of four colleagues<sup>13</sup>. A more concise summary listing of the scales is presented below in Table 4.

*Social desirability and the balancing of champion and non-champion items.*

Although every attempt was made to balance all 11 scales with equal numbers of champion and non-champion items, the reader will note from Table 4 that some scales were marked by only two or three items at one pole (typically the non-champion pole), with one extreme exception, Big Picture Perspective, where all eight items were non-championship items. Further, some scales emerged unbalanced for social desirability; typically, the more socially desirable items were found anchoring the champion pole of the scale.

In order to address these two scale development concerns, 17 new items were written by the present author in cooperation with a colleague; these new items are clearly labeled in Appendix G. The present author returned to the participants who had rated the social desirability of the original pool of 363 items and, once again, enlisted their help in rating the social desirability of these new items.

Items were written for six of the 11 scales; those scales unbalanced for: (a) number of champion and non-champion items, and (b) mean social desirability. For example, new items for Self Promotion and Action Orientation were scripted in the hopes that these items would, in a future structural analysis, load on the scales for which they were written and, thus, better balance the scale for champion vs. non-champion items

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<sup>13</sup> The generation of final scale labels will be described in Phase V of Study 1. The labeling was done by subject matter experts after a second factor analysis and item analysis was conducted. The labels shown in Appendix G and Table 4 are preliminary attempts to summarize the general theme of the component.

Table 4

*Psychometric Properties of the Preliminary Championship Scales at the Conclusion of Phase III*

	No. of Items		Social Desirability		Cronbach's Alpha
	Ch <sup>1</sup>	Non-Ch <sup>2</sup>	Ch	Non-Ch	
1. Verbal Dominance	7	3	7.13	5.13	.77
2. Rushed Disorganization	5	7	6.14	3.11	.85
3. Rule Breaking	7	6	5.24	4.58	.85
4. Self Promotion	8	1	4.87	4.11	.60
5. Willingness to Confront	6	4	4.96	5.79	.67
6. Persuasiveness & Political Savvy	8	3	2.27	7.41	.81
7. Job Involvement	7	5	5.38	5.42	.74
8. Action Orientation	8	3	2.22	5.69	.75
9. Collaboration and Support	8	3	1.78	6.98	.82
10. Openness to Change	7	5	2.34	6.01	.82
11. Big Picture Perspective	0	8	N/A	4.20	.70
Across the 119 items	71	48	4.23	5.31	N/A

<sup>1</sup> Number of champion items in the scale.

<sup>2</sup> Number of non-champion items in the scale.

(particularly in the case of Self Promotion). At the same time, these new items were also written such that they would better balance the scale for social desirability. Thus, the two items written to anchor the non-champion pole of Action Orientation, for example, were scripted to be socially desirable non-champion items (a considerable challenge given the generally positive valence attributed to North American managers who are decisive and action oriented). The social desirability ratings obtained on these two new items (3.61 and 2.83) give evidence that this objective was met, assuming, of course, that these two items would load on Action Orientation in a subsequent factor analysis.

At the conclusion of Phase III, across all scales, the champion items were judged to be roughly one scale point more desirable than the non-champion items (rated on a 9-point scale). Thus, an overall championship social desirability balance was not, at this stage, achieved. As well, the overall rating form contained 71 champion and 48 non-champion items. In general, scales contained more champion than non-champion items. Thus, the response set of acquiescence could operate if such a scale were put into use for obtaining ratings of behavior. In order to address these shortcomings, the key objectives of Phase IV would be to better balance: (a) the scales for social desirability, (b) the overall rating form for social desirability, and (c) the number of champion vs. non-champion items within each scale, while maintaining high levels ( $\alpha \approx .80$ ) of internal consistency reliability.

*Scale reliability.* The internal consistency reliabilities for each of the 11 scales are also listed in Table 4. These ranged from a low of .60 to a high of .85, with a mean alpha coefficient of .76. With the exception of Self Promotion and Willingness to Confront, the scale alpha coefficients reached levels of .70 or greater. The most problematic scale was Self Promotion ( $\alpha = .60$ ), for which three new items were written. All things considered, however, the 11 scales showed acceptable internal consistency reliability at this preliminary stage of scale development.

## Phase IV: Sample 2 Factor Analysis With Supervisory Report Data and the Application of Meredith's (1964) Method One Procedure in the Derivation of a Common Factor Pattern

### *Overview*

In Phase IV, the items surviving the structural and item-level analyses described in Phase III were re-factored in a new data set, this time, obtained via supervisory-report ratings. Ratings of 168 managers by their supervisors on the various championship items, thus provided the data needed to conduct: (a) a second factor analysis, and (b) a second series of item analyses.

The second factor analysis permitted application of Meredith's (1964) Method One procedure, in which the data (unrotated pattern matrices) from the two factor analyses were combined, and, ultimately summarized, in the form of a common pattern matrix, that was then rotated for interpretation. This common pattern was then used as a starting point for item-level analyses that yielded the final rating scales. Finally, a second-order factor analysis was carried out, once again via Meredith's Method One procedure. Thus, at the conclusion of Phase IV, a higher-order structural model of championship was articulated and rating scales were refined that would serve as criterion measures for Studies 2 and 3. The scales arising from this higher-order structure of championship will be described and interpreted in the final phase of Study 1, Phase V.

### *Method*

#### *Participants*

Participants were 86 managers who provided ratings on 168, entry-, middle-, and senior-level managers at BCTel. Of the 168 ratees, 124 were male and 44 were female.

The managers who provided the ratings were asked to take part in a research project being conducted by the present author on "Management Practices". Participation

was voluntary, but encouraged by the company Human Resource coordinator. In exchange for participation, each rater was provided with a feedback report in which the overall company profile on championship was featured (see Appendix H). In the interests of securing the cooperation of the raters (and, at the request of the HRD coordinator), no feedback was generated for the ratees.

The managers being rated had been participants in an annual assessment center conducted with company managers. A total of 286 managers had taken part in the assessment center over a period of six years. Ratings on 28 of the original sample of 286 managers could not be obtained for a variety of reasons (the manager had resigned or passed away). Thus, the present author attempted to obtain ratings on 258 managers. An attempt was made to obtain the support and cooperation of all BC Tel employees who could provide ratings on these 258 managers (the 258 managers were supervised by 110 higher-level managers). On December 15, 1993 the 110 managers were sent a package (described below), which contained materials soliciting their support of the project. By the middle of March, after several follow-up phone calls, 168 ratings had been received. Data collection for Phase IV of Study 1 was terminated on March 18, 1994. Thus, 78% (86/110) of the raters participated, yielding ratings for 65% (168/258) of the ratees.<sup>14</sup>

### *The Rating Form*

All items contained in the rating form were scripted in the third person and began with the stem: "The manager I'm rating". Each rater was instructed to consider the activity of the manager being rated over the past 12 months and rate the extent to which the ratee had engaged in each behavior (see Appendix I for a copy of the rating form).

The 136 championship items (the 119 items surviving the analyses in Phase III plus the 17 new items) made up the majority of the items contained in the rating form administered to the raters. An additional 36 items were included in the questionnaire to

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<sup>14</sup> One month later, an additional 6 ratings were received. These could not be used in Study 1, but do comprise part of the sample for Studies 2 and 3.

measure dimensions of general management performance<sup>15</sup> (e.g., Leadership, Written Communications; see Hakstian, Woolley, Woolsey, & Kryger, 1991 for a detailed description of the development and meaning of the dimensions). These 36 BOS items were similar in form and style to the championship items (e.g., "The manager I'm rating is unshakable under heavy pressure and confrontation; does not lose confidence"). In the present study, the dimension scores were summed and used as a measure of overall management performance in order to examine the relationship between overall management performance and championship.

In addition to the 172 items described above, 5 "criterion" championship items were scripted and included. One of the five items was taken directly from the definition of championship: "The manager I'm rating takes new ideas for an innovation (an idea s/he may or may not have generated) and introduces, pushes, promotes, and sells ideas to others in the organization." The other four items were written to tap into discrete components of the definition, for example: "The manager I'm rating generates a number of new ideas on his/her own." Taken together, these five items can be seen as a *criterion* measure of championship, since they were written to directly measure the behaviors connected with the definition of championship.<sup>16</sup> The inclusion of these items permitted the present researcher to examine the extent to which scores on this criterion correlate with ratings of championship on the various dimensions. Thus, it was possible to order the dimensions on a continuum ranging from closely related to ratings of overall championship (high positive correlation) to unrelated to overall ratings of championship (low to zero, non-significant correlation), to negatively correlated with overall championship. This analysis will be discussed in more detail in Phase V.

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<sup>15</sup> These items are reproduced in Appendix J.

<sup>16</sup> Four of these five items were also administered to participants in Study 3 (the ratees in Phase IV, Study 1), appended to the championship simulation. Study 3 participants were asked to indicate whether they had engaged in each of the four championship behaviors. Thus, both self- and supervisory-report data were collected to serve as "criterion" ratings of championship; both will be reported and discussed in Phases IV and V.



### *Distribution of The Rating Form*

The present author assembled a package to be mailed out to the raters containing: (a) one rating form and the appropriate number of answer sheets (one for each manager the rater supervised), (b) a covering letter from the present author, (c) a covering letter from the Director of Human Resources, and (d) an envelope stamped confidential to be used to return the completed answer sheets. Instructions indicated that answer sheets were to be returned, sealed, in the envelope to a contact person in Human Resources, care of the present author. Raters were told that their ratings would be seen by the present author only and that no individual-level feedback would be given to their subordinates.

### *Data Analysis*

The procedures used in this section were chosen in response to a need to: (a) obtain a structural model of championship that was a "best-fit" to both the self-report data obtained in Phase III and the supervisory-report data collected in Phase IV, and (b) further refine and improve upon the psychometric properties of the scales arising from the structural analyses.

To accomplish the first objective, Meredith's (1964) Method One procedure was used. Briefly, this procedure involved the aggregation of unrotated sample factor pattern matrices (in the present application, two sample factor patterns) to obtain a single, common, factor pattern matrix. The sample patterns were then rotated into congruence with this common pattern. The Meredith procedure permitted a more elegant pooling of the data than if the data from the two samples had been simply combined and factor-analyzed in a single, pooled factoring of the data. The generation of a single common pattern was a key priority for the present study, in that it would permit the interpretation of a single structure of championship. It was also of interest to examine the extent to which each of the two sample patterns fit the common pattern. The procedures used in the present study will now be explained in more detail.

*First-order factor structure.* As a first step in the application of Meredith's (1964) Method One procedure, the 119 items identified in Phase III were subjected to an unweighted least-squares common factor analysis in both Sample 1 (the self-report data collected in Phase III) and Sample 2 (the supervisory-report data collected in Phase IV). Thus, the Sample 1 data set was re-analyzed, using, this time, an unweighted least-squares common factor model. This same factor model was then used to analyze the same 119 items, but in Sample 2. Since Meredith's procedure is critical to Phase IV, the algebraic model will now be outlined in a bit more detail.

Meredith's (1964) Method One procedure permits the derivation of a single, common factor pattern matrix. It is a least-squares procedure that results in the derivation of two matrices,  $Q$  and  $T_i$ , where  $T_i$  is a nonsingular transformation matrix and  $Q$  is a semi-orthogonal matrix. The matrix  $Q$  and the  $k$  sample matrices  $T_i$  provide a "best fit" to the various sample patterns in that they minimize the sum of squares in the error matrix  $e_i$ , where  $e_i = F_i T_i - Q$ .

The solution to the minimization problem is an Eckart-Young factorization of a matrix  $G$ , where  $G = (1/k) \sum F (F'F)^{-1} F'$  ( $F$  is the unrotated sample factor pattern matrix, and the summation is over the  $k$  groups, in the present study, two). The product  $G$  is obtained for the  $k$  samples and then averaged. Note that the data from the  $k$  samples is combined, but at the factor pattern, rather than the raw data, level and, therefore, any between-groups (in this case, between the two samples) correlation that might arise because of group mean differences on the variables is precluded. In summary,  $Q$  is the decomposition of  $G$ , whose columns are the normalized eigenvectors corresponding to the  $m$  largest eigenvectors in  $G$ .  $Q$  is the common primary factor pattern matrix.

In the present study, the matrix  $Q$  was transformed to simple structure. This latter step was taken in order to enable the interpretation of the common primary factor pattern matrix. Recall that, since  $Q$  is a matrix containing normalized eigenvectors (and, thus, the columns sum to unity), the coefficients in this matrix, although analogous to

"loadings", will be much smaller. It can be shown (see Hakstian, 1976) that an orthogonal rotation (such as Quartimax) does not affect the least-squares criterion, and that, like Q, QR (where R is the transformation matrix) also minimizes the sum of squares in the error matrix  $e_i$ , where  $e_i = F_i T_i - QR$ .

Finally, the sample factor patterns (in this case, two) are rotated into congruence with the common pattern. Typically, the transformation of the sample factor pattern matrices is done using procrustean methods; this same approach was followed in Study 1. Thus, QR was conceptualized as the "hypothesized", true structure of championship, and an attempt was made to fit each of the two sample pattern matrices to this target. The oblique procrustes procedure, while allowing the factors to correlate, minimizes, in a least-squares sense, the differences between the sample matrices and the target matrix.

*First-order factor congruence.* Following application of Meredith's (1964) Method One procedure, three patterns were obtained: (a) the common rotated pattern (QT), (b) the Sample 1 factor pattern transformed into congruence with QT, and (c) the Sample 2 factor pattern matrix similarly transformed. In order to examine the similarity of the two sample factor patterns to each other and the similarity of each of the two sample patterns to the common pattern, congruence coefficients (Tucker, 1951) were computed between each of the corresponding factors across the three patterns. Thus, this analysis provided a check on the extent to which Meredith's procedure was successful in deriving a common pattern that was a close fit to both sample factor patterns, in that the degree of congruence could be directly assessed. As well, the corresponding factors from the two sample patterns could also be examined directly for similarity or congruence.

*Scale development.* Following the structural analyses and the calculation of congruence coefficients, the two primary factor pattern solutions for Samples 1 and 2 (arising from the two transformations to congruence) were then reviewed in order to make decisions on item retention. In choosing items for each factor, the loadings in both

of the sample patterns were examined.<sup>17</sup> The following decision rule was applied in determining whether or not each item had a salient loading on the given factor: the item loadings across the two sample patterns had to average to  $>.25$ , and not be  $< .20$  in either sample. Thus, an attempt was made to ensure that an item chosen for membership in a given factor demonstrated a relationship to that factor in both samples, a conservative procedure made possible as a result of the Meredith procedure.

Finally, the 17 new items written following the first factor analysis were considered. These items could not, of course, be included in the main analysis involving the Meredith (1964) Method One procedure, since the two sample unrotated patterns must be based on the same number of items (in this case, 119). It was, however, important to discover if the new items written to supplement the factors obtained in Sample 1, could be used to augment the factors arising from the Meredith One procedure. Thus, bivariate correlations were computed between the 17 new items, on the one hand, and unit-weighted linear combinations (simple sum) of the items having salient loadings on each of the 11 factors, on the other. Using this procedure, selected new items could be placed onto scales with which they correlated significantly.

Once the salient loadings in the two sample rotated patterns had been identified, the issue of complexity was addressed. Items with salient loadings on more than one factor were examined and a decision made to include such items on only one factor. In making this decision, the factor loadings and the item scale correlations were considered. An attempt was also made to retain items on factors where they made the most conceptual sense. These decisions were generally straightforward, because of converging lines of evidence between the three decision criteria.

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<sup>17</sup> Note that the loadings from the two sample patterns rotated into congruence with the common pattern were examined rather than the loadings from the common pattern. This was done because the common rotated pattern (QT) does not contain "true" factor loadings. Recall that QT is a matrix of rotated eigenvectors (where the sum of squared entries for each column, must, by definition sum to unity). Thus, the numerical entries in the matrix are in a different scale (smaller) than are the numbers in a conventional rotated pattern matrix.

Two further analyses were conducted to refine the scales. An item analysis, as well as a social desirability analysis, was undertaken. Item-scale correlations were computed, and items were removed if their deletion improved significantly the scale's internal consistency reliability. A final sweep was made with consideration given to social desirability. The objective here was to balance the mean social desirability for all champion items with the mean social desirability for all non-champion items for all the scales.

*Second-order factor structure.* A second-order factor analysis was then undertaken. The correlation matrices among the scales were subjected to an unweighted least-squares common factor analysis and Meredith's (1964) Method One procedure was once again implemented. A second-order common factor pattern was obtained, and the two sample patterns were each transformed into congruence with the second-order common pattern. Congruence coefficients were once again calculated among the factors arising from the three second-order factor patterns in order to examine the generalizability of this higher-order structure of championship, across two samples involving two different forms of ratings—self- and supervisory-report.

## *Results*

### *First-Order Factor Congruence*

Following the application of Meredith's (1964) Method One procedure, three patterns were obtained: (a) the common primary pattern, (b) the Sample 1 pattern transformed into congruence with the common pattern, and (c) the Sample 2 pattern transformed into congruence with the common pattern. Before proceeding to a discussion of the factor solution, the issue of factor congruence will first be addressed. That is, to what extent has the use of the Meredith Method One procedure resulted in the specification of factors in the three patterns that are highly similar (or congruent) with each other?

Congruence coefficients between each of the two sample patterns as well as between the common and each of the two sample patterns were calculated. These are reported in Table 5. Looking across the first two rows, the 11 factors show relatively high ( $\approx .90$ ) congruence between each sample pattern and the common pattern, indicating that the use of Meredith's (1964) Method One procedure resulted in the specification of a common pattern that provided a good fit to each of the two individual sample patterns for each factor. For example, the overall average sample-common pattern congruence coefficient was .92, ranging from a low of .87 (Factor 9—Openness to Change) to a high of .96 (Factor 3—Rushed Disorganization). Comparing the first two rows, it appears that the Sample 1 and 2 patterns fit the common pattern equally well. As would be expected, the between-sample congruence coefficients are somewhat lower, ranging from .61 (Factors 9 and 10) to .86 (Factor 3). The overall mean between-sample factor congruence coefficient was .73.

It is difficult to state precisely the degree of fit that these numbers represent, or whether a congruence coefficient of .61, for example, indicates a lack of fit, since congruence coefficients cannot be tested for significance. Like correlation coefficients, a value of unity indicates perfect agreement, or, more accurately in the case of congruence coefficients, perfect proportionality. Unlike correlation coefficients, congruence coefficient values around .60 are not typically considered to reflect good fit, however. Although there exist no definitive rules to guide the interpretation of congruence coefficients, some general guidelines can be gleaned from the work of various researchers. Harman (1976), for example, described congruence coefficients in the range of .86 to .98 as all indicating good congruence. Hakstian and Vandenberg (1979) characterized congruence coefficients in the range of .77 to .95 as indicating high congruence, while Tucker (1951), as cited in Harman (1976), considered coefficients ranging from .999984 down to .939811 as defining congruent factors.

Table 5

*Congruence Coefficients Among The Three Pattern Matrices For the Eleven First-Order Factor Scales*

	First-Order Factor Scales										
	1 (VD)	2 (RD)	3 (RB)	4 (SP)	5 (WC)	6 (PPS)	7 (JI)	8 (AO)	9 (CS)	10 (OC)	11 (BPP)
Sample 1 (Self-Report) & Common Pattern	.93	.96	.92	.91	.90	.95	.91	.94	.91	.88	.88
Sample 2 (Sup.-Report) & Common Pattern	.92	.96	.93	.91	.90	.95	.91	.94	.91	.87	.88
Sample 1 & Sample 2 Patterns	.77	.86	.76	.71	.68	.83	.72	.78	.70	.61	.61

*Note.* The column headings refer to the following first-order factors: VD = Verbal Dominance; RD = Rushed Disorganization; RB = Rule Breaking; SP = Self Promotion; WC = Willingness to Confront; PPS = Persuasiveness and Political Savvy; JI = Job Involvement; AO = Action Orientation; CS = Collaboration and Support; OC = Openness to Change; BPP = Big Picture Perspective.

Given these general guidelines, it seems likely that at least two of the factors (Openness to Change and Big Picture Perspective) differed appreciably in the self- and supervisory-report data samples. The remainder of the between-sample congruence coefficients, ranging from .68 to .86, showed adequate, but not strong, congruence.

### *The First-Order Championship Factor Scales*

Following the structural and item-level analyses, 10 first-order factor scales were obtained.<sup>18</sup> The 10 scales are summarized in Table 6 (see Appendix K for a detailed listing of each scale including the item content). Ninety-two items out of the original pool of 136 (119 items + 17 new items) were retained. Eleven of the 17 new items (written to better anchor one pole of the scales generated at the conclusion of Phase III) were retained, although not necessarily on the scale for which they were originally written. For example, two items originally written to measure the champion pole of Big Picture Perspective were retained on Persuasiveness and Political Savvy.

With the exception of Persuasiveness and Political Savvy, the scales summarized in Table 6 are generally well balanced for numbers of champion and non-champion items. Across all scales, the final rating form is made up of 51 champion and 41 non-champion items. Thus, although not completely eliminated, one possible source of response bias (acquiescence) has been minimized.

*Scale social desirability.* Turning to the social desirability figures in Table 6, the overall 92-item scale is very close to being perfectly balanced. The 51 champion items are only slightly more desirable ( .24 on a 9-point scale) than the 41 non-champion items. Thus, when used as a rating form, overall scores should not be affected significantly by

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<sup>18</sup> One of the eleven factors, Big Picture Perspective, was dropped because: (a) it had the lowest congruence coefficient across the two samples (.61), (b) even after a careful item analysis, it had a relatively low alpha ( $\alpha = .57$ ), (c) 6 of the 8 items were complex, and (d) the scale contained only non-champion items.



*Table 6**Psychometric Properties of the Final First-Order Factor Scales*

	No. of Items		Social Desirability		Cronbach's alpha
	Ch	Non-Ch	Ch	Non-Ch	
1. Verbal Dominance	6	4	7.53	3.53	.83
2. Rushed Disorganization	4	6	5.97	3.03	.84
3. Rule Breaking	5	5	5.72	4.40	.78
4. Self Promotion	5	5	5.32	3.28	.82
5. Willingness to Confront	4	5	4.68	4.57	.80
6. Persuasiveness & Political Savvy	8	0	2.72	N/A	.80
7. Job Involvement	5	4	4.80	6.33	.82
8. Action Orientation	5	4	3.00	5.25	.80
9. Collaboration and Support	5	3	1.89	6.98	.79
10. Openness to Change	4	5	2.84	5.91	.83
Total	51	41	4.40	4.64	N/A

social desirability, since this potential response set has been anticipated and held constant by balancing champion and non-champion items for social desirability.

With the exception of Willingness to Confront, the championship *scales* are not well balanced for social desirability. In some cases, the champion items are more desirable, while in other cases, the opposite is true. Clearly, high scores on some of the scales would be seen as inherently positive by most managers. For example, notice the positive desirability given to the championship items on the Collaboration and Support scale. Such scales pose a challenge for item writers, seeking to develop a scale to rate behavior. Items describing unsupportive, uncollaborative, independent management behavior are viewed by most managers as generally undesirable. Their use will likely lead to the development of scales that correlate significantly with measures of social desirability.

*Scale internal consistency reliability.* The scale internal consistency reliabilities are reported in the last column of Table 6. They range from a low of .78 (Rule Breaking) to a high of .84 (Rushed Disorganization). The scales show very satisfactory internal consistency reliability based, as they are, on extensive structural and item-level analyses.

#### *Second-Order Factors of Championship*

Within each of the two samples, intercorrelations were then computed among the factor scales reported in Table 6. These two intercorrelation matrices were then subjected to principal component and maximum likelihood factor analyses. In Samples 1 and 2 Cattell's (1966) scree and Kaiser-Guttman tests both indicated that three factors was likely the correct number of second-order factors to extract (in Sample 1, the eigenvalues of R were: 2.73, 1.89, 1.16, 0.91, 0.77, 0.70, 0.52, 0.50, 0.47, 0.35; in Sample 2 the eigenvalues of R were: 3.00, 2.67, 1.09, 0.78, 0.64, 0.51, 0.40, 0.35, 0.31, 0.26). In Sample 1, the likelihood ratio test indicated five factors; at five factors, the results of the likelihood ratio test reached non-significance  $\chi^2(5) = 10.87, p < .06$ . In Sample 2, the

likelihood ratio test indicated four factors; at four factors, the results of the likelihood ratio test were  $\chi^2(11) = 13.72, p < .25$ .

The results of the three tests were inconclusive, although a three-factor solution seemed indicated, given the convergence between both the scree and the Kaiser-Guttman criteria. Four and five-factor solutions seemed undesirable and would have resulted in little data simplification for a 10-variable correlation matrix. Therefore, an exploratory approach to the number-of-factors issue was undertaken. Meredith's (1964) Method One procedure was applied, once again, but this time at the second-order factor level, in order to examine the quality and interpretability of solutions obtained for various numbers of factors.

An unweighted least-squares common-factor model was employed and the following analyses were done separately for both the two- and three-factor solutions: (a) Meredith's procedure was used to obtain Q, the common unrotated factor pattern, (b) Q was then rotated to simple structure by means of a Quartimax rotation, resulting in the matrix QT (the common rotated factor pattern, and (c) the Sample 1 and 2 unrotated sample factor patterns were transformed into congruence with the common pattern. Thus, for each of the two- and three-factor second-order solutions, three rotated patterns were obtained: (a) the common rotated factor pattern (QT), (b) the Sample 1 pattern transformed into congruence with QT, and (c) the Sample 2 pattern transformed into congruence with QT.

Factorial complexity was carefully examined in arriving at a decision between the 2-factor and 3-factor solutions. A related concern was the meaningfulness of the second-order factors arising from the 2-factor and 3-factor solutions. Beginning with the 3-factor solution, a relatively high degree of factorial complexity<sup>19</sup> was apparent, particularly in the two sample patterns rotated into congruence with the common pattern. For example,

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<sup>19</sup> A scale was considered factorially complex if it had a loading of  $> .25$  on more than one of the higher-order factors.

four of the 10 scales were complex in Sample 1, while seven of the scales were complex in Sample 2. This was in contrast to the 2-factor solution where complexity was of less concern (3 complex scales in Sample 1 and 2 complex scales in Sample 2).

The greater factorial complexity evident in the 3-factor solutions made factor interpretation more difficult than in the 2-factor solutions. As well, the implications for second-order scale development were troublesome (i.e., a given first-order scale might be included in a linear combination for two [even three] second-order factors). For these reasons, the 2-factor second-order structure was chosen.

The three rotated pattern matrices for the 2-factor second-order structure are presented in Table 7, along with the primary-factor intercorrelations. In subsequent discussions of this second-order structure, the greatest interpretive weight will be given to the common pattern, based, as it is, on an aggregation of 601 subjects across two samples of both self- and supervisory-report data.

The common factor pattern matrix meets many of the requirements for simple structure. That is, factorial complexity was evident for only one of the 10 variables, Rushed Disorganization, and each column contained at least two (the number of factors) hyperplanar coefficients. The first-order factors Verbal Dominance, Rule Breaking, Self Promotion, Persuasiveness and Political Savvy, and Action Orientation clearly loaded on only one of the two second-order factors, while four of the remaining five first-order factors were only moderately complex (i.e., their loadings on the second factor were  $< .20$ ). The loadings for Rushed Disorganization across the three patterns indicate that it likely belongs with Factor I, but its loading was high enough on Factor II to suggest complexity.

Table 7

*Primary Common-Factor Pattern Matrices for the Aggregated and Separate Samples and the Related Primary-Factor Correlation Matrices for the Second-Order Factors*

*(Decimal Points Omitted)*

	Common Pattern		Sample 1 Self-Report		Sample 2 Supervisory-Report	
	Factor		Factor		Factor	
	I	II	I	II	I	II
First-Order Factor Scale						
1. Verbal Dominance	51	-08	66	-05	81	-15
2. Rushed Disorganization	42	-24	70	-35	46	-27
3. Rule Breaking	54	04	76	04	81	09
4. Self Promotion	28	09	29	26	54	-03
5. Willingness to Confront	32	14	33	17	62	22
6. Pers. & Political Savvy	03	47	05	69	06	58
7. Job Involvement	14	26	21	22	21	52
8. Action Orientation	-04	45	-03	48	-06	76
9. Collab. & Support	-17	40	-14	53	-35	54
10. Openness to Change	17	51	26	59	23	81
Primary-Factor Intercorrelations						
	I		II		I	
	I	100	22	100	I	-08
	II	22	100	-08	II	100

At the bottom of Table 7, the primary-factor intercorrelations are reported for the two samples. In Sample 1 the two second-order factors were moderately correlated ( $r = .22$ ), while in Sample 2, a non-significant negative correlation was found ( $r = -.08$ ). Taken together, these results suggest that Factors I and II are largely orthogonal dimensions of championship. Thus, managers rated high on Factor I, for example, are equally likely to be rated either high or low on Factor II.

*Second-order factor congruence.* In order to examine the similarity of the second-order factor solutions across the two samples, congruence coefficients were calculated between each of the two sample patterns as well as between the common pattern, on the one hand, and each of the two sample patterns, on the other. Congruence coefficients are reported in Table 8. The two factors show very high congruence (.99 and .98) between each sample pattern and the common pattern. Thus, the use of Meredith's (1964) Method One procedure at the second-order factor level resulted in the specification of a single common factor pattern that provided a very good fit to each of the two individual sample patterns. The between-sample congruence coefficients are somewhat lower, but still indicative of good convergence (.95 and .93).

### *Summary*

At the conclusion of Phase IV a first- and second-order conceptualization of championship emerged. This structural model was based on two independent factor analyses as well as a series of item-level analyses, the latter designed to develop psychometrically-sound scales to mark each factor.

Meredith's (1964) Method One procedure was applied in order to obtain a single, summary factorial conceptualization of championship. By rotating each of the two sample patterns into congruence with the common pattern (at both the first- and second-order factor levels), the present author was able to estimate the extent to which the two sample pattern solutions converged with the common pattern and with each other.

*Table 8*

*Congruence Coefficients Among the Three Pattern Matrices For the Two Second-Order Factor Scales*

	Second-Order Factor Scale	
	Factor I	Factor II
Sample 1 & Common Pattern	.99	.98
Sample 2 & Common Pattern	.99	.98
Sample 1 & Sample 2 Patterns	.95	.93

Although the structural and item-level analyses were done with an eye to the meaning and interpretability of the factors (ultimately scales), the focus, thus far, has been primarily a psychometric one. In the last phase of Study 1—Phase V—the structure of championship identified in Phase IV will be described and interpreted. Management consultants, psychologists, and professors of business and psychology, chosen because of their expertise in the area of championship and corporate innovation, were asked to conceptualize and describe the first- and second-order factors developed thus far. Their input resulted in: (a) the articulation of labels for the various factors by means of the Recaptured Item Technique (Meehl et al., 1971), and (b) the generation of *prototypicality* ratings for the various factors (Buss & Craik, 1980).

#### Phase V: Conceptualization of the Factor Structure of Championship

##### *Overview*

In this final phase of Study 1, the first- and second-order factors reported in Tables 6 and 7 were labeled and discussed in detail. As noted above, subject matter experts conceptualized and labeled each using the Recaptured-Item Technique (RIT; Meehl et al., 1971). Subject matter experts were provided with items (behaviors) and item loadings sorted by factor and asked to name each factor. In cooperation with others, the present author examined their work and gleaned from it summary labels for each of the factors.

In addition, the prototypicality (Buss & Craik, 1980) of the various factors was considered, at both the first- and second-order factor levels. Subject matter experts rated each of the factors for its prototypicality to championship. The method of obtaining ratings of prototypicality was borrowed from Buss and Craik's act frequency approach to personality. Buss and Craik argued that acts, or behavioral indicators of dispositional categories, differ with respect to their prototypicality and that not all acts within a dispositional category possess equal status; some are more prototypic than others.



The prototypicality of each factor (not the items that load on each) was rated by the SME's. This information was useful in providing a check, of sorts, on the relevance of the dimensions arising from the factor analyses. Dimensions found to be peripheral (non-prototypic) could be seen as poor markers of championship.

Finally, the relationship between the various championship factors and two criteria of interest were examined: (a) overall championship, obtained via self- and supervisory-report ratings, and (b) overall general management performance (see Appendix J). Both criteria were correlated with the 10 first-order and two second-order factor scales.

### *Method*

#### *Participants*

Participants were 11 psychologists, management consultants, and professors of business and psychology chosen because of their knowledge in corporate innovation and championship. A mailing list of 31 subject matter experts (SME's) was compiled, based, in large part, on the names summarized in Table 1 of the literature review. A request for participation was sent out to the 31 SME's. Each was promised a feedback report in which the ratings of all participants would be reported and summarized if they took part. Eleven of the 31 SME's agreed to take part; their names are listed in Table 9.

Following the conclusion of Phase IV of Study 1 (April, 1994), the SME's were mailed a rating booklet designed to solicit two pieces of information: (a) labels and descriptive adjectives for the first- and second-order factor scales, and (b) prototypicality ratings of the factors (see Appendix L for a copy of the rating booklet). Rating booklets were returned by all 11 SME's by June of 1994.

*Table 9**The Subject Matter Experts*


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Dr. John Bailey	Director, Clark, Hummerston Bailey (Ievers Terrace, Carlton, Australia).
Dr. Greg Banwell	Vice President, Wilson, Banwell & Assoc., Ltd. (Vancouver, B.C., Canada).
Mr. Joe Batten	Chairman of the Board, The Batten Group (Des Moines, Iowa, USA).
Dr. Alok Chakrabarti	Dean, School of Industrial Management (Newark, New Jersey, USA).
Dr. André Delbecq	Professor of Management, Santa Clara University (Santa Clara, California, USA).
Dr. Carolyne Egri	Professor of Management, Simon Fraser University (Burnaby, B.C., Canada).
Dr. Russell Knight	Professor of Management, The University of Western Ontario (London, Ontario, Canada).
Dr. Elizabeth Newton	Consultant, Wilson, Banwell & Assoc., Ltd. (Vancouver, B.C., Canada).
Dr. Walter Nord	Professor of Management, University of Southern Florida (Tampa, Florida, USA).
Dr. Randall Schuler	Professor of Management, Stern New York University (New York, New York, USA).
Dr. Malcolm Weinstein	Consultant, Wilson Banwell & Assoc. Ltd. (Vancouver, B.C., Canada).

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### *Data Analysis*

*Factor labels.* The present author examined and summarized the factor labels generated by the SME's. Common, core themes were identified for each factor on the basis of the SME's labels and descriptive adjectives. A label was chosen for each that was an adequate synthesis and summary of the SME's work.

*Prototypicality of the factors.* The prototypicality ratings supplied by the SME's for each of the factors were analyzed, and mean factor prototypicality ratings were calculated across SME's. Prior to this analysis, the present author checked for "deviant" SME's—those whose ratings differed significantly and consistently from the ratings of the others. No deviant SME's were identified.

*Criterion measurement of championship.* Criterion measurement of championship was obtained from both supervisory- and self-report data. Subjects were measured on: (a) a 5-item supervisory-report criterion described earlier, and (b) a 4-item self-report measure of championship<sup>20</sup>; these nine items were extracted from the definition of championship. The nine items appear in Appendix M.

The 5-item supervisory-report criterion was embedded in the larger rating instrument. Managers were rated by their supervisors on these five items using a 5-point Likert-type response format. The distribution of the total score was found to be normal, with a mean of 18.68 and a standard deviation of 2.80. The 5-item criterion had an alpha coefficient of .81, thus showing an acceptable level of internal consistency reliability.

The 4-item self-report criterion scale was appended to the championship simulation. Managers rated themselves using a true/false response format. A reliability analysis showed that one of the items had zero variance. Thus, the scale alpha coefficient could be based on 3 items only; this 3-item criterion measure had an alpha coefficient of .53, showing an adequate but not high level of internal consistency reliability. As well,

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<sup>20</sup> The four self-report items were appended to the championship simulation, described in Study 3.

the distribution of scores for the 3-item self-report criterion was severely negatively skewed with the vast majority (135/147) of the respondents answering true (indicating involvement in championship) on all three items. The scale mean was 5.88 (the total possible score was 6) with a standard deviation of .41.

In order to examine the relative *importance* of the various dimensions of championship, the self- and supervisory-report ratings were each correlated with the first- and second-order factor scales. Given the psychometric concerns raised above in connection with the 3-item self-report criterion, the greatest interpretive weight was given to the supervisory-report data.

*Overall management performance (OMP).* The 36 items designed to measure dimensions of management performance were unit-weighted and summed to form a measure of overall management performance (OMP). As noted earlier, the 36 BOS items were designed to measure 12 dimensions of management performance (e.g., Leadership, Analysis, Oral Communication; see Appendix J for a listing of the 36 items). OMP was of most relevance, in the present application, since it was of interest to examine the relationship between ratings of *overall* management performance and championship.

The 36-item BOS measure of OMP had an alpha coefficient of .95, indicating significant inter-correlation among the items from the 12 dimensions. Scores on OMP were then correlated with scores on the 10 first- and two second-order factor scales.

## *Results*

### *Labels for the First-Order Factor Scales of Championship*

Labels for the first- and second-order factor scales were obtained using the Recaptured Item Technique (RIT; Meehl et al., 1971). Briefly, this method involves subject matter experts (SME's) in labeling obtained factors. The method was initially proposed as a way of minimizing the likelihood that factors would be labeled in an

idiosyncratic way by a single researcher. Using the RIT, SME's are provided with the items (behaviors) and item loadings sorted by factor and asked to name each factor. A range of expertise and judgment is harnessed in such a method. Overlap among the labels the various raters generate is, of course, desirable, in that greater confidence can be placed on labels that describe themes seen by a variety of subject matter experts.

As initially proposed, the RIT includes a process for facilitating discussion on rater disagreement. Briefly, the process is an iterative one, in which labels are summarized and fed back to the raters. Such an involved process was not feasible in the present study. Instead, the labels generated by each SME were reviewed by the present author and, with help from local colleagues, summary labels for each were gleaned from the SME's work. For the most part, this was a straightforward process, in that, for many of the factors, the SME's generated very similar labels.

The labels generated by the various SME's are summarized in Table 10, along with the present author's summary label for each factor. As noted above, for the majority of factors, it was a relatively straightforward matter to synthesize the 11 labels into one, common, summary label that captured the meaning of the factor. The reader will note that, in many cases (e.g., Self Promotion), a fair degree of overlap was found between the labels generated by the SME's. For other factors, the derivation of a single, final, summary label was a slow and involved process (e.g., Visibility and Growth Seeking) that required the present author to revisit the *items* in light of the various labels generated by the SME's. A final, summary label was, however, generated for all 10 first-order factors. These labels are described below.

*Persistent Dominance (PD).* Many of the SME's generated labels containing some form of the word dominance or included dominance as one of the adjectival descriptors (e.g., Dominant Discussant). Other labels from Table 10 include the word

Table 10

*A Listing and Description of the First-Order Factor Scales*


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**1. Persistent Dominance:** persistent, domineering, dominant, aggressive, argumentative, assertive, stubborn, dogmatic, opinionated, forceful, self oriented, overpowering.

Two sample items: I monopolize discussions.

I'm persistent in voicing my opinion over and over again, even if my ideas are rejected.

SME labels: *Dogged Interpersonal Persistence; Exploitive Expediency; Assertive Dominance; Dogmatism; The Dominant Leader; Communication Prominence; Internal Focus; Dominant Discussant; Self-Oriented Assertion; Communication Skills; Self Centered.*

**2. Impatient Expediency:** impulsive, spontaneous, loose, impatient, unsystematic, unmethodical, impetuous, non-detail, non-documenter, non-bureaucratic, improviser.

Two sample items: I don't usually take the time and effort to document all my plans and activities.

I have no patience for the more tedious tasks.

SME labels: *Impatient Undocumented Spontaneity; Uncrafted Expediency; Low Detail Tolerance; Spontaneous Improviser; The Big Picture Conceptualizer; Detail Avoidance; Spontaneous; Document Averse; Free Wheeling; Personal Organization Skills; Disinterest in Detail.*

**3. Rebellious Drive:** rule bender, rebellious, iconoclastic, opportunistic, non-conforming, anti-authority, risk taking, challenging, boat rocker, non bureaucratic, bold, manipulator, maverick, inner directed, rebel.

Two sample items: I some company rule or procedure gets in my way, I go around it.

I have persisted in pursuing an idea even when I was explicitly directed to stop.

SME labels: *Non-Conforming Opportunism; Omnipotent Drive; Non-Conformist; Corporate Rebel; The Rule Breaker; Inner Directed; Persistence; Organizational Chain Breaker; Counter Dependent; Individual Initiative; Rule Breaker.*

**4. Self Promotion:** manipulator, power seeker, boastful, immodest, self serving, competitive, success oriented, promoter, arrogant, impression managing, network wise, visible, staging, personal promoter, well connected.

Two sample items: I ensure that my successes in the company are known.

I make sure I rub shoulders with powerful individuals in other departments and business units in the company.

SME labels: *Machievellian Self Promotion; Manipulative Self Promotion; Manipulative Self Promotion; Self-Serving Promotion; The Self Promoter; Power Oriented; Visibility; Achievement Orientation; Impression Managing; Self Fulfillment; High-Profile Manipulator.*

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Table 10 cont.

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**5. Confrontive Candor:** straight shooter, blunt, direct, confrontational, combative, assertive, forthright, straightforward, demanding, evaluative, confident, low need for social approval, task oriented.

Two sample items: I'm not afraid to tell others, in a direct and forceful manner, what should be done.  
I am willing to "weed out" team members who are not immediately productive.

SME labels: *Straight-Shooting Combateness; Forthright Expediency; Direct Intervention; Assertive Task Orientation; The Confrontational Manager; Performance Oriented vs. Affiliative; Self Confidence; Confrontational; Low Need for Social Approval; Practice of Tough-Minded Candor; Confronter of Reality.*

**6. Influence & Political Savvy:** salesmanship, influential, well connected, strategic, savvy, promoter, conceptualizer, implementor, communicator, persuasive, discriminating, networker, assertive, visionary, big thinker.

Two sample items: I am able to get the time of executives in the company in order to communicate my ideas.  
I think at a conceptual level; I let others worry about the details and specifics of projects.

SME labels: *Strategic Selling; Organizational Influence; Political Savvy; The Promoter; Political Boundary Spanner; Influence; Idea Communicator; Discriminating Politically; Emotionally Secure--Good Self Esteem; Politically-Astute Influencer.*

**7. Driven Commitment:** driven, absorbed, passionate, committed, dedicated, energetic, involved, task oriented, work centered, focused.

Two sample items: I tend to start early and work late when I'm emotionally involved in a particular project.  
I tend to make personal sacrifices in my work when I am dedicated to a task or project.

SME labels: *Project Passion; Obsessive Commitment; High Job Commitment; Workaholism; The Workaholic; High Task Energy; Dedicated; Task Driven; Effective Time Management; Obsessive Compulsive.*

**8. Immediate Responsiveness:** deadline driven, time urgent, responsive, prompt, impatient, immediate responder, non-procrastinating, a compulsive doer, action oriented, other person oriented, goal oriented.

Two sample items: I always meet my deadlines at work.  
I address every task with urgency.

SME labels: *Deadline Driven; Urgent Responsiveness; Action Oriented; Efficient Action Orientation; The Goal-Oriented Doer; Action Oriented; Compulsive; Antonym of Procrastinator; Immediate Responsiveness; Applied Empathy; Rapid Responsiveness.*

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Table 10 cont.

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**9. Collaboration & Support:** supportive, team player, empowering, encouraging, nurturing, collaborative, recognizer, reinforcer, recognizes achievement, delegator, instructor, coach, rewarder.

Two sample items: I recognize the achievement and accomplishments of others both publicly and privately.  
I work to motivate teamwork--cooperation and collaboration among team members.

SME labels: *Team Cheer leadership; Collaborative Influence; Supportive Teamwork; Supportive Collaboration; The Team Coach; Team Oriented; Developer of Others; Supportive; Motivates Others Through Rewards for Performance; Leadership; Team Leader.*

**10. Visibility & Growth Seeking:** volunteer, explorer, influence seeker, visible, publicity seeking, generalist, exposure seeking, challenge seeking, role flexible, initiative taking, outgoing.

Two sample items: I volunteer for tasks forces and other related activities that allow me to be a change agent.  
I enjoy working outside of my own office or department.

SME labels: *Visibility; Role Flexibility; Initiative Taking; Diverse Generalist; The Volunteer Generalist; The Volunteer Extrovert; Intrapreneurial; Liaison/Politician; Willingness to Work Outside Own Department; Exposure and Growth Seeking; Positive and Focused Aggressiveness; Seeker of Challenge*

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assertiveness in some form. Two of the less value-laden (but also less descriptive) labels generated were Communication Skills and Communication Prominence, the latter coming somewhat closer than the former to characterizing the predominant theme of assertiveness/dominance.

Another theme running through the scale is one of persistence (e.g., Dogged Interpersonal Persistence, Dogmatism). High scorers on this factors would likely repeat their assertive/dominant style, until getting their way. Looking at the item content of this scale (see Appendix K), many of the items refer to behavior occurring in group settings (i.e., meetings). Thus, by inference, high scorers would likely be comfortable persistently and assertively voicing their opinion in a public forum.

As a champion of a new, controversial idea, a manager might need to demonstrate many of the behaviors reflected in the items in this scale. In the face of opposition and resistance to change, the champion might need to persist in arguing his/her points. S/he might be called upon to defend ideas against angry opponents. A strategy of persistent dominance might, in some situations, be a necessary and successful one if the new idea is not to die before implementation.

Three of the SME's noted elements of self absorption/self interest in this factor (self oriented assertion, self centered, internal focus), while a fourth SME acknowledged that some form of exploitation/manipulation was involved (Exploitive Expediency). Although aspects of self interest and exploitation *may* be the forces driving the behavior contained in the item content of this scale, they are less apparent and salient than the themes of persistence and dominance. The themes of persistence/dogmatism, self interest, and dominance were summarized as Persistent Dominance.

*Impatient Expediency (IE).* Many of the SME's appeared to use the non-champion pole of this scale as the starting point for labeling, which contains items having to do with detail orientation. Thus, three of the labels contain the notion of detail avoidance (Low

Detail Tolerance, Detail Avoidance, Disinterest in Detail). Attempts to label the champion pole of this scale using synonyms for detail avoidance included the notion of spontaneity: Impatient Undocumented Spontaneity, Spontaneous Improviser, Spontaneous.

Some variation on the word impatience is either seen directly or implied in the item content ("I have no patience for the more tedious tasks."), the descriptive adjectives (impatient, impulsive, impetuous), and the labels (Impatient Undocumented Expediency). Indeed, the discussion of low detail tolerance above, implies impatience. High scorers on this scale would likely avoid documenting their activities and avoid details. Set in a more positive light, high scorers would likely consider the big picture (The Big Picture Conceptualizer).

Ultimately, the label Impatient Expediency was chosen for this scale. The theme of impatience is evident from both the SME's work and the item content. Expediency is contained in one of the labels (Uncrafted Expediency), and is less cumbersome than "low detail orientation". It is likely that high scorers on this dimension get things done quickly with little regard for minor details and protocol often associated with decision making in organizations. They expedite and drive to implement as quickly as possible.

*Rebellious Drive (RD).* Two themes predominate in what has been labeled Rebellious Drive. These are: (a) rule and authority challenging, and (b) expediency and persistence toward some objective. High scorers on this scale would likely bypass corporate rules and ignore those who make and enforce them in order to meet their objectives.

A number of SME's acknowledged lack of conformity as a critical theme in this factor. Words such as non-conforming, omnipotent, non-conformist, rebel, rule breaker, and chain breaker were found among the labels. One of the more colorful labels generated was Corporate Rebel. Words such as initiative, persistence, and drive were

also found among the labels. Thus, it appears that the rule and authority challenging found in the item content is purposeful—some goal or objective is met.

Two SME's used the term inner-directed, suggesting that high scorers are behaving in ways that satisfy their own needs. This theme is not a new one; it was acknowledged in connection with Persistent Dominance and will surface again when Self Promotion is discussed. Self interest and rebelliousness overlap in that those who rebel often do so to satisfy their own needs. Persons who break rules and ignore authority are likely following their own desires, and, in so doing, subordinating the concerns and needs of the larger collective (i.e., the company or society).

*Self Promotion (SP).* The word "self" was used in six of the 11 labels, and some variation on the word promotion appears in five of the labels. Self promotion is a clear and consistent theme throughout the items, the adjectives, and the labels generated by the SME's. Other popular adjectives included: manipulative and impression managing.

The SME's were in agreement that managers who achieve high scores on this scale would be out for themselves. Such managers would seek out opportunities at work to present themselves in a positive light. They might choose visible, high profile work assignments. There was also a theme of manipulation running through the item content (Manipulative Self Promotion was used twice, and High-Profile Manipulator).

This scale shares with Persistent Dominance and Rebellious Drive the theme of self interest. Unlike PD and RD, however, high scorers on Self Promotion would likely show self interest in a more subtle, manipulative way, rather than through either direct and outspoken confrontation or rule breaking. Although it might be tempting to see high scoring managers on this scale in a less than desirable light, the types of behaviors reflected in the item content might very well be necessary and highly adaptive in the context of promoting and selling innovation. High scorers on this scale would likely work to craft a high-profile reputation as a success in the company. Certainly, the

champion cannot shy away from the limelight in his/her role as advocate of new products and processes.

*Confrontive Candor (CC).* Two clear themes emerge from this scale. First is the notion of candidness. A number of SME's acknowledged this by using the following words in some part of their scale label: Straight-Shooting, Forthright, Direct, Candor, Confronter of Reality. The second and related theme of confrontation also emerges from the labels and descriptive adjectives.

Although similar in some respects to Persistent Dominance, the item content of Confrontive Candor is more performance-oriented. That is, high scorers on this dimension could be expected to be direct with others in pointing out performance problems (i.e., "I am willing to weed out team members who are not immediately productive"). Such candidness would, typically, be associated with a willingness to enter into confrontation with others. Two of the SME's used labels indicating that high scorers are able to confront others because of their self confidence and low need for social approval (e.g., Self Confidence). These labels are more inferential, however, than descriptive of the behavior reflected in the item content.

Confrontive Candor measures one's ability to be straight with others about performance expectations—to communicate and expect high standards and drive for productivity and achievement. Thus, according to this dimension, champions are task-oriented, bottom-line managers, willing to enter into conflict and confrontation with others to raise and maintain high standards.

*Influence and Political Savvy (IPS).* Four of the 11 SME's used some form of the word political in their label (e.g., Politically-Astute Influencer). This scale contains items relating to one's ability to access power (e.g., "I know how to use my political connections in the company to make things happen."). High scorers on Influence and

Political Savvy can likely secure the help and support of other, influential people in the company.

This scale also contains a clear theme of influence and salesmanship, two related labels. Those good at securing others' sponsorship will also tend to be influential people. A high scorer on this scale would influence others by using his/her political savvy. Thus, this scale is not a measure of boisterous, flamboyant salesmanship. Instead, it appears to measure those sales skills needed to influence colleagues and superiors: longer term influence "projects" requiring tact, social skill, and good judgment.

The label Influence and Political Savvy captures the main themes running through this scale. Influence and political skill are acknowledged directly in the label, while judgment and sophistication are reflected by the word savvy. A clear picture of a socially-skilled and polished power player emerges from a consideration of the item content of this scale. These themes were consistently acknowledged by the SME's.

*Driven Commitment (DC).* Themes of commitment and dedication surface consistently in the SME's labels for this scale. Indeed, some SME's saw this scale as commitment beyond what is psychologically normal or "healthy". Thus, we see labels such as: Obsessive Commitment, Obsessive Compulsive, Workaholism, and The Workaholic, reflecting the extreme nature of the drive and commitment to task. Since current researchers consider Workaholism to be a multi-dimensional construct, containing behaviors not found in this scale (see, for example, Schaefer, 1987), this label was not chosen. The word *obsessive* was not chosen for similar reasons. Interestingly, the construct not mentioned here (or, in connection with the scale Immediate Responsiveness) by any of the SME's, but considered to be closely related by the present author, is the Type A behavioral syndrome.

The word *driven* was chosen for the label to emphasize the urgency and personal investment connected with the commitment to task. High scorers could be expected to

invest themselves in their work, to attack their tasks with high energy and drive. As well, they would likely work with a high degree of urgency, perhaps feeling pressured to achieve as much as they can in the time available. Themes of driven commitment have been described repeatedly in previous research on the champion (recall Table 3 of the Introduction section and the label Persistent Drive). Champions have been described as focused, passionate advocates who work with intensity and commitment when they align themselves with a new idea.

*Immediate Responsiveness (IR).* Time is a critical factor in this scale, as virtually all the items reflect behaviors involving rapid, urgent responsiveness. One of the SME's labeled this scale "The opposite of procrastinator", an apt but cumbersome label. The central theme of Immediate Responsiveness is time urgency.

Three of the 11 SME's used a slight variation of the final label chosen for this scale (Urgent Responsiveness, Immediate Responsiveness, and Rapid Responsiveness). The theme of responsiveness is central. In addition, this responsiveness is driven by a sense of time urgency. Managers high on Immediate Responsiveness take action right away, rather than delay. They are responsive, but they are also *proactive*, oriented toward taking immediate action on issues.

Immediate Responsiveness is similar in some ways to Impatient Expediency, except that the latter contains elements of disinterest in detail and impatience. High scorers on Immediate Responsiveness do not appear driven by impatience or expediency. Instead, their urgency and responsiveness appears to be more a function of a desire to maximize efficiency without decreasing the quality of what they accomplish.

*Collaboration and Support (CS).* This ninth first-order factor scale contains a clear interpersonal theme—one of collaboration/teamwork, support, coaching, and empowerment. The words *team* or *collaboration* were used by seven of the SME's. As well, some variation on support was contained in three of the labels (Supportive

Teamwork, Supportive Collaboration, and, simply, Supportive). Two of the SME's noted the presence of items relating to coaching and development (The Team Coach, Developer of Others), while three others stressed the theme of leadership (Leadership, Team Leader, Team Cheer leadership).

The label Collaboration and Support was chosen to reflect the two predominant themes running through the item content of this scale: (a) teamwork/collaboration, and (b) support/coaching. High scorers on this scale would likely work cooperatively and collaboratively with others, supporting and encouraging people to achieve and do their best. As well, they would likely consider the needs of others and act in ways that are respectful and supportive. They would likely delegate and share responsibility and power with others. Such managers would appear mindful of other people and open to sharing with them both the processes and outcomes of accomplishment.

*Visibility and Growth Seeking (VGS).* A theme of openness to new experience mixed with personal ambition emerges in this scale. This theme, one component of Visibility and Growth Seeking, has been labeled as growth seeking—an active, ambitious drive to voluntarily and proactively expose oneself to new situations that provide opportunities to learn and develop one's competencies. The words *volunteer* and *initiative* surface in the item content of this scale, the adjectival descriptors, and the scale labels. High scorers on this scale would be likely to show initiative and volunteer for projects and assignments in order to develop further their skills by meeting new challenges.

Also of note in this scale is the theme of visibility, found in the item content and repeatedly among the adjectival descriptors generated by the SME's. Working in tandem with the theme of growth seeking is a willingness to be visible and on display. This does not appear to be a promotional, "grand-standing" form of visibility as seen in Self Promotion, but appears, instead, to be related to a desire to interact with new people in

new situations—an openness to novelty and new experiences. Ultimately, the themes of visibility and growth seeking were combined to label this factor.

High scorers on Visibility and Growth Seeking appear to be open and receptive to new work opportunities. Specifically, this openness appears to be in the service of career development. It is not a generalized openness to new things and experiences (perhaps arising out of curiosity) unrelated to career advancement. Those managers who work outside of their office and volunteer for new projects are behaving in ways that demonstrate an eagerness to develop new competencies, perhaps in order to further one's career. High scorers would, then, likely be able to access greater resources (one indicator of power) than would low scorers.

*Labels for The Two Second-Order Factor Scales of Championship*

After supplying labels for the 10 first-order factor scales, subject matter experts then went on to name the two second-order factor scales. The labels generated for these two second-order factor scales show substantial variability. In consultation with others, the present author was, however, able to decipher two labels that captured each of the two second-order factors in an overall sense.<sup>21</sup> These two labels are reported in Table 11, along with the common factor pattern and the labels for the ten first-order factor scales.

The two second-order factor scales appear to be orthogonal (see Table 7). They correlated .22 in Sample 1 and -.08 in Sample 2 for a mean correlation of .15. Thus, Forceful Drive and Expediency (FDE) appears to be independent from Influence and Visible Drive (IVD). They are both salient aspects of championship emerging, as they did from the acts generated in the very early stages of Study 1, but managers high on FDE can be either high or low on IVD.

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<sup>21</sup> I wish to thank Drs. Peter Frost, Ralph Hakstian, Robert Hare, Robert Hogan, and Jerry Wiggins for their help as "SME's of the SME's" in the labeling and conceptualization of the two second-order factors.



*Forceful Drive and Expediency (FDE).* Five of the 10 first-order factor scales loaded on FDE: Persistent Dominance (PD), Impatient Expediency (IE), Rebellious Drive (RD), Self Promotion (SP), and Confrontive Candor (CC). As discussed earlier, the individual first-order factor scales contained themes of dominance (PD, CC), rebelliousness (RD), self interest (SP, RD, PD), and impatience (IE). It may be tempting, at first blush, to conceptualize such a factor as a "bad manager" factor, particularly given the current ethos in the business world of empowerment and teamwork. It may be, however, that, depending on the situation, championing new ideas may require the kind of forcefulness and persistence likely found among managers high on FDE.

Managers high on FDE would likely be able and willing to wield power in a direct, confrontive, and, perhaps, manipulative way. They would likely face issues and other people head on and do what was necessary to get things done. They might break rules and impatiently drive ahead despite what others say, and go around established corporate protocol. Moreover, it is possible that they would do these things because they are driven by their own personal needs and motives. The label Forceful Drive and Expediency was chosen to emphasize the themes of urgency, forcefulness, and drive.

*Influence and Visible Drive (IVD).* The following five first-order factors have salient loadings on IVD: Influence and Political Savvy (IPS), Driven Commitment (DC), Immediate Responsiveness (IR), Collaboration and Support (CS), and Visibility and Growth Seeking (VGS). The label *influence* was chosen to represent the interpersonal flavor of IVD. Some variation on the word influence (e.g., persuasion) was used by three of the SME's. The second part of the label—Visible Drive—was chosen to emphasize the high degree (and profile) of job involvement, responsiveness, and drive reflected in the item content of the three remaining first-order factor scales (DC, IR, VGS).

*Table 11*

*Meredith's Common Factor Pattern and a Synthesis of the Labels Generated By the Raters*

	Forceful Drive & Expediency <sup>1</sup>	Influence & Visible Drive <sup>2</sup>
Persistent Dominance	<b>.51</b>	-.08
Impatient Expediency	<b>.42</b>	-.24
Rebellious Drive	<b>.54</b>	.04
Self Promotion	<b>.28</b>	.09
Confrontive Candor	<b>.32</b>	.14
Influence & Political Savvy	.00	<b>.47</b>
Driven Commitment	.14	<b>.26</b>
Immediate Responsiveness	-.04	<b>.45</b>
Collaboration & Support	-.17	<b>.40</b>
Visibility & Growth Seeking	.17	<b>.51</b>

<sup>1</sup> Other labels generated by the subject matter experts: Charismatic Opportunism, Unbounded Drive & Exploitation, Self Expression, Aggressive Producer, The Driving Entrepreneur, Concept Driven, Promoter, Pace Setter, Socially-Oriented Self Assertion, Tough-Minded Leadership, Self-Confident Visionary.

<sup>2</sup> Other labels generated by the subject matter experts: Passionate Persuasion, Obsessive Influence & Responsiveness, Success Orientation, Effective Collaboration, The Team Entrepreneur, High Mission Identity, Focused, Team Performer, Get The Job Done, Focused & Integrated Skills, Influential, Action-Oriented Leader.

Two of the five first-order factor scales (IPS and CS) relate to one's ability to accomplish things through other people. In contrast to Persistent Dominance and Confrontive Candor (two first-order factor scales relating to assertive interpersonal influence that loaded on FDE), Influence and Political Savvy and Collaboration and Support contain items that relate to one's ability to influence others in more collaborative and subtle (less confrontive) ways. The focus is on building alliances and developing relationships.

Visibility and Growth Seeking contains items that an extrovert might respond to affirmatively. VGS is distinct from SP in that the behavior is not self aggrandizing or manipulative, but appears, instead, designed to increase one's skill level and competence. Immediate Responsiveness also has a salient loading on IVD. The focus in IR is on accomplishing objectives for the good of the organization. The content of IR is decidedly less interpersonal than for CS, IPS, and VGS, but continues the theme of unselfishness evident in the other four first-order factor scales that loaded on IVD. In contrast to FDE, managers high on IVD appear motivated to succeed and achieve for the good of the organization.

#### *Prototypicality of the First- and Second-Order Factor Scales*

As noted earlier, each factor scale was rated for prototypicality by the SME's. Prototypicality is of interest here in that not all of the 10 first-order factor scales might be equally central to the more general construct of championship. Some might be more prototypic (or ideal, best) examples of championship than others.

The prototypicality ratings supplied by the SME's are reported in Table 12. The first-order factor scales are listed in descending order by mean rated prototypicality, while the second-order factor scales are reported at the bottom of the table. All of the 10 first-order factor scales have mean prototypicality ratings of greater than 4, meaning that all

Table 12

*Mean Prototypicality Ratings For the Factor Scales, Listed in Descending Order*

Factor Label	Mean Prototypicality <sup>1</sup> Rating	Mode
Driven Commitment	6.27	7.0
Influence & Political Savvy	6.00	7.0
Visibility & Growth Seeking	5.73	7.0
Immediate Responsiveness	5.64	6.0
Rebellious Drive	5.55	5.0
Collaboration & Support	5.36	6.0
Confrontive Candor	5.27	7.0
Persistent Dominance	4.91	7.0 <sup>2</sup>
Impatient Expediency	4.73	5.0 <sup>2</sup>
Self Promotion	4.27	3.0
Influence & Visible Drive	6.20	6.0
Forceful Drive & Expediency	5.80	7.0

<sup>1</sup> Each factor for Championship was rated using the following 7-point scale:

1 = Very Unprototypic; is a poor example of Championship

4 = Moderately Prototypic; is a moderately good example of Championship

7 = Very Prototypic; is a very good example of Championship

<sup>2</sup> The distribution of SME ratings for both Persistent Dominance and Impatient Expediency was bi-modal: (a) PD 5.0 and 7.0, (b) IE 4.0 and 5.0.

first-order factor scales were seen as at least *moderately* prototypic of championship by the SME's.

While all 10 scales appear to be at least moderately prototypic of championship, there is a gradient of prototypicality ratings, ranging from a high of 6.27 for Driven Commitment to a low of 4.27 for Self Promotion. The four factor scales rated highest for prototypicality all loaded on the second-order factor Influence and Visible Drive; the fifth member of IVD occupies the 6th position in the rank ordering. The individual first-order factor scales loading on Forceful Drive and Expediency were seen as less prototypic to the construct of championship by the SME's than the scales loading on IVD. But, once again, the factor scale with the lowest mean rating was still rated as *moderately* prototypic of championship.

It was hypothesized that first-order factor scales related to salesmanship would be judged as more prototypic of championship than would factors related to other aspects of the champion role, initially conceptualized as related to innovation. Partial support for this hypothesis was found. This hypothesis could not be tested at the second-order factor level as originally intended, since IVD is more than just salesmanship. The first-order factor scale Influence and Political Savvy comes closest to the original conception of salesmanship. This factor was rated as the second-most prototypic first-order factor scale; it received a mean rating of 6 on a 7-point scale, second only to Driven Commitment (mean prototypicality = 6.27). Thus, salesmanship was seen by the SME's as a central component of championship.

Turning to the two second-order factor scales, SME's rated both IVD and FDE as prototypic of championship. The mean ratings were very similar (6.20 to 5.80), both falling close to 6 on the 7-point scale. The modal rating for FDE was 7, while for IVD the modal rating was 6. Thus, when the two clusters of first-order factor scales were considered as members of two larger factors, the SME's rated each as roughly equal in prototypicality for championship.

### *Correlates of the Dimensions of Championship*

In this section, the relationship between the first- and second-order championship factor scales and selected criteria of interest are reported in order to address hypotheses related to the prototypicality and importance of the factor scales. First, correlations between the various championship factor scales and overall championship are reported. As discussed earlier, two sources of information were used to measure overall championship: (a) a 5-item supervisory-report scale, and (b) a 3-item self-report scale. Recall that items for these two scales were drawn directly from the definition for championship; thus, these two scales can be seen as *criterion* measures of overall championship. Secondly, the factor scales were correlated with rated overall management performance (OMP). As described earlier, OMP was measured by 36 BOS items.

*The 3-item and 5-item self-report measures of championship.* Bivariate correlations between the 3-item and 5-item criterion measures of championship (3CC and 5CC), on the one hand, and the first- and second-order factor scales, on the other, are reported in Table 13. Beginning with 5CC, the first-order factor scales associated with IVD correlated significantly and positively with this criterion measure of championship. Correlations ranged from .37 (Driven Commitment) to .66 (Visibility and Growth Seeking). In contrast, the correlations between the FDE first-order factor scales and 5CC were generally low and, in three cases, failed to reach significance at  $p < .05$ . Turning to the second-order factor scales, IVD was much more closely related to 5CC than was FDE. A correlation of .73 ( $p < .001$ ) is reported in Table 13 between 5CC and IVD. In contrast, FDE and 5CC correlated .07 ( $p > .05$ ).

The results for the 3-item self-report criterion are markedly different from those reported above in connection with 5CC. The majority of correlations reported in the 3CC column of Table 13 are low; there is no strong trend for either the IVD or FDE first-order

Table 13

*Bivariate Correlations Between the 3-item and 5-item Championship Criteria (3CC and 5CC), the Overall Management Performance (OMP) and the Championship Factor Scales*

Factor Scale	3CC (n=147)	5CC (n=174)	OMP (n=174)
<i>Forceful Drive and Expediency</i>			
Persistent Dominance	.10	.03	-.54
Impatient Expediency	.07	-.15	-.50
Rebellious Drive	.20	.19	-.26
Self Promotion	.24	.04	-.38
Confrontive Candor	.18	.19	-.08
<i>Influence and Visible Drive</i>			
Influence and Political Savvy	.16	.61	.59
Driven Commitment	.14	.37	.36
Immediate Responsiveness	.09	.57	.75
Collaboration and Support	.06	.42	.61
Visibility and Growth Seeking	.19	.66	.58
Forceful Drive and Expediency	.22	.07	-.50
Influence and Visible Drive	.18	.73	.80

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .05: .15; .01: .195; .005: .213; .001: .247.

factor scales to correlate significantly with 3CC. These results may, in part, be an artifact of the low variability of the criterion. As discussed in a previous section, when participants rated themselves on the four items designed to measure championship, the vast majority indicated that they had indeed generated new ideas on their own, adapted or built on the ideas of others, introduced and promoted new ideas in the company, and worked to sell and champion new ideas in the company (all 147 participants responded affirmatively to the second item above). The present results suggest that either: (a) there are an inordinate number of champions working for BC Tel, or (b) the self-report criterion suffers from some shortcomings. The latter possibly seems more tenable than the first. The present results call into question the validity of self-report measures of championship, particularly those based on such a relatively small number of items (recall that 1-item self-report criterion measures of championship have been reported in the literature). Given the limitations of 3CC, the 5-item supervisory-report measure of championship, 5CC, will be featured in subsequent analyses and discussions.

It was hypothesized that salesmanship would correlate most significantly with an overall criterion measure of championship. Since the two hypothesized second-order factors did not emerge in the present study, this hypothesis could not be tested directly at the second-order factor scale level.

As discussed earlier, the first-order factor scale that most closely resembles salesmanship is Influence and Political Savvy; IPS correlated positively and significantly with 5CC ( $r = .61$ ), surpassed only by Visibility and Growth Seeking ( $r = .66$ ). Salesmanship appears to be both a central (on the basis of the prototypicality results) and important component of rated overall championship, at least as measured by 5CC.

*The championship factor scales and overall management performance (OMP).*  
The correlations between OMP and the championship factor scales are reported in the third column of Table 13. With the exception of Confrontive Candor, the FDE factor



scales correlated significantly and negatively with OMP, while the IVD factor scales correlated significantly and positively with OMP. Turning to the bottom of Table 13, IVD correlated .80 with OMP, while FDE correlated -.50 with OMP.

Clearly, then, IVD and its constituent factor scales are closely related to overall, general management performance, while FDE appears to represent behaviors anchoring the opposite pole of OMP. Thus, managers who champion items by exhibiting the behaviors associated with IVD will likely be seen by their supervisor as generally high-performing, successful, competent managers. In contrast, managers who receive high scores on FDE would likely be seen by their supervisor as generally low-performing, unsuccessful managers.

### *Discussion*

#### *Overview*

In this section, the results reported in Phase V at the conclusion of Study 1 will be discussed. This discussion will begin with a conceptualization of the two second-order factor scales and conclude with a discussion of their prototypicality and correlates. Throughout this section, parallels will be drawn between theories and constructs from psychology and organizational behavior, on the one hand, and the dimensions of championship on the other. This discussion is intended to: (a) further explore the psychological meaning of championship, and (b) place the study of the champion within a broader framework and tradition of knowledge.

The hypothesized hierarchical model of championship did not emerge in the present study. First, two levels or strata, rather than the three that were hypothesized, were uncovered. The two second-order factors obtained were uncorrelated. Thus, a third-level factor—overall championship—could not be calculated as hypothesized. Instead, the behavioral description of championship must stop at the second-order factor level. Given the orthogonality of FDE and IVD, it would be inadvisable to, for example,

compute an overall score for championship and then conceptualize and discuss the meaning of this score.

Secondly, the two second-order factor scales that emerged do not correspond to the two that were hypothesized—salesmanship and innovation. The two second-order factors obtained relate to: (a) an aspect of salesmanship, labeled as Influence and Visible Drive, and (b) a variable seemingly unrelated to innovation, labeled Forceful Drive and Expediency. Thus, the structure obtained suggests a two-factor explanation of championship, but not salesmanship and innovation. Instead, a dark and a heroic side to championship emerged, a conceptualization that will be discussed in detail below<sup>22</sup>.

Salesmanship emerged as Influence and Political Savvy, and, thus, is a component of Influence and Visible Drive. But IVD is more than just salesmanship. As will be discussed below, IVD taps into elements of achievement and collaboration, among other things. Nevertheless, salesmanship is clearly represented in the structural model of championship obtained in the present study. And, as was shown in Table 12, it was seen as a prototypic aspect of championship by a panel of subject matter experts.

The fact that innovation did not appear, even at the first-order factor scale level, is an interesting finding. Recall that the two-factor model of championship (see Table 2) was used to train the panel members who generated the behavioral statements in Phase I. A substantial amount of time was devoted to the discussion of the role of innovation in championship. Panel members were clearly instructed to consider innovation as one of two dimensions central to championship. But innovation did not surface.

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<sup>22</sup> Although IVD will be characterized as the heroic side of championship, this does not rule out the possibility that there may also be heroic qualities associated with some aspects of FDE behavior. Similarly, the use of the "dark" side as a label for FDE should not be construed as a condemnation of this constellation of behaviors. Rather, it serves as a convenient, descriptive term to characterize a side of championship that may be viewed by some (particularly those with communal tendencies) as less than desirable, supportive, and prosocial.

A perusal of Appendix C reveals only five items (from the pool of 363 items) that appear related to the theme of innovation:

I hold brainstorming sessions to determine the ideal world. I'm able to generate easily a number of new ideas each day. I'll go after new ideas, before following through on previous ones. When confronted with a new idea, I tend to think through the reasons why it can't be done (e.g., lack of people, no money, against company policy, etc.). I enjoy the implementation stage, more than the stages of planning and idea generating [the latter two items are reverse keyed for championship].

Clearly, innovation had no chance of emerging as a factor, with so few variables related to the construct in the analysis. Why, then, were so few behavioral statements related to innovation generated? This question has a number of possible answers.

One hypothesis is that the panel members who originally composed the behavioral statements were biased in some way toward seeing the champion as a salesman and promoter, not an innovator. This might have occurred if, for example, the majority of panel members worked in areas of the company where sales and persuasion were stressed over idea generation and innovation (i.e., marketing and sales). But only five of the 26 panel members worked in the sales and marketing divisions at BC Tel. Many came from the more technical divisions (e.g., Engineering, Finance, Operations), where technical product and process innovations would likely be a frequent topic of discussion. Thus, it appears unlikely that the business backgrounds of the panel members could have systematically distorted the generation of acts in such a significant and pervasive way.

Another concern related to the composition of the panel from Phase I is that BC Tel managers might, as a group, see championship differently from managers in other organizations and industries in such a way that they downplay the importance of innovation. Such a possibility seems unlikely, however, given that managers working for BC Tel operate in a high-technology business environment in which product innovations drive business success (particularly since de-regulation of the telecommunications

industry). Managers at BC Tel are very cognizant of the importance of product innovation for the continuing success of the company.

A second hypothesis relates to the act frequency methodology. When panel members were asked to think about people they know who they would describe as champions, they likely generated examples of behavior that they had *observed* in the past. Persuasiveness, collaboration, assertiveness, confrontation, rule breaking, self promotion, drive, commitment, growth seeking, and expediency are largely public acts, easily observed by others. In contrast, the processes that occur when one innovates (primarily cognitive) are largely private. Thus, it is possible that the use of the act frequency approach might have resulted in the generation of behavioral profiles slanted toward interpersonal acts. The act frequency approach was, after all, designed to measure dispositional (e.g., dominance), rather than cognitive tendencies.

A third hypothesis is that the two-dimensional conceptualization of championship outlined in the Introduction was inaccurate. Championship may be largely persuasion, promotion, and drive, with innovation left to the inventors and pioneers working in research and development. A review of the personality/motivational and cognitive traits listed in Table 3 reveals that inventiveness and creativity are not dominant features of the champion profile, despite their mention in many of the definitions of championship. Based, as it was, on the definition of championship gleaned from previous research, the two-dimensional model of championship outlined in Table 2 may have been a poor conceptual summary of the key features of championship. Too much emphasis may have been placed on innovation and inventiveness.

For whatever reason, innovation does not appear to be an important aspect of championship on the basis of the results from the present study. Clearly, more research is needed to determine whether this finding is an artifact of some element of the study design or if indeed innovation is more the domain of the inventor and scientist than the

champion. At present, the disappearance of innovation from the face of championship is best seen as a suggestive result that merits further investigation.

The hierarchical structure of championship that was obtained in the present study will now be discussed in some detail. I will begin with a general discussion of two factor models in the social sciences, in order to place the factor analytic solution within a broader context. The discussion will then move to a detailed consideration of the two second-order factors, FDE and IVD.

### *A Two-Factor Conceptualization of Championship*

Two-factor explanations of human behavior abound in the social sciences and humanities. They are as general as sociological/anthropological conceptions of masculinity/femininity and as specific and assessment-based as Norman's (1963) surgency and agreeableness. A number of two-factor conceptual systems might have relevance to the two-factor second-order structure obtained in the present study, especially those developed from research on leadership. These include consideration vs. initiating structure (Fleishman, 1953), democratic vs. autocratic leadership (Morse & Reimer, 1956), and person vs. task (Blake & Mouton, 1964). Each of these two-factor leadership-based models can, however, be represented by two primary, encompassing, higher-order modalities of human existence—agency and communion. The discussion of the factors arising from Study 1 will begin with an overview of agency and communion and an integration of these two orthogonal modalities with FDE and IVD.

*Agency and communion.* Recently, Wiggins (1991) discussed an extensive literature on the concepts of agency and communion in the social sciences and humanities, drawing on the writings of a diverse range of influential philosophers and scholars, including religious figures like Confucius, pioneers in psychology like Freud, and more recent contributors to psychology, like Erikson, Bem, and Norman. One of Wiggins' goals was to suggest that "agency and communion should serve as the

conceptual coordinates for the measurement of interpersonal behavior" (p. 90). The concepts of agency and communion are broad, encompassing, and generalizable over time and across a wide variety of academic disciplines (e.g., religion, psychology, anthropology; Bakan, 1966). Given the broad scope of these two orthogonal concepts, they will be used as a starting point for the placement of FDE and IVD into a conceptual framework.

The discussion below is not intended to suggest that FDE and IVD fit perfectly this two dimensional structure. Instead, the discussion is intended as a broad introduction to the exploration of the psychological meaning of the two orthogonal dimensions of championship. Areas of overlap between agency and communion, on the one hand, and FDE and IVD, will be discussed below. But the overlap is not close enough to warrant a conceptualization of championship based solely on agency and communion. More specific discussion of FDE and IVD will follow.

Bakan (1966) characterized agency and communion as "...two fundamental modalities in the existence of living forms, agency for the existence of an organism as an individual, and communion for the participation of the individual in some larger organism of which the individual is a part" (pp. 14-15). Agency is manifested by strivings for mastery and power that serve to set the individual apart from others—the condition of being a differentiated individual. Agency is a way of relating to one's environment that reinforces one's independence and distinctiveness. In contrast, communion is manifested by "...strivings for intimacy, union, and solidarity with the larger entity" (Wiggins, 1991, p. 89). Communion involves being at one with others and in contact and openness. Moreover, communion involves a recognition of one's obligations in the larger social order.

Parallels between FDE and agency are evident. Recall that managers rated high on FDE can be described as forceful, strong-willed, tenacious, and outspoken. Their behavior reinforces their *differentiation*. This theme of differentiation was particularly

evident in Rebellious Drive, but also appears in Self Promotion and Persistent Dominance. High scorers on FDE behave in ways that satisfy their internal needs: their behavior sets them apart from, it does not bring them into communion with, others.

Bakan (1966) described the focus on self associated with agency in terms of self protection, self assertion, and self expansion. A focus on self is a familiar theme connected with the first-order factor scales that load on FDE, most obviously SP, but also PD and RD. FDE has much to do with personal gain and little to do with consideration of others and forging of links with a larger collective whole. FDE is about success for the individual, not the group.

In contrast, the IVD factor scales reflect a more prosocial, affiliative orientation. This is particularly evident from Collaboration and Support and, to a lesser extent Influence and Political Savvy and Visibility and Growth Seeking. Action is taken in order to facilitate the development and support of others (CS). Interpersonal influence is of a more participative nature, involving others in the process of championship (IPS). And voluntarism and openness to new experience is evident (VGS). Even Immediate Responsiveness and Driven Commitment, although not containing items having to do with interpersonal behavior, relate to strivings to accomplish *organizational*, rather than *individual* objectives: commitment and drive in the service of the company.

Bakan (1966) discussed the importance of balance between the two modalities. He noted that agency can serve to mitigate communion, while communion can serve to mitigate agency. Bakan's prime concern appeared to have been with unmitigated agency, and the resultant alienation, isolation, and repression that results. Moreover, he argued that the very split of agency from communion is a feature of agency itself and that agency represses communion from which it has separated. Unmitigated FDE would likely appear as aggression and selfish exploitation, dominance, self promotion, and rebelliousness taken to their extreme.

Unmitigated communion, on the other hand, might lead to submission, loss of self, and passivity (Bakan, 1966). Unmitigated IVD might appear as absorption in the needs of others (or the organization) with little attention given to one's needs and priorities. Extremes of either modality may be counterproductive. Wiggins (1991) argued that "...agentic strivings mitigated by a concern for others and communal feelings mitigated by a sense of self are the much preferred expression of these two modalities" (p. 106).

The parallels between FDE and IVD and agency and communion discussed in this section are not perfect. Most notably, DC and IR, both loading on IVD, appear related to achievement, a variable typically associated with agency. Indeed, Bakan (1966) discussed McClelland's (1961) early work on need for achievement in connection with agency. Moreover, FDE contains a manipulative, unsocialized component that may go beyond agency. Nevertheless, agency and communion provide an informative context within which to view FDE and IVD; a way of placing these dimensions of championship within a much larger, interpersonal context.

The areas of overlap do, however, suggest that these two fundamental modalities of existence are useful to consider at a general level in the discussion of championship. Managers high on FDE are likely out for themselves; they may show little concern for others and their place in the larger social collective. Their agenda would likely be to dominate and win. This is the cornerstone of agency, particularly agency unmitigated by communion. Managers high on IVD collaborate with others and make efforts to operate smoothly and effectively within the political arena of an organization; they work hard for the sake of the company and show commitment. This cooperative, prosocial orientation is the cornerstone of communion.

The modalities of agency and communion provide an informative introductory context within which to view FDE and IVD. Given the generality of these two modalities, however, the discussion, thus far, has been relatively abstract. In the next



section, each of the two higher-order championship dimensions will be examined, separately, and in detail, in order to explore further their psychological meaning. The analysis will become more focused and specific and will involve the examination of theories of leadership behavior and, in the case of FDE, psychopathology.

*A Closer look at Forceful Drive and Expediency.* FDE was conceptualized above as representing agentic strivings for mastery and accomplishment. A closer inspection of the scales and items loading on FDE reveals what was called earlier the *dark side* of championship. Taken to their extreme, dominance, aggression, impulsivity, manipulation, and rule breaking reflect antisocial behavior that may represent unmitigated, unbridled agency. In this section, the possibility of a dark side of championship will be explored, first by examining a related literature on the dark side of charismatic leadership, and then by exploring the relationship between FDE and both narcissism and psychopathy.

*The dark side of leadership.* The dark side of leadership, in particular, charismatic leadership (Conger & Kanungo, 1987), has been explored from a variety of perspectives, including psychoanalytic (e.g., Kets de Vries, 1989; Kets de Vries & Miller, 1991), research on individual differences (e.g., Hogan, Raskin, & Fazzini, 1990), and leader behavior (e.g., Conger, 1990; Howell, 1988). This literature has relevance to the study of the champion, since the champion emerges as a leader of others, among other things, in the service of promoting innovation. Interestingly, the dark side of leadership looks very similar from this diverse body of literature. As will be discussed below, the area of communality is narcissism. A variety of researchers have ascribed narcissistic personality traits to influential, powerful, and dynamic leaders.

In a discussion of the link between the psychological characteristics of key organizational members (CEO's) and the "neurotic styles" of their organizations, Kets de Vries & Miller (1991) discussed the charismatic leader, whom they described as

grandiose, dramatic, exhibitionistic, lacking in self discipline, and driven by a need for excitement and stimulation. Such leaders possess a sense of entitlement, are superficially warm and charming, but are often exploitive. In so doing, Kets de Vries & Miller drew a link between charisma and *narcissism*. They went on to suggest that such traits in the CEO would lead to the creation of a neurotic organizational style, as manifested by a "charismatic" culture.

Hogan et al. (1990) described the narcissistic leader who is able to rise quickly in organizations because of his/her social skills. Citing research on the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979), they point out the overlap between narcissism and assertive, forceful, self confident, "leader like" behavior. Hogan et al. argued that recent research on narcissism shows "...a persistent and surprisingly large relationship between measures of narcissism and attitudes and characteristics often thought to typify aggressive managers, athletic coaches, military commanders, and political leaders" (Hogan et al., 1990, p. 350).

Hogan et al. (1990) cited research in which significant correlation between the NPI and the CPI scales of Dominance (.71), Sociability (.66), Social Presence (.62), and Capacity for Status (.37) was shown, providing further evidence of a link between narcissism and dominant, forceful, assertive behavior. Ramanaiah, Detwiler, and Byravan (1994) reported similar results. They divided subjects into narcissistic and non-narcissistic groups on the basis of NPI scores. Mean scores for the narcissistic group on NEO-PI Extraversion were higher than the non-narcissistic group and lower than the non-narcissistic group on Agreeableness. Mean differences were not significant on the other three NEO-PI scales.

In a related literature, Conger (1990) discussed the dark side of charismatic leadership. Charismatic leaders inspire trust, respect, even idolization and worship among their followers (Bass, 1985). According to House (1977), indicators of charismatic leadership include: (a) followers' trust in the correctness of the leader's

beliefs, (b) unquestioning acceptance of the leader, (c) affection for the leader, and (d) obedience.

Conger (1990) argued that when "...a leader's behaviors become exaggerated, lose touch with reality, or become vehicles for purely personal gain, they may harm the leader and the organization" (p. 44). His point was that when normally functional and productive charismatic leader behaviors are taken to their extreme (perhaps unmitigated by communion), they become dysfunctional. When vision becomes obsession, and judgment is clouded, the dark side of leadership emerges and poor decisions are made.

In a theoretical paper on charismatic leadership, Howell (1988) also discussed the dark side of charismatic leader behavior. She argued for a more precise definition of charismatic leadership and a reconciliation of the fact that *both* Mahatma Gandhi and Adolf Hitler have been described as charismatic leaders. Drawing on the work of McClelland (1985), Howell hypothesized and described two faces of charismatic leadership—personalized and socialized.

Personalized charismatic leaders, Howell hypothesized, articulate goals that originate from leaders' private motives or intentions. Such leaders recognize "...followers' needs only to the degree necessary to achieve leaders' goals" (p. 225). In contrast, socialized charismatic leaders articulate goals "...that originate from followers' fundamental wants [and recognize] followers' needs in order to help them develop in their own right" (p. 225).

The personalized charismatic leader is forceful and dominant and will manipulate others to get his/her way. Such leaders expect and require followers to submit and obey to their novel and self-serving goals. Such leaders see their followers as objects to be manipulated. Thus, Howell comes to a similar conclusion to Conger (1990) in describing a dark side to charismatic leadership and portraying it as generally dysfunctional and potentially harmful to the organization and its members. Howell also goes on to

acknowledge that personalized leadership could be valuable during times of crisis and uncertainty, when strong and decisive leadership may be needed.

Collectively, the literature on the dark side of leadership points up the dysfunctionality of extreme leader behavior: that some leaders are driven by excessive needs for power, prestige, and control.<sup>23</sup> Interestingly, the possibility of a dark side of championship has not previously been acknowledged and explored, even though some of the "darker" traits summarized in Table 3 (like rule-bending and aggressiveness) have been previously, albeit infrequently, acknowledged. But, insofar as champions assume leadership roles in promoting innovation, sometimes in the face of strong opposition, one might expect to find narcissistic traits among champions. Given the item content of FDE, it seems advisable to explore further the relationship between championship and narcissism.

*Narcissism and Forceful Drive and Expediency.* Narcissism involves a turning inward for gratification and a reliance on the self. Narcissists are typically pre-occupied with power and prestige; they see themselves as better, stronger, and more important than others. They seek out and need admiration from others. The Diagnostic and Statistical Manual-Version IV (DSM-IV) criteria include: (a) a grandiose sense of self-importance, (b) pre-occupations with fantasies of unlimited success and power, (c) a perception of special uniqueness; a desire to associate only with those of high status, (d) admiration seeking, (e) a sense of entitlement, (f) interpersonal exploitiveness, (g) a lack of empathy, (h) a display of arrogant behaviors/attitudes, and (i) envy of others (American Psychiatric Association [APA], 1994).

Although the FDE factor scales do not map one-on-one with the various criteria for the diagnosis of narcissism, there is sufficient overlap between the constructs of narcissism and championship to warrant a discussion and exploration of the connection.

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<sup>23</sup> A number of researchers have noted that narcissists often end up in leadership positions because of their need for power and prestige (e.g., Emmons, 1987; Kernberg, 1979; Person, 1986).

This is not to suggest that a manager rated high on FDE would receive a diagnosis of narcissism, based on the DSM-IV diagnostic criteria; rather, that persons high on FDE demonstrate some of the traits associated with narcissism. Such behavior might be seen as reflective of narcissism as a *personality trait* rather than narcissism as a psychiatric category. The measurement of the former was Raskin & Hall's (1979) objective in connection with the development of the NPI.

Themes of both exploitiveness and admiration seeking are evident from the item content of the Self Promotion scale, although not in extreme form. Exploitiveness is evident from the following items, the first reverse keyed when scored for Self Promotion: "I don't exploit political connections in the company just to get ahead", and "I orchestrate situations (e.g., meetings, one-on-one conversations) so that my wishes are approved." Admiration-seeking tendencies are revealed in the following two items: "I promote ideas that have the highest visibility and likelihood of success", and "I ensure that my successes in the company are known." An inclination toward associating with those of high status is revealed from the SP item: "I make sure I rub shoulders with powerful individuals in other departments and business units in the company."

Turning to other FDE first-order factor scales, Persistent Dominance and Confrontive Candor contain items that reflect a dominant, combative approach to interpersonal relationships, thus revealing an arrogance and general lack of regard or empathy for others, (e.g., "When I think that someone is incompetent I tell them", and "I'm persistent in voicing my opinion over and over again, even if my ideas are rejected"). Grandiosity and entitlement can be *inferred* from the item content of Rebellious Drive; perceptions of self importance, uniqueness, and entitlement may lead one to see oneself as above the rules and conventions most people must follow.

Considered together, the FDE first-order factor scales contain items that reflect traits associated with narcissism. But the fit is far from perfect. Elements of impulsivity, rule breaking, deceit, and aggression, found in the item content of FDE are not listed as

indicators of NPD in DSM-IV or in the related measurement literature on narcissism associated with the NPI (e.g., Emmons, 1987; Raskin & Terry, 1988). As well, some of the symptoms of NPD are not well represented in the item content of FDE. In order to more fully examine the psychological meaning of FDE, the literature on a personality disorder conceptually related to narcissism, psychopathy, will now be examined, and parallels between psychopathy and FDE discussed.

*Psychopathy and Forceful Drive and Expediency.* Psychopathy has traditionally been characterized by traits similar to narcissism, (tough-minded, glib, superficial, exploitive, and unempathic). It is distinct from narcissism in that it is diagnosed from a pattern of interpersonal, affective, and behavioral indicators that include, among other things, impulsivity, aggression, deceit, and various forms of rule breaking or antisocial behavior. Psychopathy is a personality disorder characterized by interpersonal, affective, and behavioral symptoms (Cleckley, 1976; McCord & McCord, 1964). Interpersonally, psychopaths are grandiose, manipulative, dominant, egocentric, and forceful. Affectively, they display shallow, labile emotions, are unable to form long-lasting bonds with people, and are lacking in empathy, anxiety and guilt. Behaviorally, psychopaths are impulsive and sensation seeking; they violate social norms as manifested by criminality, substance abuse, and a failure to fulfill social obligations and responsibilities (Hart, Hare, & Forth, 1994).

Virtually all research on psychopathy has been conducted on those in prisons or forensic hospitals, where the incidence of psychopathy is approximately 10%, as compared with roughly 1% in the general population (Hare, 1993). Increasingly, however, the white-collar (or "sub criminal") psychopath is receiving attention in the literature (e.g., Babiak, in press; Hare, 1993). Such individuals demonstrate the interpersonal and affective traits of the psychopath, but are able to mask their anti-social,

irresponsible behavior with a veneer of charm. The interpersonal traits associated with psychopathy are instrumental in the cover up of criminal and/or antisocial behavior.

Psychopathy and Antisocial Personality Disorder (APD) are two labels often used interchangeably to describe the same disorder, but they are different. A diagnosis of APD is made solely on the basis of *behavioral* indicators reflecting antisocial and criminal activity. Thus, APD criteria do not include the interpersonal and affective characteristics that have traditionally been seen as central to psychopathy (e.g., Cleckley, 1976), with the result that persons diagnosed as APD can be heterogeneous with respect to the personality traits that define psychopathy. The distinction between APD and psychopathy is an important one to make in the context of studying the sub criminal psychopath, where a reliance on the DSM-IV criteria for APD would lead one to fail to diagnosis any person prior to documentation of blatantly antisocial and/or criminal activity, even though they might demonstrate many of the interpersonal and affective indicators associated with psychopathy.

Turning to the first-order factor scales associated with FDE, a number of the behavioral and interpersonal symptoms associated with psychopathy are evident. For example, the Rebellious Drive dimension, contains items that reflect antisocial and irresponsible behavior. RD contains a number of items having to do with norm- and authority-challenging. High scorers on RD would likely ignore authority and do as they please. The impulsivity noted by the SME's in connection with Impatient Expediency is another behavioral indicator for psychopathy (and, of course, APD). Finally, elements of deceitfulness are seen in the item content of Self Promotion, the latter item reverse keyed for scoring on SP (e.g., "I will sometimes bend the truth in order to achieve my goals", and "I will not compromise my integrity just to get ahead").

FDE does not appear to contain the affective symptoms associated with psychopathy (e.g., low anxiety, guilt), however. Such affective indicators are difficult to measure with behavioral scales. The connection between FDE and affective indicators of

psychopathy will, however, be re-visited in Study 2, when the individual-difference characteristics of the champion are reported discussed.

As discussed earlier in connection with narcissism, high scorers on FDE would likely be described as dominant, forceful, even cold hearted. Item content from the Persistent Dominance and Confrontive Candor scales reveal an aggressive, forceful, dominant interpersonal style (e.g., "I monopolize discussions", "I am stubborn and resistant, even in the face of legitimate criticism", and "I have risked disappointing others in order to get my own ideas across"). Also an indicator of narcissism, grandiosity was discussed earlier in connection with the item content of Rebellious Drive. Egocentricity was a theme discussed earlier as well in connection with the FDE factor scales Self Promotion, Rebellious Drive, and Persistent Dominance. A strong theme of self interest unites these three first-order factor scales. Finally, Self Promotion contains a clear theme of manipulation, as noted earlier by the SME's.

*Summary.* The parallels drawn between FDE and both narcissism and psychopathy warrant further investigation. An empirical study of the relationships between championship and narcissism and psychopathy is needed in order to more fully examine the dark side of championship. At present, the linkages between championship, narcissism, and psychopathy should be seen as suggestive only. The parallels do appear, however, strong enough to warrant closer study.

*A closer look at Influence and Visible Drive.* Parallels between FDE and two personality disorders (narcissism and psychopathy) were drawn in the previous section. IVD, on the other hand, does not appear related to personality disorders. If FDE tapped the dark side of championship, then IVD is measuring, not the opposite of the dark side (since this would require FDE and IVD to be negatively correlated), but rather a side of championship that is orthogonal to FDE; one that bears close similarity to the glowing descriptions of the champion forwarded by past researchers. In recognition of this fact,



IVD has been labeled as the *heroic* side of championship since it reflects the prosocial and desirable behaviors and traits so frequently cited by others in the literature.

There are a number of similarities between IVD and the trait profile of the champion developed from the literature review reported in Table 3. For example, Burgelman (1983) described the champion as politically astute, while others acknowledged the champion's ability to influence and inspire others (e.g., Galbraith, 1982; Howell & Higgins, 1990a). The overlap here with the IVD dimension Influence and Political Savvy is obvious. The champion is able to garner support through his/her influence tactics. The dimension labeled Interpersonal Awareness in Table 3 is similar, in many ways, to the IVD factor scale Collaboration and Support. Both have an obviously strong interpersonal flavor and both relate to cooperation and support. Kanter (1982) emphasized the importance of collaboration in working toward the implementation of innovation. Other have acknowledged the general importance of interpersonal skills (one's ability to work well with others) for the champion's success.

Other parallels between IVD and the dimensions identified in Table 3 relate to drive and achievement. Persistent Drive and Action-Oriented Competition bear a striking similarity to the first-order factor scales Immediate Responsiveness and Driven Commitment. Finally, Visibility and Growth Seeking appears similar to the dimension labeled Openness to Change/Visionary in Table 3, although the latter has a more rebellious, excitement-seeking theme to it than does VGS. Pinchot (1985) has described the champion as open and willing to try new things. Recall that much of the item content of VGS relates to seeking out of opportunities for new challenges, described by some of the SME's as voluntarism or role flexibility.

All of the scales that load on IVD reflect behaviors and traits that have been discussed by previous researchers in connection with the champion. Taken together, the dimensions of IVD represent the heroic- and the most frequently cited-side of

championship. Clearly, there is significant overlap between IVD and researchers' past descriptions of the champion.

Going beyond the literature on championship, parallels can be drawn between IVD and both charismatic and transformational leadership (Bass, 1985; Burns, 1978), the former being a subset of the latter. As discussed briefly in a previous section, Howell's (1988) application of McClelland's (1985) work on power motives to charismatic leadership led to the proposal of two faces of charismatic leadership—socialized and personalized. While personalized leadership was related to FDE, socialized leadership appears similar in at least two respects to IVD.

The socialized leader expresses goals that are mutual and shared: follower and leader pursue a common purpose. The socialized leader takes into consideration the individualized needs of the followers and provides them with developmental opportunities. The socialized leader is a more collaborative and subtle influencer than his/her personalized counterpart. These behavioral characteristics point up parallels between Collaboration and Support and Influence and Visible Commitment, on the one hand, and socialized leadership, on the other, areas of communality that will be discussed in more detail below in the section on transformational leadership (Bass, 1985).

*The relationship between transformational leadership and IVD.* The link between *innovation* and transformational leadership has been made previously by several authors (e.g., Bass, 1985; Conger & Konungo, 1987). Of more direct relevance to the present study is the research of Howell and Higgins (1990a) who demonstrated recently a link between *championship* and transformational leadership. Howell and Higgins found that champions reported using transformational leadership behaviors to a greater extent than non-champions. Thus, the connection between transformational leadership and championship warrants further examination.

Transformational leadership refers to the process of influencing significant changes in the attitudes and assumptions of organizational members. The leader transforms the organization's members and, in so doing, effects significant cultural change in the organization. The transformational leader inspires followers<sup>24</sup> to transcend their self interests for a higher collective purpose (Burns, 1978). The leader's effect on followers is to empower them to participate; the transformational leader works to earn their commitment.

Building on the earlier work of Burns (1978) in connection with political leaders, Bass (1985) defined transformational leadership as made up of four components: (a) *charismatic leadership*—the leader articulates a vision, inspires and encourages others; instills respect, faith, and loyalty, (b) *inspirational leadership*<sup>25</sup>—uses emotional appeals, communicates a vivid, persuasive image of how things could be; provides examples to enhance followers' motivation, (c) *intellectual stimulation*—suggests creative, novel ideas that challenge others' conceptualization, comprehension, and understanding of the nature of problems, and (d) *individualized consideration*—the leader takes a developmental and individualized approach to followers. Thus, Bass (1985) sees transformational leadership as more than just charisma. Transformational leaders seek to empower and elevate followers, whereas some charismatic leaders may seek to keep their followers weak and dependent (i.e., personalized charismatic leadership).

IVD can be related to transformational leadership in the following ways. First, on a general level, transformational leadership is clearly about influencing others. As discussed earlier, IVD dimensions Influence and Political Savvy and Collaboration and Support both relate to interpersonal influence, especially support and persuasion.

Collaboration and Support overlaps, in particular, with Bass' (1985) factor *individualized*

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<sup>24</sup> Burns (1978) noted that transformational leadership may be exhibited by anyone in the organization, in any type of position; thus, it may involve people influencing, not only subordinates, but also peers and superiors.

<sup>25</sup> Inspirational leadership emerged as a component of the first and largest of the factors, charismatic leadership, but is described separately by Bass (1985).

*consideration*, while the more political influence tactics evident in IPS overlap with charismatic and inspirational leadership.

The connection between Immediate Responsiveness, Driven Commitment, and Visibility and Growth Seeking, on the one hand, and transformational leadership, on the other, is more difficult to make. As discussed previously, items comprising IR and DC reflect a hard-working committed, dedicated approach to one's work, while items comprising Visibility and Growth Seeking relate to one's openness to new challenges and working environments. High scorers on IR, DC, and VGS could be seen as modeling—providing examples of commitment and determination in order to enhance followers' motivation. Thus, IR, DC, and VGS could be seen as overlapping with Bass' *inspirational leadership* component, although the overlap here is far from perfect.

Missing from the IVD factor scales is intellectual stimulation, a component of transformational leadership that appears to overlap, to some extent, with one of the two higher-order dimensions of championship that was hypothesized to emerge—innovation. The issue of innovativeness and, more generally, cognitive ability, will be re-examined in Study 2.

*Summary.* Drawing on the findings of previous research on the champion as well as the literature on transformational leadership, the psychological meaning of Influence and Visible Drive has been further explored. In contrast to Forceful Drive and Expediency, IVD has been conceptualized as the heroic side of championship. IVD appears to represent that which is "good" and desirable about the champion. And, as such, it overlaps with previous, mostly descriptive research on the champion in which this figure is described as the heroic advocate of innovation and change.

#### *The Prototypicality of The First- and Second-Order Factor Scales*

Mean prototypicality ratings on the various factor scales were reported in a previous section. Ratings for the two second-order factor scales were very similar; both

were rated as prototypic of championship. A gradient of ratings was observed for the first-order factor scales, with higher prototypicality ratings being assigned to the first-order factor scales loading on IVD.

It is possible that this gradient may reflect a view of the champion that is influenced by an historic bias among those who have researched and read about this figure. As noted before, in the majority of research the champion has typically been described as a near-heroic, energetic, highly-skilled advocate. Thus, if the SME's believed that champions were inherently prosocial, supportive, hard-working, and tactful influencers, they would see the IVD scales designed to measure such behavior as close to the category of champion and, as well, see the scales comprising FDE as less prototypic of the category of champion. An historical positively-biased view of the champion may, in part, account for the pattern of prototypicality ratings observed in Table 12.

It is interesting, then, to see just how similar the *overall* prototypicality ratings are for FDE and IVD, despite the possible operation of such a bias. When required to consider the individual first-order factor scales as marking two global dimensions of championship and to rate these two global dimensions for prototypicality, the SME's continued to see the IVD factor scales as prototypic of championship but now saw the group of five FDE factor scales as almost equally prototypic.

Although the dark side of championship has not been explicitly discussed in previous literature, the SME's ratings indicate that the dark side is nearly as central to the category of champion as is the heroic side. These findings suggest that the dark side of championship may have been with us for some time, but that the stereotype of the positive, prosocial champion has colored our views in such a way as to block from view the darker aspects of this role, unless they are examined at a concrete, behavioral level.

### *Correlates of Championship*

The correlations between the 5-item criterion measure of championship (5CC) and overall management performance (OMP), on the one hand, and the championship factor scales, on the other, were reported in Table 13. These correlations will now be discussed.

*The 5-item supervisory-report criterion measure of championship and the factor scales.* Taken at face value, it would appear that the IVD factor scales are the most important components of championship, while the FDE factor scales are less important. The 5-item criterion measure of championship is not, however, without its shortcomings. It represents a brief assessment of global, overall, championship, based on the original definition of championship that inspired the present research, a definition that is biased toward positive views of the champion role. Thus, it is not surprising to see such significant convergence between IVD (and the related first-order factor scales) and 5CC. This criterion measure of championship was, after all, designed to measure the most frequently-cited and desirable side of championship.

Moreover, 5CC is not an objective independently-obtained criterion measure of championship. Thus, the correlations represent convergence between ratings of behavior rather than associations between ratings on the factor scales and consensually-validated, documented on-the-job achievements as a champion. Therefore, the correlations reported in Table 13 are likely inflated by method variance and should not be seen as demonstrating either: (a) the unimportance of the FDE factor scales, or the supreme or exclusive importance of the IVD factor scales.

A next step in research on these first- and second-order factor scales would be to examine their validity as predictors of: (a) participation rates in technical and administrative innovations, and (b) success rates (defined as implementation of innovation). It would be particularly interesting, for example, to see if both IVD and FDE correlate with success. At present, the relationships between IVD and FDE and

organizational-level variables, like implementation, are unknown, but a possible scenario will be proposed.

Although IVD would be seen by most people as the more desirable side of championship, it is likely that, in some situations (perhaps depending on the degree of radicalness of the innovation or the perceived risks to implementation by organizational members), an approach typified by FDE might be necessary. When resistance is strong and the innovation must be implemented despite widespread resistance, the dark side of championship might be highly adaptive, at least in the short term, as suggested by Howell (1988) in connection with personalized charismatic leadership. It is possible that the degree of association between FDE and IVD, on the one hand, and implementation success, on the other, is moderated by the degree of resistance to the idea.

*OMP and the factor scales.* We see further evidence of a dark and a heroic side to championship when we examine the relationship between OMP and the two second-order factor scales. IVD is clearly associated ( $r = .80$ ) with positive appraisals of general managerial competence, while FDE is associated ( $r = -.50$ ) with negative appraisals of general managerial competence. The two higher-order dimensions of championship bear markedly different relationships to OMP. IVD appears to be tapping into both championship and general management effectiveness, at least managerial effectiveness as measured by OMP.

Both OMP and the championship factor scale scores are based on supervisory ratings. Thus, it is likely that the correlations reported above are inflated due to method variance; recall that the 36-item OMP was embedded in the larger 141-item instrument. In other words, the true degree of relationship between overall management effectiveness, on the one hand, and the two sides of championship (particularly the heroic side), on the other, may not be as strong as might be suggested by the results in Table 13.

A related methodological concern is halo. The halo effect is the tendency for raters to rate all traits (dimensions) in the direction of some general impression—the ratee is good or bad, hard-working or lazy. In the application of performance appraisal, the halo effect results in inflated inter-correlations among oblique but conceptually distinct dimensions of performance (e.g., planning and analysis). A manager viewed as a very effective planner, might also be rated as high on analysis, for example, in spite of the fact that such a manager might have poor analytical skills.

In the present study, halo may be inflating the correlations between championship and OMP. Managers seen by their supervisors as generally likable and good performers might have received high scores on both OMP and IVD, while those seen as generally poor performers might have received low scores on OMP and high scores on FDE due, in part, to the halo effect. Although the halo effect and method variance might account for some of the overlap between OMP and championship, the correlations are strong enough to suggest that these relationships exist in spite of the likely operation of these statistical artifacts.

Given the relationships between OMP and the two second-order factor scales, implications for selection seem clear. First, if organizations wished to select for *both* general management competence and championship (perhaps by assessing a pool of incumbents via supervisory, peer, or subordinate [bottom-up] ratings), their best strategy would be to select on the basis of IVD. If such a strategy were pursued, the organization would be likely to select in managers who: (a) show many of the behaviors characteristic of champions, and (b) are likely to be high-performing managers.

If, on the other hand, it was felt that more forceful drive and opportunistic leadership were needed to, for example, implement an unpopular but necessary innovation, then FDE might be emphasized. There would, however, likely be a cost associated with selecting for FDE. That cost, at the least, might be low performance as a manager (at least as perceived by supervisory ratings). At the worst, the cost could be the



selection of a low-performing manager who is prone to engage in a range of antisocial and counterproductive behaviors.

### *Summary*

A hierarchical structural model of championship was developed in Study 1. Ten replicable and clearly interpretable first-order and two second-order factors were labeled and discussed. Although all ten of the first-order factors were related to championship, some were found to be more central or prototypic than others. The two second-order factors were found to be very similar to one another in rated prototypicality; thus, both sides of championship—the heroic and the dark—are prototypic of championship. Finally, the relationships between the factor scales and overall management performance, as well as a 5-item criterion measure of championship were discussed in order to examine further the psychological meaning of the factor scales. The scales arising from this structural model of championship will now serve as criteria for Studies 2 and 3.

## STUDY 2: AN EXAMINATION OF THE INDIVIDUAL-DIFFERENCES CHARACTERISTICS OF THE CHAMPION

### Overview

The purpose of Study 2 was to examine the characteristics of the champion that distinguish him or her from the non-champion. Three approaches were used to identify these distinguishing characteristics. First, correlational methods were used to examine the relationships between the various components of the assessment center (AC) battery and rated championship. These correlational analyses were based on the complete sample of managers ( $n = 174$ ) who participated in the assessment center. Secondly, a contrasted-groups design was used to study managers with very high and very low scores on both FDE and IVD. Information from all components of the AC battery, including an open-ended biographical information form, was examined in order to identify the characteristics that distinguished: (a) managers low and high on FDE, and (b) managers low and high on IVD. Finally, a case study approach was used to explore in more descriptive detail the characteristics of the manager receiving high and low scores on the two second-order factor scales.

The characteristics of the champion were of interest for two primary reasons—theory and application. First, Study 2 was designed to test hypotheses and contribute to theory on the individual-differences characteristics of the champion. As noted in the Introduction chapter, much of what is currently known about the champion's personality is based on descriptive research—primarily case studies—in which one or two champions were studied intensively by the researcher. Such research leads to the development of descriptively-rich and compelling profiles. The validity of these profiles can, however, be challenged when viewed from the perspective of a quantitative research paradigm. They typically include no comparison groups and, by definition, make no use of standardized assessment tools. Salient characteristics that appear to substantiate common wisdom can be reported and seemingly contrary evidence disregarded or de-emphasized.

Thus, the theory-driven objective of Study 2 was to develop an empirically-based profile of the champion—a profile that distinguished him or her from the non-champion. The results from this analyses would permit the present researcher to test the validity of the descriptive profile of the champion outlined in Table 3. Qualitative research methods were also used in Study 2, in part, for the purpose of "triangulation". That is, the results from the contrasted groups and case study analyses were compared with the results from the correlational component of Study 2 in order to identify areas of communality and convergence. Hypotheses were tested on the basis of results from the correlational analyses. The case study and contrasted-groups approaches were used to add further depth and descriptive detail to the profile of the champion.

The second reason the champion's characteristics were of interest was to develop an optimally-predictive championship scale. Using multiple regression methods, scales from the various standardized instruments were differentially weighted and combined to predict the two second-order factor scales, FDE and IVD. The results arising from this analysis would have implications for management assessment, selection in particular. If acceptable levels of criterion-related validity could be achieved between rated championship and linear combinations of various assessment measures, then it might be possible to use psychological testing to assist the human resource function in accomplishing strategic objectives related to championship. A championship screening test (or battery) could be added to existing selection methods to raise the probability of hiring employees likely to take a new idea for either an administrative or technical innovation (an idea s/he may or may not have generated) and introduce, promote, and sell the idea to others in the organization.

## Hypotheses

Hypothesized correlations between scales from the various components of the AC battery (described in detail below) and ratings of championship are presented in Table 14. The reader will note that the hypotheses have been organized according to the four individual-differences clusters featured in Table 3.

## Method

### *Participants and Setting*

The participants were 174 entry, middle-, and senior-level managers at the British Columbia Telephone Company (BC Tel; the same group of managers rated in Phase IV of Study 1). Of the 174 participants, 44 were female and 124 were male. To review, the sample was composed of managers who participated in a three-day assessment center at BC Tel, between the years of 1989 and 1994. A variety of assessment procedures were used in the assessment center, including both standardized tests and simulation exercises.

### *The Assessment Center Measures*

The measures used in the assessment center appear in Table 15. Cognitive ability tests, personality inventories, management simulations, a structured interview, and a biographical information form made up the assessment battery. Each component of the AC battery will now be described in more detail.

### *Cognitive Ability (Intellectual Measures)*

The Wonderlic Personnel Test, Form A (E. F. Wonderlic & Associates, 1983), the Concept Mastery Test, Form T (Terman, 1956), and the Culture Fair Intelligence Test, Scale 3, Form A (Cattell, 1973) were used to assess *general intelligence*. The first two tests are culturally-influenced measures of general intellectual ability. They measure one's *acquired* level of functional ability. The Culture Fair Intelligence Test was designed to measure individual intelligence by reducing "...the influence of verbal

Table 14

*A Summary of Hypotheses on the Individual-Differences Characteristics of the Champion***A. Personality/Motivational Traits***Interpersonal Effectiveness*

1. Positive and significant correlations will be found between managers' scores on the 16PF Q<sub>I</sub> Extraversion second-order scale, the 16PF Factor E and Factor H scales, the CPI Sociability (Sy) scale, Dominance (Do), Capacity for Status (Cs), Social Presence (Sp), and Psychological Mindedness (Py) scales, and the PRF Affiliation (Af), Dominance (Do), and Exhibition (Ex) scales and their scores on the championship factor scales.
2. Positive and significant correlations will be found between managers' scores on the Rahim Organizational Conflict Inventory (ROCI-II) scales Dominating (Do) and Integrating (In) and their scores on the championship factor scales.
3. Positive and significant correlations will be found between managers' scores on the summary Role-play and Interview Interpersonal dimensions and their scores on the championship factor scales. The Interpersonal dimension scales in the role-play and interview measures aspects of interpersonal effectiveness, poise, sensitivity, assertiveness, and tact. They are summary measures of one's overall rated interpersonal effectiveness.

*Determined Achievement Orientation*

4. Positive and significant correlations will be found between managers' scores on the 16PF Q<sub>IV</sub> second-order scale, the CPI Achievement via Independence (Ai), and the PRF Achievement (Ac), Endurance (En), and Autonomy (Au) scales and their scores on the championship factor scales.
5. Positive and significant correlations will be found between managers' scores on the championship factor scales and their scores on the four Jenkins Activity Survey (JAS) scales: Type A, Factor S (Speed and Impatience), Factor J (Job Involvement), and Factor H (Hard-Driving and Competitive).
6. A positive and significant correlation will be found between managers' scores on the championship factor scales and their scores on both the Interview and Role Play dimension of Entrepreneurship. The Entrepreneurship dimension measures aspects of one's drive, ambition and independence.

*Table 14 cont.*

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*Openness/Willingness to Change*

7. Positive and significant correlations will be found between managers' scores on the championship factor scales and their scores on the CPI Tolerance (To), Flexibility (Fx), 16PF Factor M and Factor Q<sub>1</sub>, and the PRF Change (Ch) scales.
8. Negative and significant correlations will be found between managers' scores on the championship factor scales and their scores on the CPI Socialization (So) and Self-Control (Sc) scales, and the PRF Cognitive Structure (Cs) scale.
9. Positive and significant correlations will be found between managers' scores on the championship factor scales and their scores on the summary Role-play and Interview Initiative/Innovation dimension.

**B. Cognitive Abilities**

10. Positive and significant correlations will be found between managers' scores on the championship factor scales and their scores on the Comprehensive Ability Battery (CAB) measures of Ideational Fluency and Spontaneous Flexibility.
11. Positive and significant correlations will be found between managers' scores on the championship factor scales and their scores on the following measures of general intellectual level: the Wonderlic Personnel Test, the Culture Fair Intelligence Test, Scale 3, Form A, and the Concept Mastery Test, Form T.

Table 15

*Measures Used in the Assessment Center (AC) Battery***Cognitive Ability (Intellectual Measures)**

*Wonderlic Personnel Test* (Form A): measures general intellectual ability; this is a language-dependent measure.

*Concept Mastery Test* (Form T): measures general intellectual ability; developed as a measure of ability to deal with abstract ideas at a high level. This test is a language-dependent measure.

*Culture Fair Intelligence Test* (Scale 3, Form A): measures general reasoning ability; this is a measure that is free of English language proficiency.

*Nelson-Denny Reading Test* (Form E)

*Reading Speed*

*Reading Comprehension*: comprehension of material read.

*Vocabulary*

*Flanagan Industrial Tests*

*Expression* (Form A): writing skills--grammar and style.

*Comprehensive Ability Battery* (CAB)

*Ideational Fluency* (Fi): idea generation, brainstorming ability.

*Spontaneous Flexibility* (Fs): freedom from rigid thought modes.

**Personality Inventories and Measures of Temperament**

*California Psychological Inventory* (Revised) (CPI): yields scores on 19 scales measuring aspects of personality: Dominance (Do), Capacity for Status (Cs), Sociability (Sy), Social Presence (Sp), Self-acceptance (Sa), Responsibility (Re), Socialization (So), Self-Control (Sc), Good Impression (Gi), Communality (Cm), Sense of Well-being (Wb), Tolerance (To), Achievement via Conformance (Ac), Achievement via Independence (Ai), Intellectual Efficiency (Ie), Psychological Mindedness (Py), Flexibility (Fx), Femininity/Masculinity (F/M), and Anxiety (An).

*Sixteen Personality Factor Questionnaire* (16PF): measures 16 dimensions of personality as well as four "Second Order" factors assessing more global or comprehensive measures of personality. The second-order factors, labeled with the descriptor for high scorers are: Extraversion (Q<sub>I</sub>), Tough Poise (Q<sub>III</sub>), Independence (Q<sub>IV</sub>), and Adequacy of Adjustment (AA). The primary factors (again, the label

*Table 15 cont.*


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associated with high scores is reported) are: A (Outgoing), B (Bright), C (Emotionally Stable), E (Assertive), F (Happy-go-lucky), G (Conscientious), H (Venturesome), I (Tender-minded), L (Suspicious), M (Imaginative), N (Astute), O (Apprehensive), Q<sub>1</sub> (Experimenting), Q<sub>2</sub> Self-sufficient), Q<sub>3</sub> (Controlled), Q<sub>4</sub> (Tense).

*Personality Research Form (Form E) (PRF)*: yields scores on 22 scales: Achievement (Ac), Affiliation (Af), Aggression (Ag), Autonomy (Au), Dominance (Do), Endurance (En), Exhibition (Ex), Harm avoidance (Ha), Impulsivity (Im), Nurturance (Nu), Order (Or), Play (Pl), Social Recognition (Sr), Understanding (Un), Infrequency (In), Abasement (Ab), Change (Ch), Cognitive Structure (Cs), Defence (De), Sentience (Se), Succorance (Su), Desirability (Dy).

*Rahim Organizational Conflict Inventory-II (ROCI-II)*: designed to measure five independent dimensions that represent styles of handling interpersonal conflict: Integrating (IN), Obliging (OB), Dominating (DO), Avoiding (AV), and Compromising (CO).

*Jenkins Activity Survey (Form C) (JAS)*: measures Type A behavior. Provides a Type A score and factor scores for three components of Type A behavior: Speed and Impatience (S), Job Involvement (J), and Hard-Driving and Competitive (H).

## **Management Simulations**

### **In-Basket Exercises:**

*Telephone Supervisor In-Basket Exercise*. Yields scores on seven dimensions: Planning and Organizing Work, Interpersonal Relations, Leadership in a Supervisory Role, Managing Personnel, Analysis and Synthesis in Decision Making, Productivity, Quality of Judgment. An overall performance score is also computed.

*Consolidated Fund In-Basket Test*. Yields scores on nine dimensions: Taking Action Toward Solving Problems, Exercising Supervision or Control, Problem Analyzing and Relating, Communicating in Person, Delegating, Scheduling Systematically, Amount of Work Accomplished, Quality of Actions Taken, Scorer's Rating of Overall Performance.



Table 15 cont.

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**Role-plays:**

*Employee Performance Role-play.* Yields scores on seven dimensions: Leadership, Commitment, Communication, Interpersonal, Conceptual and Analytical, Control and Follow Up, Appraisal and Development of Subordinates. A summary or overall mean dimension score is also reported.

*Industrial Relations Role-play.* Yields scores on seven dimensions: Leadership, Communication, Interpersonal, Initiative/Innovation, Conceptual and Analytical, Entrepreneurship, Performance Stability.

*Marketing Role-play.* Yields scores on seven dimensions: Leadership, Communication, Interpersonal, Decision Making, Commitment, Conceptual and Analytical, Initiative/Innovation. A summary or overall mean dimension score is also reported.

*New Manager Role-play.* Yields scores on eight dimensions: Leadership, Communication, Commitment, Initiative/Innovation, Interpersonal, Decision Making, Conceptual and Analytical, Appraisal and Development of Subordinates. A summary or overall mean dimension score is also reported.

*Summary Role Play Dimension Scores.* Scores are summed across the three role-plays and an average computed for each dimension. The following nine summary scores are reported: Leadership, Communication, Commitment, Interpersonal, Initiative/Innovation, Decision Making, Conceptual and Analytical, Control and Follow Up, Appraisal and Development of Subordinates.

**Structured Interview**

Yields scores on eleven dimensions: Leadership, Communication, Entrepreneurship, Commitment, Interpersonal, Performance Stability, Initiative/Innovation, Decision Making, Planning and Organizing, Control and Follow Up, Appraisal and Development of Subordinates.

**Biographical Information Form**

Contains 16 open-ended questions measuring general background factors such as: (a) education, (b) leisure/social activities, (c) career history, and (d) self appraisals of attributes and skills. Each of the 16 questions is scored according to a categorical scheme derived from the responses of the participants.

fluency, culture, climate, and educational level" (Cattell, 1973, p. 5). It has been described as a measure of abstract-reasoning ability.

Tests that measure an individual's ability to process written information were also given. The Nelson-Denny Reading Test, Form E (Brown, Bennett, & Hanna, 1981) yields scores on Reading Speed, Reading Comprehension, and Vocabulary. The Flanagan Industrial Tests—Expression, Form A (Flanagan, 1975) provides a measure of Writing Skills (grammar and style). Finally, the Ideational Fluency (Fi) and Spontaneous Flexibility (Fs) tests of the Comprehensive Ability Battery (CAB; Hakstian & Cattell, 1975) were administered to assess imaginative and divergent thinking.

#### *Personality Inventories and Measures of Temperament*

Three widely-used standardized personality batteries were administered: the California Psychological Inventory (CPI; Gough, 1975), the Sixteen Personality Factor Questionnaire (16PF; Institute for Personality and Ability Testing, 1972), and the Personality Research Form - Form E (PRF; Jackson, 1984). In total, the three personality inventories yield scores on 60 scales. Although different test construction methods were used for each of the three inventories, the major purpose of each is to measure broadly relevant personality traits that might be useful in a variety of settings. The focus is on *normal functioning*, rather than upon psychopathology.

In addition to the three large personality inventories, two other instruments were given: the Rahim Organizational Conflict Inventory-II (ROCI-II; Rahim, 1983) and the Jenkins Activity Survey - Form C (JAS; Jenkins, Zyzanski, & Rosenman, 1979). The former inventory yields measures of five styles of handling interpersonal conflict. The latter instrument is a well-known measure of Type A behavior. Scores on three factors—components of Type A behavior—are also given: Speed and Impatience (Factor S), Job Involvement (Factor J), and Hard-Driving and Competitive (Factor H).

### *Management Simulations: In-Basket Exercises*

*The Telephone Supervisor In-Basket Exercise (TSIB).* The TSIB is a simulation exercise designed to measure administrative/organizational skills. The TSIB was originally developed at BC Tel for use in selecting entry-level managers (Hakstian, Woolsey, & Schroeder, 1986). The instrument has recently been revised and refined with the result that scoring time has been significantly reduced (Hakstian & Harlos, 1993). The TSIB yields scores on seven dimensions. An Overall Performance score—an unweighted average of all seven dimensions—was also computed.

*The Consolidated Fund In-Basket Test.* The Educational Testing Service (ETS, c. 1970) in-basket exercise is, like the TSIB, a management simulation designed to measure administrative/organizational skills. It yields scores on nine dimensions, one of which is the scorer's rating of Overall Performance. The ETS exercise dimensions have been found to correspond closely to the TSIB dimensions (Hakstian & Harlos, 1993). Both were included in the present research in the interests of comprehensiveness.

### *Management Simulations: Role-plays*

Four role-plays developed by Hakstian, Woolsey & Associates, Ltd. for the BC Tel Career Development Program were administered (three of the four role-plays were used in any one year). In each role-play, managers were required to assume a role and act *as if* they were actually on the job. Managers were given some background information for each of the three roles. In each role-play, managers interacted with a role-player (a management consultant hired for the role-play) who assumed a different role for each of the three role-plays. Each role-play lasted 15 minutes and was videotaped; scoring was done independently, at first, by two raters (using a videotape of the role-plays). Each rater made use of a standardized recording form to rate, for each role-play, the extent to which the manager demonstrated specific behaviors associated with dimensions of performance. After making their independent ratings, the two raters compared their assessments, discussed any ratings that diverged significantly, and then modified their

individual ratings as necessary. Such a practice is a common feature of the assessment center method (e.g., Thornton & Byham, 1982).

*The Employee Performance Role-play.* In this role-play, the manager must give performance feedback to an employee—a Ms. Jane Foster—who, although technically-skilled, has been identified as having caused problems in the company due to her abrasive and insensitive interpersonal style. The employee is, however, highly valued for her technical skills. Thus, the manager's task is to deliver unpopular feedback in a way that encourages and inspires the employee to work on identified areas of weakness. This role-play is scored for seven dimensions.

*Industrial Relations Role-play*<sup>26</sup>. In this role-play, the manager is acting as chief negotiator for the company and has been trying, over the past six months, to reach an agreement for a new one-year collective agreement with the union. Negotiations have been lengthy and involved, and the contentious issue of wages must now be discussed. The manager has made a previous commitment to the President of the company to hold any wage increase to a maximum of 3.5%. Thus, the manager's task in the role-play is to achieve agreement to a 3.5% wage settlement with the union. This role-play is scored for seven dimensions.

*The Marketing Role-play*<sup>27</sup>. In this scenario, the manager assumes the role of the leader of a team involved in developing and marketing a new technology. Although the majority of test research on the new technology has been very promising, some very recent test data has raised concerns. The manager has found evidence that the excellent test results to date may have been the result of either a systematic error or deliberate distortion on the part of a project team member. The manager is meeting with a potential customer immediately and does not have time to investigate further the anomalies in the

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<sup>26</sup> The Industrial Relations role-play was used in the first two years of the assessment center, 1989 and 1990, and was then replaced with the Marketing role-play. Thus, data is available on only 83 cases.

<sup>27</sup> The Marketing role play replaced the Industrial Relations Role Play in 1991. Thus, data is available on only 89 cases.

data. The role-play involves the manager meeting with the potential customer. This role-play yields scores on seven dimensions.

*The New Manager Role-play.* In this role-play, the manager assumes the role of a middle-manager, newly appointed to a division of a company that has been identified as lagging in productivity. The manager's mandate is to work cooperatively with a senior manager—a Mr. Joseph Staywell—and implement changes to increase performance and productivity. The manager interacts with Mr. Staywell, who has just decided, unilaterally, to put an indefinite hold on the plan for change. The manager's task is to decide how best to handle this situation. The New Manager Role-play yields scores on eight dimensions.

*Summary Role-play Dimension Scores.* In total, nine dimensions were assessed across the three role-plays used in a given year. Not all role-plays measure all dimensions. Nevertheless, it was of interest to obtain an overall measure of performance across the role-plays on specific dimensions. Thus, dimension scores were summed across the three role-plays and an average computed for each dimension. The dimensions are reported in Table 15 as well.

#### *Structured Interview*

A structured interview was developed, again by Hakstian, Woolsey & Associates, Ltd., for BC Tel for the Career Development Program. All managers were interviewed by a psychologist. Interviews lasted approximately 1 1/4 hours and were recorded on videotape. The interviewer followed a structured format, posing a series of 20 questions each followed by probes, when necessary. Following the interview, the psychologist and one trained company employee each completed an interview rating form for each manager. This rating form was divided into dimensions, each anchored by a number of behavioral statements. Scores were averaged across the two raters for each dimension. The interview yielded scores on 11 management dimensions.

### *Biographical Information Form*

Prior to the interview, each manager completed an open-ended biographical information form (biodata form), designed to provide an historical introduction to each participant. Some examples of questions from the biographical form were: "Comment on the strengths and weaknesses of your educational background in relation to your career", "What is your own approach to supervision, that is, your management style?", and "What types of tasks or assignments bring out the best in you?"

### *Criterion Measurement*

The development and content of the questionnaire used to collect criterion data on championship was described in detail in Phase IV of Study 1. Briefly, the first- and second-order factor scales obtained at the conclusion of Study 1 were used to compute scale scores for the 174 AC participants. Thus, each participant was rated on the 92 items that survived the factor and item-level analyses described in Phase IV of Study 1, in addition to the 5 criterion championship items (5CC). In summary, scores for the 174 managers were computed for: (a) scales arising from the first-order factor analyses—Persistent Dominance, Impatient Expediency, Rebellious Drive, Self Promotion, Confrontive Candor, Influence & Political Savvy, Driven Commitment, Immediate Responsiveness, Collaboration & Support, and Visibility & Growth Seeking, (b) scales arising from the second-order factor analyses—Forceful Drive & Expediency and Influence & Visible Drive, and (c) the 5-item supervisory-report criterion measure of championship.

### *Data Analysis*

#### *Correlational Analyses Involving the AC Measures and the Championship Criteria*

With the exception of the biodata form, bivariate correlations were computed between each of the scales listed in Table 15, on the one hand, and (a) the 10 first-order factor scales, (b) the two second-order factor scales, and (c) 5CC, on the other, in order to address the hypotheses outlined earlier. Given the vast number of bivariate correlations

that were computed (cross correlations between 128 predictor scales and 13 criterion dimensions), Type I error rate was a concern. The probability of committing a Type I error was set to  $p = .005$  (2-tailed) ; thus, only .5% of the 1,664 correlations computed (approximately 8) could be expected to be significant, purely by chance.

A step-wise multiple regression model was then used to obtain: (a) inventory-specific optimally-predictive linear combinations of scales (one for each of the CPI, 16PF, PRF, JAS, Role-play, and Interview), and (b) a cross-inventory optimally-predictive championship linear combination for FDE and IVD based on the standardized instruments included in the AC battery. The scales from the standardized paper-and-pencil tests listed in Table 15 found to correlate significantly ( $p < .05$ ) with the relevant criterion of championship constituted the predictor set for the cross-inventory multiple regression analysis.

#### *Contrasted Groups Analyses Involving the AC Battery Scales and the Championship Criteria*

As a supplement to the correlational analyses above, a subset of the 174 managers was studied in detail. The focus was on examining the mean scores achieved on the various components of the AC by managers whose criterion scores placed them into one of four groups: (a) low FDE, (b) high FDE, (c) low IVD, or (d) high IVD. Thus, the criterion data collected in Phase III of Study 1 was used to rank-order the sample of 174 managers on both FDE and IVD. The managers with the 20 highest and lowest scores on each of the two criterion scales were then identified leading to the development of the four groups.

A discriminant analysis was then performed using the scales from the AC battery that correlated significantly ( $p < .01$ ) with the relevant criterion. The first discriminant function is an equation that, when applied to the independent variables, yields a composite score that maximizes variance between groups while minimizing within-group variances, thus maximally differentiating the groups. The results of a discriminant

analysis can be used to: (a) develop a linear equation that can be used to classify subjects into groups according to their scores on a set of independent variables, and (b) explore the psychological meaning of the linear combination of independent variables that maximally differentiates between the two groups. With respect to classification, the accuracy of the discriminant function (DF) can be examined in correctly predicting group membership. That is, since the group to which a case actually belongs is known, this can be compared with the predicted group membership (based on the DF). Three indices can be examined: (a) hit rate (the number of correct classifications), (b) sensitivity (proportion of high FDE or IVD managers who are correctly classified), and (c) specificity (proportion of low FDE or IVD managers who are correctly classified). Thus, one application of the DF in the present study would be to develop an equation that could be used in much the same way as the equations that will be developed in connection with multiple regression—for decision making and classification.

A second potential application of the DF is conceptual. The output from a DF can be used to examine the "dimensions" of group differences (Tatsuoka & Lohnes, 1988), thus shedding light on the relative centrality of the various independent variables to the linear equation that maximizes group differences. This analysis can be used to explore further the psychological meaning of high scores on the criteria. Two coefficients are typically of most interest in the interpretation of a DF: (a) standardized DF coefficients (analogous to beta weights in multiple regression), and (b) structure coefficients (representing the correlation between a given independent variable and the DF as a whole). Univariate *t*-values (univariate *t*-tests of group mean differences) were also computed in the present study in order to examine directly the mean differences between the extreme groups on each of the independent variables included in the DF.

Given the relatively small sample sizes involved in the discriminant analysis ( $n = 40$ ), it was necessary to limit, in some way, the number of independent variables included. Like multiple regression, discriminant analysis requires a relatively large ratio of number



of subjects to independent variables in order to obtain results that are stable. At the same time, it was important to include all possible AC battery scales, given the exploratory nature of the analysis. To address these issues, a stepwise selection approach was taken. That is, all scales that correlated significantly ( $p < .01$ ) with the relevant criterion were considered for inclusion in the DF and scales were either entered or removed from the DF equation depending upon their relative contribution to the discriminant function.

*Analysis of the biographical information forms.* The biodata forms were also examined in order to broaden the nature of information considered (e.g., background factors like education) in this section. The open-ended biodata forms of the managers in each of the four groups were examined, coded, and scored. Since the biodata form is an open-ended instrument with no previously-established scoring key, the procedures used to score these forms will now be explained.

The first step in scoring the biodata forms was to develop a system for coding the managers' responses to the open-ended questions. Techniques from grounded theory (Glaser & Strauss, 1967) were used in the development of categories for each of the questions. A key feature of grounded theory is that categories emerge from the data at hand, rather than being imposed, a priori, by the researcher. Glaser & Strauss' approach ensures that all data fit the categories developed and, therefore, can be coded.

The responses of the 70 managers<sup>28</sup> from the four groups to each of the 16 questions in the biodata form were broken down into discrete units of meaning (a unit of meaning represents a single theme, as compared to a complete response that may contain a number of distinctive themes). For each question, the present researcher examined the managers' responses and extracted from these responses general themes or categories (typically five to six categories for each question). Armed with a discrete number of categories for each question, the responses of the 70 managers for each question were

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<sup>28</sup> The biodata forms of 70 (not 80) managers were coded, because there was overlap between IVD and FDE. That is, 10 managers in the top or bottom 20 on FDE were also in the top or bottom 20 on IVD.

then re-examined in order to confirm that all units of meaning could be coded into one of the available categories. This was done for all 16 questions, until all units of meaning for each question could be coded.

*Inter-rater agreement.* Each of the biodata forms was then coded independently by two raters. The present author (Rater 1) trained a Ph.D. student (Rater 2) in the use of the coding system. The two raters used five biodata forms (not part of the 70 used in the study) for the purposes of training. A scoring form listing the categories and a brief description of each was developed in order to structure and standardize the coding (see Appendix N for a copy of the scoring form). Raters 1 and 2 coded two of the five biodata forms together, in order to train Rater 2 on the meaning of the various categories. Raters 1 and 2 then independently coded three biodata forms and discussed their ratings. Although there were some differences of opinion, a substantial amount of overlap was apparent and, after discussing areas of disagreement, it was felt that Raters 1 and 2 were in agreement as to the meaning or general theme of each category.

In order to assess the degree of inter-rater agreement, Flanders' (1967) modification of  $\pi$  was computed, where  $\pi_f = (P_{of} - P_{ef}) / (1 - P_{ef})$ . Conceptually,  $\pi_f$  reflects the amount that the ratings of two observers exceed chance agreement divided by the amount that perfect agreement exceeds chance (Flanders, 1967). The coefficient can range from a low of 0 (indicating no agreement) to a high of 1 (indicating perfect agreement). Flanders recommended that a coefficient of .85 or higher be seen as reflecting a reasonable level of inter-rater agreement.

Computationally, Flanders' (1967) coefficient is similar to one developed by Scott (1955), except that Flanders modified the calculation of both  $P_{of}$  and  $P_{ef}$  to permit estimation of inter-rater agreement when two raters have not coded the same number of total categories for a given question. This situation will arise when a given response requiring coding contains a number of themes and can, therefore, be coded legitimately as

falling into a number of different categories. Such was the case in the present study, given the open-ended response format of the biodata form.

With the Flanders (1967) formula, the two components of the equation ( $P_{of}$  and  $P_{ef}$ ) are computed on the basis of category marginals (total frequencies) for each rater for each question. Thus, for each of the raters, a frequency count is made of the number of times each category is indicated for each question and these category frequency counts are compared across the two raters. This can be contrasted with methods based on *nominal* agreement (like kappa or percentage agreement) where a contingency table is constructed for each question in which the cells of the table represent the *nominal* agreement of two raters for each category. Nominal procedures, the more common method for computing indices of inter-rater agreement, require that, for each question, each rater assign the exact same number of total frequencies across the categories. This condition can only be met, however, when the responses to be coded contain only one theme and, therefore, can be coded as falling into one (and only one) category.

In summary, Flanders' (1967) index of inter-rater agreement was chosen instead of a simple percentage agreement for a number of reasons. First, as noted above, with the coding system used it was possible for one rater to fail to code meaning units that were coded by the other rater. This precluded use of simple percentage agreement or indices like kappa to estimate inter-rater agreement. Moreover, it was a preferable index to percentage agreement in that, like kappa, Flanders'  $\pi$  includes a correction for chance agreement and is, therefore, a conservative estimate of inter-rater agreement. Finally, Flanders'  $\pi$  has been found to be more appropriate in situations when the intended unit of analysis is category proportions (Frick & Semmel, 1978), as in the present application.

*Category frequency counts.* The coding work done by Rater 1 was summarized for each of the four groups in the form of a category frequency breakdown. That is, for each of the four groups separately, a frequency count was made, for each of the 16 questions, of the number of managers whose response to a given question was coded as

falling into a given category. For example, for the low FDE group and Question 12, a count was made of the number of responses coded as belonging to each of the six categories associated with this question (this frequency count could then be compared with that associated with the high FDE group on Question 12). Frequency counts were done for each of the 16 questions and within each of the four groups separately in order to obtain category frequencies for each question. These category frequencies were then transformed to category *proportions* to permit z-tests of the differences between proportions for each category across the two relevant comparison groups (i.e., Question 1 category 2, for low vs. high FDE groups).

Thus, each of the categories (90 in total) across the 16 questions was examined and a z-test for proportions conducted. Although a  $\chi^2$  analysis of each *question* would have constituted a simpler and more elegant analysis procedure, this approach could not be followed because of the manner in which the data were collected: a given manager's response to a single question was often coded as falling into multiple categories. As noted above, the open-ended response format used in the biodata form meant that answers often contained more than one theme and, therefore, had to be coded as falling into more than one category. A manager's response to one question might contain three units of meaning, leading the scorer to code that response for three categories. As a result, for each question, the marginal frequencies across categories for the two groups were typically unequal. That is, a total of 15 responses might have been coded for the low FDE group on Question 12 across the six categories, while 10 responses might have been coded for the high FDE group on this same question.

#### *A Case Study Analysis of Championship*

An illustrative case study approach was used to examine more closely the differences between managers high and low on championship. The AC files of two

managers—one high and one low on FDE—were examined.<sup>29</sup> These two managers were chosen because their biodata form profile was prototypic of the group biodata profile. That is, the biodata forms of the two managers chosen for study conformed to the group profile for FDE and, thus, represented "best case" examples of high and low FDE managers.

The information used to develop these two case studies was drawn not only from the biodata form, containing, as it does, a rich source of descriptive information, but also from the complete file of AC data and notes available on these two managers. Further descriptive information was available from the written comments made by two observers who had watched the managers interact during the role plays. Of course, the information from the two days of standardized tests was also used.

## Results

### *The Criterion Rating Scales*

Scores were computed for the 174 managers on the 10 first- and two second-order factor scales described in Study 1. Means and standard deviations for each of the criterion scales are reported in Table 16 for the total sample and separately by gender.

Mean raw scores were higher on the IVD, than on the FDE, factor scales, despite the fact that the former scales contained fewer items. As discussed earlier, these scales measure more positive, prosocial behaviors representing championship and, as well, tap into overall management competence (recall the correlation of .80 between OMP and IVD). Thus, as a group, the managers appear to have been rated very favorably by their supervisors, with the group mean on IVD sitting at 74% of the maximum possible score.

The possibility of gender differences in the criterion data was examined. A Hotelling's  $T^2$  analysis testing for gender differences on the 10 first-order factor scales

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<sup>29</sup> Cases for low and high IVD were not examined because: (a) none of the AC measures correlated significantly with IVD, and (b) only one of the 90 categories measured in the biodata form differentiated between low and high IVD groups. Thus, there was no AC information on which to base an illustrative case study.

Table 16

*Descriptive Statistics for the Championship Criterion Scales*

First-Order Factor Scale	Max. Poss. Score	Total Sample		Males		Females	
		M	SD	M	SD	M	SD
Persistent Dominance	50	24.24	5.72	24.79	5.33	22.67	6.52
Impatient Expediency	50	23.68	5.37	24.26	5.44	22.02	4.86
Rebellious Drive	50	26.74	4.91	27.30	4.73	25.13	5.12
Self Promotion	50	27.44	5.73	27.67	5.29	26.78	6.88
Confrontive Candor	45	27.76	4.49	27.87	4.23	27.47	5.22
Influence & Political Savvy	40	29.05	4.23	29.09	4.14	28.96	4.53
Driven Commitment	45	33.24	5.32	33.32	5.44	33.00	5.00
Immediate Responsiveness	45	33.72	4.54	33.81	4.58	33.49	4.50
Collaboration and Support	40	29.36	3.90	29.05	3.60	30.24	4.58
Visibility & Growth Seek'g	45	32.82	4.89	32.88	4.71	32.64	5.42
Forceful Drive & Exped.	245	129.87	19.12	131.88	17.83	121.26	21.57
Influence & Visible Drive	215	158.19	16.45	158.12	16.12	158.39	17.53

was non-significant [ $T^2(10, 163) = 1.46; p > .10$ ]. Univariate  $t$ -tests revealed only one dimension on which males and females differed significantly at  $p < .01$  (Rebellious Drive). Thus, for this sample of managers, men and women do not appear to differ significantly in mean levels of championship. One can observe a trend in the data for males to receive slightly higher mean scores than females on some of the first-order factor scales (e.g., Persistent Dominance, Impatient Expediency), but this trend was not statistically significant overall. As a result, the data for all subsequent correlational analyses were pooled for men and women.

### *Correlational Analyses: Predictor-Criterion Correlations*

The correlations between the various predictor measures, on the one hand, and the championship criteria, on the other, are reported in the following five sections, corresponding to: (a) cognitive ability measures, (b) personality and temperament measures, (c) in-basket exercises, (d) role play exercises, and (e) the structured interview.

#### *Cognitive Ability*

Cross-correlations were computed between the nine cognitive ability tests listed in Table 15, on the one hand, and the 13 championship criterion scales (10 first-order factor scales, two second-order factor scales, and 5CC), on the other. These are reported in Table 17. Not one of the 117 correlations was significant at  $p < .005$ .

Various facets of cognitive ability were assessed, including general intelligence (g), word fluency, ideational fluency, and communication skills (vocabulary, reading and writing ability). In the present sample of managers, those persons high on various facets of cognitive ability were not rated more highly on championship. Thus, although a salient predictor of general management performance (e.g., Hunter & Hunter, 1984), cognitive ability does not appear to covary with rated championship.

The results obtained in this section were not consistent with hypotheses outlined in an earlier section in connection with cognitive predictors of championship. Positive and significant correlations were hypothesized between managers' scores on two subtests

Table 17

*Correlations Between the Scales From the Cognitive Ability Tests and the 13 Championship Criteria (Decimal Points are Omitted in Correlations) and Scale Descriptive Statistics*

	M	SD	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	FDE	IVD	5CC
G1	60.41	5.70	-18	-00	-09	-04	-11	12	-04	-07	15	02	-12	04	-02
G2	67.66	23.48	-11	-10	02	-07	-01	09	10	02	04	06	-08	09	-02
G3	61.31	6.93	-15	-01	-11	-13	-09	-02	-07	-02	-03	-01	-13	-04	-10
RS	55.49	6.85	-06	06	02	02	-15	11	-02	-10	05	07	-02	02	02
RC	59.28	8.04	-09	-07	-04	-08	-05	05	02	00	03	10	-09	06	-02
Vo	68.45	5.31	-09	-04	-00	-03	02	16	02	-05	16	03	-04	08	01
Wr	52.86	7.97	-10	-18	-07	01	07	20	-03	02	17	12	-08	13	05
Fu	48.11	8.85	-02	-06	04	11	-05	-02	-00	-11	-03	08	01	-02	-04
Fx	48.63	9.26	01	-08	01	09	06	10	02	05	03	13	03	09	13

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .01: .195; .005: .213; .001: .247. Correlations significant at  $p < .005$  (two-tailed) have been bolded.

The column headings refer to the following: M: scale mean; SD: scale standard deviation; PD: Persistent Dominance; IE: Impatient Expediency; RD: Rebellious Drive; SP: Self Promotion; CC: Confrontive Candor; IPS: Influence and Political Savvy; DC: Driven Commitment; IR: Immediate Responsiveness; CS: Collaboration and Support; VGS: Visibility and Growth Seeking; FDE: Forceful Drive and Expediency; IVD: Influence and Visible Drive; 5CC: 5-Item Championship Criterion.

The row headings refer to the following measures of cognitive ability: G1: Wonderlic Personnel Test; G2: Concept Mastery Test; G3: Culture Fair Intelligence Test; RS: Nelson-Denny Reading Test (Reading Speed); RC: Nelson-Denny Reading Test (Reading Comprehension); Vo: Nelson-Denny Reading Test (Vocabulary); Wr: Flanagan Industrial Tests (Expression); Fu: CAB Ideational Fluency; Fx: CAB Spontaneous Flexibility.

Means and standard deviations were calculated from T-scores, referenced to the "general population", with the exception of G2 (the Concept Mastery Test) where means and standard deviations were based on raw scores; the maximum possible raw score on the Concept Mastery Test is 190.



from the CAB (ideational fluency and flexibility) and championship. None were found. Similarly, the expected correlations between measures of general intelligence and championship were not obtained.

### *Measures of Personality and Temperament*

Correlations between the scales from the California Psychological Inventory, the 16 Personality Factor Questionnaire, the Personality Research Form, The Rahim Organizational Conflict Inventory, and the Jenkins Activity Survey, on the one hand, and the 13 championship criteria, on the other, are reported in Tables 18 through 21. Results were generally consistent with hypotheses outlined in Table 14.

*California Psychological Inventory (CPI).* Correlations between the 19 scales of the CPI and the 13 championship criteria are reported in Table 18. As hypothesized, significant and positive correlations were found between the CPI scales of Dominance and Capacity for Status and elements of championship. Significant correlations were also obtained on the related scale of Self Acceptance, although this result was not hypothesized. These results paint the picture of an ascendant, dominant, and poised manager, a view of the champion that is consistent with hypotheses outlined earlier.

Dominance appears to be a salient characteristic of the champion. The CPI Dominance scale correlated significantly with Forceful Drive and Expediency (FDE) as well as Persistent Dominance (PD) and Self Promotion (SP). Thus, it appears that managers rated by their supervisors as outspoken, assertive, power seeking, and manipulative, also tend to be dominant, confident and assertive. Not surprisingly, Dominance appears to be most closely related to the five first-order factor scales that load on FDE. The Dominance scale does not correlate significantly with Influence and Visible Drive (IVD) or any of the 5 first-order factors that loaded on IVD.

CPI Capacity for Status correlated significantly with the first-order factor scale Driven Commitment and correlated .20 with FDE ( $p < .01$ ). Managers rated by their supervisors as driven, committed, energetic, and dedicated, also tended to obtain high

Table 18

*Correlations Between the CPI Scales and the 13 Championship Criteria (Decimal Points are Omitted in Correlations) and Scale Descriptive Statistics*

	M	SD	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	FDE	IVD	5CC
Do	63.29	8.17	<b>23</b>	13	17	<b>26</b>	17	11	09	-04	-05	13	<b>27</b>	07	05
Cs	55.33	8.31	16	12	19	17	09	07	<b>22</b>	-07	-10	18	20	10	08
Sy	57.85	8.37	07	01	-01	19	04	09	11	-06	-04	18	09	09	02
Sp	59.56	9.71	09	20	05	18	01	12	08	00	02	18	15	11	-00
Sa	62.41	7.72	17	14	10	<b>23</b>	13	18	14	02	00	<b>22</b>	<b>21</b>	17	12
Wb	54.72	6.56	01	-03	03	07	14	02	03	-03	-07	06	05	01	-01
Re	48.51	7.75	-01	-03	00	-04	05	09	06	-03	-03	09	-01	05	-03
So	52.66	8.60	<b>-25</b>	-02	-05	-09	<b>-27</b>	-01	-14	-04	-08	00	-18	-08	-09
Sc	51.46	7.73	-14	-18	-14	-16	-07	-05	-06	-05	-03	-02	-19	-06	00
To	55.02	6.54	-00	-01	-01	-02	08	07	02	-10	06	10	01	04	08
Gi	52.99	9.66	04	-11	04	04	05	-02	15	-06	-14	09	01	03	05
Cm	53.87	7.53	07	03	-02	00	-05	-02	08	03	01	-03	01	02	-01
Ac	58.37	6.85	-12	-03	-08	03	-14	02	-00	-13	-01	03	-09	-02	-07
Ai	58.53	7.31	-02	-06	-04	-07	08	11	05	03	19	18	-04	15	09
Ie	55.25	8.14	-08	-01	-04	-01	00	19	11	-03	16	18	-04	17	05
Py	57.51	8.72	-07	03	02	-15	-03	-02	05	-05	00	01	-06	00	-05
Fx	52.36	9.89	-05	-06	-04	-08	04	-02	11	00	14	11	-06	09	03
Fe	47.99	7.52	-06	-20	-15	-12	-08	-05	-06	09	-03	-17	-17	-06	-11
An	37.86	6.01	-19	-08	-11	-13	-10	-01	11	14	15	-03	-17	10	04

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .01: .195; .005: .213; .001: .247. Correlations significant at  $p < .005$  (two-tailed) have been bolded.

The column headings refer to the following: M: scale mean; SD: scale standard deviation; PD: Persistent Dominance; IE: Impatient Expediency; RD: Rebellious Drive; SP: Self Promotion; CC: Confrontive Candor; IPS: Influence and Political Savvy; DC: Driven Commitment; IR: Immediate Responsiveness; CS: Collaboration and Support; VGS: Visibility and Growth Seeking; FDE: Forceful Drive and Expediency; IVD: Influence and Visible Drive; 5CC: 5-Item Championship Criterion.

The row headings refer to the following CPI scales: Do: Dominance; Cs: Capacity for Status; Sy: Sociability; Sp: Social Presence; Sa: Self Acceptance; Wb: Well Being; Re: Responsibility; So: Socialization; Sc: Self Control; To: Tolerance; Gi: Good Impression; Cm: Communitary; Ac: Achievement via Conformance; Ai: Achievement via Independence; Ie: Intellectual Efficiency; Py: Psychological Mindedness; Fx: Flexibility; Fe: Femininity; An: Anxiety.

Means and standard deviations for the CPI scales were calculated from T-scores, referenced to the "general population".

scores on Capacity for Status. Gough (1975) described high scorers on this scale as ambitious, independent, and driven to succeed.

CPI Self Acceptance correlated significantly with FDE and two first-order factor scales (SP and VGS). Gough (1975) described individuals high on Self Acceptance as possessing a good opinion of themselves and as seeing themselves as attractive and talented. The two first-order factors with which Self Acceptance correlated (VGS and SP) both measure the extent to which one is oriented toward taking on roles that are visible and provide opportunities for self advancement and promotion.

Also of note, Socialization correlated negatively with rated championship, consistent with hypotheses outlined in Table 14. Socialization correlated significantly with two of the first-order factor scales, Persistent Dominance and Confrontive Candor. The Socialization scale is a measure of conformity, conventionality and rule following and, in a modified form—the Personnel Reaction Blank (PRB; Gough, 1972)—a measure of "wayward impulsive" or integrity. Gough (1975) described high scorers on Socialization as honest, serious, and industrious, while low scorers tend to be defensive, rebellious, and deceitful. Managers rated as outspoken and dominant (PD) and likely to confront others in a forceful and direct way (CC) tended to obtain low scores on Socialization. Thus, building on the results of Study 1, we see evidence of a tendency toward rule breaking, rebelliousness, and non-conformity among champions.

In summary, results in Table 18 lead to a description of the high scorer on FDE as dominant, socially-poised, and self confident. In addition, elements of impulsivity and unconventionality were seen. Individuals who possess a CPI profile very similar to the one described above, have been described by McAllister (1986), in an interpretive manual for the CPI, as "...likely to have strong sales abilities; they enjoy managerial responsibility and are generally effective at getting their own way." He noted that "...this combination suggests executive effectiveness and success" (p. 33).

*The 16 Personality Factor Questionnaire (16PF).* Correlations between the 16 primary and four second-order factors of the 16PF and the 13 championship criteria are reported in Table 19. Significant correlations were found between the 16PF measures of Assertiveness (16PF-E) and Extraversion (16PF-Q<sub>I</sub>), on the one hand, and FDE, on the other. Elements of assertiveness, social enthusiasm and boldness, group dependence, and extraversion showed significant ( $p < .005$ ) correlation with individual first- and second-order factor scales. Results obtained for 16PF Factors E (Assertiveness), H (Venturesomeness), and Q<sub>I</sub> (Extraversion) were consistent with hypotheses outlined in Table 14.

Once again, we see evidence that managers rated high on championship are dominant, as measured by standardized personality scales. The 16PF measure of Assertiveness correlated significantly with FDE, and three of the five first-order factors that load on FDE. Thus, managers rated as outspoken, dominant, confrontational, and self promoting (PD, SP, CC) obtained a score on the 16PF scales suggesting an assertive, aggressive, independent, and competitive interpersonal style. High scorers on Assertiveness tend to disregard authority and break rules, a finding consistent with the correlations between the CPI Socialization scale and FDE.

Further evidence that managers rated high on championship possess an ascendant interpersonal style is seen from the correlations between the 16PF second-order Extraversion scale and the championship criteria. This 16PF factor correlated .22 with FDE and .31 with Self Promotion. In the 16PF manual, persons high on Extraversion are described as outgoing, extraverted, and uninhibited..."they are likely good at making and maintaining interpersonal contacts" (IPAT, 1972, p. 26). The Extraversion scale appears to be most strongly related to aspects of championship that have to do with self promotion, dominance, and manipulation. Other correlations give further evidence that social enthusiasm and expressiveness (as measured by the 16PF Factors F and H) are related to championship, at least the Self Promotion scale. Finally, the 16PF measure of

Table 19

*Correlations Between the 16PF Scales and the 13 Championship Criteria (Decimal Points are Omitted in Correlations) and Scale Descriptive Statistics*

	M	SD	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	FDE	IVD	5CC
A	50.25	10.38	03	04	06	15	-06	06	08	-10	-01	06	07	03	-00
B	60.68	7.52	-10	04	-05	-18	-01	-04	-07	-03	-00	-05	-09	-06	-06
C	53.30	7.65	-03	-02	-04	00	02	00	04	-01	-05	06	-02	02	02
E	58.90	8.94	<b>25</b>	16	14	<b>22</b>	<b>21</b>	04	12	-06	-05	12	<b>28</b>	06	02
F	54.11	10.42	07	09	09	<b>23</b>	01	-01	05	-10	-06	06	14	-01	00
G	53.20	9.23	-02	-07	-06	04	-03	06	-12	03	-06	-04	-03	-04	00
H	57.45	10.61	09	02	05	<b>22</b>	09	06	09	-06	-04	15	13	06	-00
I	47.05	9.82	-08	-10	-01	-02	-07	05	06	-06	10	03	-08	05	03
L	47.98	8.55	04	13	04	16	01	15	-02	-06	02	01	11	02	-02
M	52.62	8.47	-00	-03	-00	-14	04	10	14	09	13	16	-04	17	13
N	44.17	8.81	-04	-12	-04	-06	02	05	02	20	-06	02	-07	06	05
O	42.57	7.29	03	-00	-12	-01	-07	-04	-12	-03	-02	-14	-04	-10	-11
Q <sub>1</sub>	52.74	10.35	-00	04	-07	05	-05	08	05	-10	04	01	-00	02	03
Q <sub>2</sub>	48.99	9.43	-07	05	01	<b>-21</b>	-12	-08	02	-06	-04	-10	-10	-07	-01
Q <sub>3</sub>	52.51	8.29	-17	-10	-18	-05	-02	-06	-19	-08	-14	-13	-14	-17	-14
Q <sub>4</sub>	45.86	8.79	12	12	08	00	00	-02	-03	02	-01	-05	09	-02	-02
QI	56.81	9.21	17	10	10	<b>31</b>	10	05	07	-09	-05	13	<b>22</b>	04	-00
QIII	57.13	8.76	16	15	09	11	16	-03	-03	-02	-09	04	19	-03	-01
QIV	57.60	8.04	12	14	08	07	08	07	15	-09	03	12	14	09	05
AA	58.51	7.94	02	-08	03	14	06	02	05	-06	-06	08	08	01	03

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .01: .195; .005: .213; .001: .247. Correlations significant at  $p < .005$  (two-tailed) have been bolded.

The column headings refer to the following: M: scale mean; SD: scale standard deviation; PD: Persistent Dominance; IE: Impatient Expediency; RD: Rebellious Drive; SP: Self Promotion; CC: Confrontive Candor; IPS: Influence and Political Savvy; DC: Driven Commitment; IR: Immediate Responsiveness; CS: Collaboration and Support; VGS: Visibility and Growth Seeking; FDE: Forceful Drive and Expediency; IVD: Influence and Visible Drive; 5CC: 5-Item Championship Criterion.

The row headings refer to the following 16PF scales (the meaning of high scores is listed): Factor A: outgoing; Factor B: bright; Factor C: emotionally stable; Factor E: assertive; Factor F: happy-go-lucky; Factor G: conscientious; Factor H: venturesome; Factor I: tender-minded; Factor L: suspicious; Factor M: imaginative; Factor N: astute; Factor O: apprehensive; Factor Q<sub>1</sub>: experimenting; Factor Q<sub>2</sub>: self sufficient; Factor Q<sub>3</sub>: controlled; Factor Q<sub>4</sub>: tense; Factor QI: extraversion; Factor QIII: tough poise; Factor QVI: independence; Factor AA: adequacy of adjustment.

Means and standard deviations for the 16PF scales were calculated from T-scores, referenced to the "general population".

Group Dependence (16PF-Q<sub>2</sub>) correlated negatively, once again with the Self Promotion scale. Managers rated high on SP tend to depend on other people for social approval and admiration. Cattell described people low on this 16PF scale as group dependent—as joiners and followers and as needing group approval and support.

*The Personality Research Form (PRF).* Correlations between the 20 PRF scales and the 13 championship criteria are reported in Table 20. Five PRF scales correlated significantly with at least one of the first-order factor scales. Of those five scales, Aggression, Exhibition, and Impulsivity showed the most consistent relationship with championship. Of these three, the correlation between Exhibition and championship was hypothesized. Managers rated high on FDE appear to be aggressive and argumentative, exhibitionistic and impulsive.

The PRF Aggression scale correlated significantly with three of the five first-order factor scales that load on FDE, as well as FDE itself. Managers rated by their supervisors as outspoken and dominant (PD), impatient and impulsive (IE), and self promoting (SP) tended to score high on Aggression. Jackson (1984) described high scorers on Aggression as quarrelsome, irritable, argumentative, blunt, belligerent, and antagonistic. Such people tend to be combative and argumentative. Further, "...they are sometimes willing to hurt people to get their own way" (p. 6).

The PRF Exhibition scale also correlated significantly with FDE. This significant correlation was largely the result of a high correlation between Exhibition and Self Promotion. Once again, the SP criterion scale figured prominently in the predictor-criterion correlations. Given that the SP scale was designed to measure the extent to which one is attention seeking, it is not surprising to see such a high ( $r = .34$ ) correlation between SP and Exhibition. Jackson (1984) described persons high on Exhibition as colorful, entertaining, exhibitionistic, conspicuous, and pretentious. They want "....to be the center of attention [and enjoy] having an audience" (p. 6).

Table 20

*Correlations Between the PRF Scales and the 13 Championship Criteria (Decimal Points are Omitted in Correlations) and Scale Descriptive Statistics*

	M	SD	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	FDE	IVD	5CC
Ab	45.08	9.03	11	06	08	-00	05	-18	11	-03	-10	-02	08	-05	-07
Ac	57.60	6.54	17	-00	01	18	00	00	15	-05	<b>-25</b>	-00	11	-03	-02
Af	53.43	8.75	06	01	-06	18	-06	-04	12	-08	-08	11	05	02	-05
Ag	47.59	7.63	<b>23</b>	<b>24</b>	15	<b>23</b>	13	05	-03	-08	-12	00	<b>27</b>	-04	-03
Au	41.55	9.33	08	04	13	05	09	05	05	05	-01	05	11	05	15
Ch	48.72	8.92	13	16	10	11	13	03	10	01	-02	07	17	06	05
Cs	51.75	9.33	-09	-11	-09	00	-12	10	-12	-02	-01	-01	-11	-02	05
De	48.08	7.51	04	11	09	07	-00	09	-13	-01	-01	-06	09	-04	-03
Do	58.14	5.52	14	07	-05	<b>23</b>	04	-00	-01	-09	-00	07	13	-01	-02
En	54.36	6.34	06	-09	-07	10	-06	00	01	-01	-10	01	-01	-02	03
Ex	53.25	9.35	16	12	05	<b>34</b>	08	08	10	-02	-01	20	<b>21</b>	10	08
Ha	51.17	8.62	-09	-05	-09	-00	-13	06	-19	-14	04	-07	-10	-10	-07
Im	46.12	8.25	<b>25</b>	16	13	04	16	03	12	06	-01	08	<b>21</b>	09	07
Nu	51.26	7.61	05	09	01	16	01	-03	10	-14	-07	-05	09	-05	-09
Or	54.53	8.15	03	-09	-06	12	02	11	-14	06	-06	04	01	-01	03
Pl	46.72	9.02	-07	08	03	10	-04	08	08	-01	09	13	03	10	05
Se	49.03	8.85	-07	-08	-01	13	02	16	11	-06	18	08	00	13	10
Sr	52.16	8.37	-07	-05	-05	07	-03	-01	02	06	07	07	-04	06	01
Su	49.78	9.34	03	06	05	09	-06	-13	-01	-08	-03	-05	05	-08	-12
Un	45.98	10.03	-08	-05	-05	-04	-06	10	20	04	07	10	-08	15	03

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .01: .195; .005: .213; .001: .247. Correlations significant at  $p < .005$  (two-tailed) have been bolded.

The column headings refer to the following: M: scale mean; SD: scale standard deviation; PD: Persistent Dominance; IE: Impatient Expediency; RD: Rebellious Drive; SP: Self Promotion; CC: Confrontive Candor; IPS: Influence and Political Savvy; DC: Driven Commitment; IR: Immediate Responsiveness; CS: Collaboration and Support; VGS: Visibility and Growth Seeking; FDE: Forceful Drive and Expediency; IVD: Influence and Visible Drive; 5CC: 5-Item Championship Criterion.

The row headings refer to the following PRF scales: Ab: Abasement; Ac: Achievement; Af: Affiliation; Ag: Aggression; Au: Autonomy; Ch: Change; Cs: Cognitive Structure; De: Defence; Do: Dominance; En: Endurance; Ex: Exhibition; Ha: Harm Avoidance; Im: Impulsivity; Nu: Nurturance; Or: Order; Pl: Play; Se: Sentience; Sr: Social Recognition; Su: Succorance; Un: Understanding.

Means and standard deviations for the PRF scales were calculated from T-scores, referenced to the "general population".

The PRF Impulsivity scale showed a significant correlation with FDE. More specifically, Impulsivity correlated .25 with Persistent Dominance (PD). Managers rated high on PD, then, will tend to be spontaneous, hasty, reckless, quick-thinking, impatient, and excitable. Jackson (1984) further described persons high on Impulsivity as tending to act on the spur of the moment. They speak freely and vent readily their emotions and needs.

Further significant correlations were found between the PRF Dominance and Achievement scales and selected first-order factor scales. The Dominance scale correlated positively and significantly with Self Promotion; its correlation with the conceptually related criterion of Persistent Dominance (PD), while in the correct direction, was non-significant. The theme of dominance is clearly a recurring one, being seen from the CPI, 16PF, and PRF criterion correlations.

In one of the few significant correlations with an IVD factor scale, the PRF Achievement scale correlated negatively with Collaboration and Support (Cs). It appears that managers rated as collaborative and supportive tend to respond poorly to competition. Such managers may tend to focus more on the needs of the group than on their own priorities.

*Rahim Organizational Conflict Inventory (ROCI-II).* The ROCI-II yields scores on five dimensions each representing one style of handling interpersonal conflict: Integrating (In), Obliging (Ob), Dominating (Do), Avoiding (Av), and Compromising (Co). It was hypothesized that significant and positive correlations would be found between the ROCI-II scales Dominating and Integrating and championship. However, as shown in the upper half of Table 21, none of the correlations between the five ROCI-II scales, on the one hand, and the 13 championship criteria, on the other, was significant at  $p < .005$ . Thus, at least in the present sample, one's style of dealing with conflict, at least as measured by the ROCI-II, does not appear related to championship.



Table 21

*Correlations Between the Rahim Organizational Conflict Inventory (ROCI-II) and the Jenkins Activity Survey (JAS) Scales and the 13 Championship Criteria (Decimal Points are Omitted in Correlations) and Scale Descriptive Statistics*

	M	SD	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	FDE	IVD	5CC
<i>ROCI-II Scales</i>															
I	167.83	26.31	03	02	-07	07	-02	10	07	-04	-03	08	01	06	09
O	151.13	22.48	-06	05	-14	-06	-09	12	-01	-02	09	05	-08	06	16
D	165.68	21.63	03	11	14	08	04	11	17	-00	15	-03	11	11	01
A	136.49	22.85	-13	00	-06	-16	-12	01	-16	04	-04	-04	-13	-06	-08
C	168.93	21.00	-08	02	-14	04	-02	18	02	-02	16	04	-05	10	01
<i>JAS Scales</i>															
A	57.05	7.00	<b>34</b>	05	10	<b>31</b>	14	08	02	-06	-13	07	<b>23</b>	00	01
S	50.85	8.93	<b>23</b>	14	<b>22</b>	13	18	09	08	08	-05	11	<b>25</b>	09	05
J	61.17	6.06	15	05	18	<b>21</b>	12	17	10	-01	-08	11	20	09	09
H	51.32	8.79	12	-10	04	<b>31</b>	06	03	06	-03	-17	-02	13	-03	03

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .01: .195; .005: .213; .001: .247. Correlations significant at  $p < .005$  (two-tailed) have been bolded.

The column headings refer to the following: M: scale mean; SD: scale standard deviation; PD: Persistent Dominance; IE: Impatient Expediency; RD: Rebellious Drive; SP: Self Promotion; CC: Confrontive Candor; IPS: Influence and Political Savvy; DC: Driven Commitment; IR: Immediate Responsiveness; CS: Collaboration and Support; VGS: Visibility and Growth Seeking; FDE: Forceful Drive and Expediency; IVD: Influence and Visible Drive; 5CC: 5-Item Championship Criterion.

The row headings refer to the following ROCI-II and JAS scales: I: ROCI-II Integrating; O: ROCI-II Obliging; D: ROCI-II Dominating; A: ROCI-II Avoiding; C: ROCI-II Compromising; A: JAS Type A; JAS Factor S: Speed and Impatience; JAS-Factor J: Job Involvement; JAS-Factor H: Hard Driving and Competitive.

Each of the five ROCI-II scale scores is a sum of three T-scores, each of which was referenced to the present BC Tel Assessment Center sample. Means and standard deviations for the JAS scales were calculated from T-scores, referenced to "middle management" norms provided in the JAS test manual.

*Jenkins Activity Survey (JAS)*. The JAS was designed to measure Type A behavior: "...an overt behavioral syndrome or style of living characterized by extreme competitiveness, striving for achievement, aggressiveness, impatience, haste, restlessness, and feelings of being challenged by responsibility and under the pressure of time" (Jenkins et al., 1979, p. 3). Correlations between the overall JAS scale (Type A) as well as the three JAS factors and the 13 championship criteria are reported in the lower half of Table 21. As hypothesized, the JAS scales correlated significantly with championship, more specifically, FDE. The behavioral pattern associated with Type A behavior appears to be a central aspect of championship, at least the behaviors associated with FDE.

Overall Type A scores correlated significantly with two of the first-order factor scales that load on FDE, Persistent Dominance and Self Promotion (as well as with FDE). Thus, managers rated high on FDE tend to be competitive, aggressive, hard driving and impatient. This is consistent with the conceptualization of Forceful Drive and Expediency developed in Study 1, where themes of aggressiveness, tough-mindedness, and drive were present.

Turning to the three Factor scales, managers who received high ratings on FDE tended to obtain high scores on Speed and Impatience and, to a lesser extent, Job Involvement. Jenkins et al. (1979) described high scorers on Speed and Impatience as reporting feelings of time urgency. They may, for example, react impatiently with others, hurry other people, have strong tempers, and become irritated easily (Jenkins et al., 1979). Speed and Impatience correlated significantly with Persistent Dominance (PD) and Rebellious Drive (RD). Thus, managers rated as dominant and likely to break or bend rules, also tended to obtain high scores on Speed and Impatience indicating considerable feelings of impatience and time urgency.

Job Involvement also appears related to championship, at least Self Promotion. Jenkins et al. (1979) described persons high on Job Involvement as dedicated to their occupation. Such persons tend to work overtime and typically have challenging, high-

pressure jobs. Finally, Hard Driving and Competitive also correlated significantly with Self Promotion. Thus, people rated as attention seeking and self promoting, tended to describe themselves as hard driving, conscientious, responsible, and competitive—as putting forth more effort than others.

*Management Simulations: In-Basket Exercises*

*The Consolidated Fund In-Basket Test.* Correlations between the dimensions arising from the ETS Consolidated Fund In-Basket Test and the championship criteria are reported in the upper half of Table 22. As hypothesized, none of the correlations between the nine scales from this in-basket test and the 13 championship criteria were significant at  $p < .005$ . Administrative/organizational skills, as measured by the ETS in-basket, do not appear significantly related to ratings of championship.

*The Telephone Supervisor In-Basket Exercise (TSIB).* Correlations between the dimensions arising from the TSIB exercise and the championship criteria are reported in the lower half of Table 22. Of the seven In-Basket dimensions, only one, Quality of Judgment, showed significant correlation with any of the championship criteria (no correlations were hypothesized between the In-Basket exercise dimensions and championship). Quality of Judgment correlated .33 with Visibility and Growth Seeking (VGS).<sup>30</sup> Quality of Judgment scores reflect the appropriateness and effectiveness of actions taken during the In-Basket exercise. High scores suggest managerial performance characterized by effective judgments about how best to handle work problems.

*Management Simulations: The Role Plays*

Correlations between the role play exercise dimensions and the championship criteria appear in Table 23. Six of the 11 dimensions measured by the role play exercises

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<sup>30</sup> These analyses are based on a sample size of 89. Quality of Judgment and the six Stylistic Dimensions could be measured only in the last 4 years.

Table 22

*Correlations Between Scales From The Two In-Basket Exercises and the 13 Championship Criteria (Decimal Points are Omitted in Correlations) and Scale Descriptive Statistics*

	M	SD	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	FDE	IVD	5CC
<i>The ETS In-Basket Exercise</i>															
E1	70.81	23.03	-04	05	12	-02	06	06	03	-11	05	-02	04	00	-04
E2	57.02	27.43	-07	-12	-02	-06	00	03	-02	-05	04	-02	-08	-01	-07
E3	65.25	26.08	-01	-12	-04	04	-03	02	07	-04	01	-02	-04	01	-07
E4	76.84	19.72	-01	07	03	-01	-02	-03	-04	-17	-02	-10	02	-10	-10
E5	54.99	27.30	-04	01	-02	01	-08	-02	-06	-05	-15	-07	-03	-09	-09
E6	65.19	24.32	11	08	11	17	04	-02	-08	-12	-05	-06	14	-10	-09
E7	61.28	23.79	-03	-06	-03	01	04	05	-01	-10	03	-04	-02	-02	-08
E8	65.29	23.71	-05	-01	09	01	04	06	08	-08	05	-03	02	03	-05
E9	63.59	17.10	-05	-04	01	02	03	03	02	-10	01	-05	-01	-03	-12
<i>The TSIB Exercise</i>															
B1	50.24	8.48	16	16	18	21	09	05	10	07	-05	11	24	08	12
B2	60.20	9.32	11	03	12	01	14	01	19	02	-22	14	11	06	-08
B3	61.25	9.96	-08	-02	05	-08	-01	04	03	04	-15	04	-05	01	-17
B4	64.63	10.01	07	-04	08	-00	-08	00	08	07	-16	-06	01	-01	-01
B5	52.08	7.64	04	10	22	-01	11	09	15	12	-02	12	12	13	11
B6	60.44	9.43	04	12	19	03	-01	15	05	13	-13	08	11	08	02
B7	58.67	10.37	12	05	25	02	21	17	21	17	-06	33	18	23	12

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .01: .195; .005: .213; .001: .247 for E1 through E9. For B1 through B7, critical values for  $r$  for various (two-tailed) significance levels: .01: .27; .005: .29; .001: .34. Correlations significant at  $p < .005$  (two-tailed) have been bolded.

The column headings refer to the following: M: scale mean; SD: scale standard deviation; PD: Persistent Dominance; IE: Impatient Expediency; RD: Rebellious Drive; SP: Self Promotion; CC: Confrontive Candor; IPS: Influence and Political Savvy; DC: Driven Commitment; IR: Immediate Responsiveness; CS: Collaboration and Support; VGS: Visibility and Growth Seeking; FDE: Forceful Drive and Expediency; IVD: Influence and Visible Drive; 5CC: 5-Item Championship Criterion.

The row headings refer to: E1: Taking Action Toward Solving Problems; E2: Exercising Supervision or Control; E3: Problem Analyzing and Relating; E4: Communicating in Person; E5: Delegating; E6: Scheduling Systematically; E7: Amount of Work Accomplished; E8: Quality of Actions Taken; E9: Overall Performance; B1: Planning & Organizing Work; B2: Interpersonal Relations; B3: Leadership in a Supervisory Role; B4: Managing Personnel; B5: Analysis and Synthesis in Decision Making; B6: Productivity; B7: Quality of Judgment.

Means and standard deviations for the ETS In-Basket dimensions (B1 through B9) were calculated from percentiles scores, supplied by the publisher. Means and standard deviations for the TSIB exercise were calculated from T-scores, referenced to "entry-level management" norms available for the TSIB exercise.

Table 23

*Correlations Between the Role-play Scales and the 13 Championship Criteria (Decimal Points are Omitted in Correlations) and Scale Descriptive Statistics*

	M	SD	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	FDE	IVD	5CC
Led	3.55	.79	19	09	15	<b>28</b>	16	17	20	05	03	05	<b>24</b>	14	10
Com	3.71	.67	15	07	10	24	13	14	12	05	04	05	19	11	10
Ent	4.01	.97	19	-04	21	06	<b>29</b>	-08	21	16	-11	-09	18	04	-07
Cmt	3.69	.74	17	08	12	<b>25</b>	09	11	15	01	03	03	20	10	07
Int	3.38	.74	19	08	15	<b>26</b>	10	07	16	01	-01	07	<b>22</b>	09	07
PSt	4.21	.79	26	05	26	05	<b>35</b>	-05	23	-01	-13	-15	25	-01	-03
In	3.09	.96	<b>24</b>	13	19	<b>26</b>	12	04	12	-03	-13	-03	<b>26</b>	00	-00
Dec	3.68	.79	10	04	11	08	06	07	19	10	-03	04	11	11	07
Cnl	3.38	.83	16	04	15	16	10	08	16	07	-08	01	17	08	05
Ctr	2.71	1.15	05	-01	12	05	09	03	16	04	-06	03	08	07	10
App	3.03	1.10	15	04	03	17	03	08	06	01	-04	01	12	04	03

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .01: .195; .005: .213; .001: .247 for Led, Com, Cmt, Int, In, Dec, Cnl, Ctr, App. Critical values for  $r$  for various (two-tailed) significance levels: .01: .27; .005: .29; .001: .34 for Ent and PSt. Correlations significant at  $p < .005$  (two-tailed) for all variables have been bolded.

The column headings refer to the following: M: scale mean; SD: scale standard deviation; PD: Persistent Dominance; IE: Impatient Expediency; RD: Rebellious Drive; SP: Self Promotion; CC: Confrontive Candor; IPS: Influence and Political Savvy; DC: Driven Commitment; IR: Immediate Responsiveness; CS: Collaboration and Support; VGS: Visibility and Growth Seeking; FDE: Forceful Drive and Expediency; IVD: Influence and Visible Drive; 5CC: 5-Item Championship Criterion.

The row headings refer to the following role-play scales: Led: Leadership; Com: Communication; Ent: Entrepreneurship; Cmt: Commitment; Int: Interpersonal; PSt: Performance Stability; In: Initiative/Innovation; Dec: Decisiveness; Cnl: Conceptual and Analytical; Ctr: Control and Follow Up; App: Appraisal and Development of Subordinates.

Means and standard deviations for the Role-play dimensions were calculated from raw scores; the maximum possible score attainable on a single dimension is 6.0.

correlated significantly with at least one of the first-order factor scales. Those six dimensions were: (a) Leadership, (b) Entrepreneurship, (c) Communication, (d) Commitment, (e) Interpersonal, and (f) Initiative/Innovation. Significant and positive correlations were hypothesized between championship and the role play dimensions Interpersonal, Entrepreneurship, and Initiative/Innovation.

Once again, we see evidence, this time from the role play results, that interpersonal factors are related to championship. The role play exercise dimensions Leadership, Communication, Commitment, and Interpersonal measure one's ability to influence other people through: (a) taking a leadership role in the role play interaction by persuading and influencing the role player, (b) effectively communicating ideas—both verbally and through body language—such that the role player is won over, (c) successfully strengthening the commitment of the role player to the manager's proposals and, in the process, maintaining a professional and business-like manner, and (d) using an appropriate interpersonal style in the interaction—showing tact and social skill. The Initiative/Innovation dimension is a measure of one's ability to come up with inventive, new ideas in response to challenges that arise during the role play. Managers who obtained high scores on this dimension can be described as flexible and able to think on their feet.

All things considered, managers who were rated on the role play as socially skilled, able to take on a leadership role, and able to influence and persuade others, also tended to obtain high ratings on FDE. The prominence of interpersonal characteristics as predictors of championship was seen once again. Innovativeness also appeared related to championship, at least innovation in the sense that the role player was able to be innovative in a spontaneous and socially-effective way.

#### *The Structured Interview*

Correlations between the 11 scales derived from the structured interview, on the one hand, and the 13 championship criteria, on the other, are reported in Table 24.

Table 24

*Correlations Between the Interview Scales and the 13 Championship Criteria (Decimal Points are Omitted in Correlations) and Scale Descriptive Statistics*

	M	SD	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	FDE	IVD	5CC
Led	4.35	.73	18	10	10	<b>27</b>	15	17	-01	-15	03	-08	<b>22</b>	-01	-04
Com	4.22	.77	-04	03	01	14	07	15	-09	-17	00	-17	06	-09	-13
Ent	4.22	.88	<b>27</b>	19	<b>24</b>	<b>31</b>	20	16	08	-03	-06	04	<b>33</b>	06	03
Cmt	4.25	.68	14	04	06	<b>22</b>	12	16	-01	-11	-02	-11	16	-03	-04
Int	4.26	.68	07	01	02	17	07	03	-02	-15	06	-17	10	-08	-10
PSt	4.41	.64	13	13	08	<b>26</b>	16	09	02	-18	01	-05	<b>21</b>	-03	-05
In	4.23	.67	14	08	17	<b>26</b>	19	20	05	-03	09	06	<b>23</b>	10	05
Dec	4.44	.76	03	01	02	11	06	04	-07	-08	-10	-19	07	-12	-09
Pln	4.53	.61	01	03	07	20	03	<b>22</b>	-02	-02	08	-00	10	06	09
Ctr	4.40	.76	12	03	06	16	05	10	-00	-06	06	-09	12	-00	-00
App	4.23	.92	<b>22</b>	02	12	<b>23</b>	12	08	07	-10	04	-09	20	00	03

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .01: .195; .005: .213; .001: .247. Correlations significant at  $p < .005$  (two-tailed) for all variables have been bolded.

The column headings refer to the following: M: scale mean; SD: scale standard deviation; PD: Persistent Dominance; IE: Impatient Expediency; RD: Rebellious Drive; SP: Self Promotion; CC: Confrontive Candor; IPS: Influence and Political Savvy; DC: Driven Commitment; IR: Immediate Responsiveness; CS: Collaboration and Support; VGS: Visibility and Growth Seeking; FDE: Forceful Drive and Expediency; IVD: Influence and Visible Drive; 5CC: 5-Item Championship Criterion.

The row headings refer to the following interview scales: Led: Leadership; Com: Communication; Ent: Entrepreneurship; Cmt: Commitment; Int: Interpersonal; PSt: Performance Stability; In: Initiative/Innovation; Dec: Decisiveness; Pln: Planning and Organizing; Ctr: Control and Follow Up; App: Appraisal and Development of Subordinates.

Means and standard deviations for the interview dimensions were calculated from raw scores; the maximum possible score attainable on a single dimension is 6.0.

Seven of the interview dimensions were significantly related to at least one aspect of championship. The Entrepreneurship dimension figured most prominently in the bivariate correlations.

Of all the predictors considered thus far in Study 2, the structured interview dimension of Entrepreneurship correlated the highest with FDE ( $r = .33$ ). Entrepreneurship, as measured in the interview, relates to seeking out challenges, taking risks, and experimenting with new approaches and ideas. Thus, managers rated as high on these aspects of entrepreneurship were also rated by their supervisors as demonstrating many of the behaviors associated with championship, most notably, PD, RD, and SP.

Paralleling the results from the role play exercise, Leadership, Commitment, and Initiative/Innovation, were also related to aspects of championship. Once again, interpersonal factors correlated with championship, at least FDE. Performance Stability, Appraisal and Development of Subordinates, and Planning and Organizing also correlated significantly with aspects of championship. Performance Stability is a measure of one's ability to maintain effectiveness under pressure, while Appraisal and Development of Subordinates measures one's ability to provide constructive feedback to subordinates in ways that enhance their performance and effectiveness. Planning and Organizing was the only interview scale that correlated significantly with an IVD factor scale, Influence and Political Savvy. One's ability to organize and plan effectively activities appears related to persuasiveness and influence.

### *Summary*

The results reported in Tables 17 through 24 build on the behavioral profile of the champion developed in Study 1. In particular, our understanding of FDE is enhanced. Findings in this connection were consistent with those reported and discussed in Study 1. High FDE managers were found to be dominant, forceful, exhibitionistic, impulsive, likely to break rules, and driven by feelings of impatience and challenge. Our



understanding of IVD, however, has not been similarly enhanced. Rather, IVD (and 5CC) could not be predicted beyond chance levels of significance using the measures contained in the AC battery.

Having reported the bivariate correlations between the various individual AC battery scales and the three championship criteria, attention now shifts to a consideration of the criterion-related validity of multiple-scale combinations. In the following section, multiple regression analysis was used to develop optimally-predictive championship linear combinations. The purpose in the next section was to develop: (a) inventory- (and domain-) specific linear combinations of scales, and (b) an optimally-predictive cross-inventory linear combination of scales.

*Correlational Analyses: Criterion Correlations of Optimal Linear Combinations of AC Battery Scales*

In this section, scales from the various AC battery components were combined in order to develop optimally-predictive linear combinations of scales. A stepwise multiple regression approach was used in order to identify both inventory-specific optimal linear combinations and cross-inventory optimal linear combinations. The stepwise algorithm permits variables to enter and exit the equation on the basis of each variable's contribution to criterion prediction and on the basis of its relationship to the variables already in the equation. The two second-order factor scales were each regressed onto: (a) scales from the CPI, (b) scales from the 16PF, (c) scales from the PRF, (d) scales from the JAS, (e) scales from the role play, (f) scales from the interview, and (g) scales from the four standardized inventories (the CPI, 16PF, PRF, and JAS) that showed a bivariate correlation with the relevant criterion significant at  $p < .05$ <sup>31</sup>. Multiple correlation coefficients were also calculated for the complete predictor data set (all predictors with a bivariate  $r$  significant at  $p < .05$  with the relevant criterion), but the description and

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<sup>31</sup> The alpha level was relaxed to  $p < .05$  for the multiple regression analyses in order to permit calculation of multiple regression equations for IVD. As noted earlier, not one of the AC battery scales correlated with IVD at  $p < .01$ .

interpretation of the results is based on the *stepwise* analyses. These results are reported in Tables 25 through 31.

#### *Regression Analyses Involving The CPI Scales*

Results of the multiple regression analyses involving the CPI appear in Table 25. A significant multiple correlation coefficient was found for the Forceful Drive and Expediency criterion ( $R_s^{32} = .340$ ;  $F(3, 170) = 8.54, p < .0001$ ). A significant multiple correlation coefficient was also found for Influence and Visible Drive ( $R_s = .198$ ;  $F(2, 171) = 4.52, p < .05$ ), but this second-order factor scale was clearly not as predictable as was FDE. At least for FDE, criterion correlations can be boosted substantially by using more than one CPI scale to predict championship.

#### *Regression Analyses Involving The 16PF Scales*

Results of the multiple regression analyses involving the 16PF appear in Table 26. Significant multiple correlation coefficients were achieved. Once again, they were stronger for FDE ( $R_s = .264$ ;  $F(1, 172) = 14.00, p < .001$ ) than for IVD ( $R_s = .209$ ;  $F(2, 171) = 4.97, p < .01$ ). The 16PF scales do an adequate job of predicting the two championship criteria, although they do not perform as well as do the CPI scales.

#### *Regression Analyses Involving The PRF Scales*

In Table 27 the two championship criteria were regressed onto the PRF scales. A significant multiple correlation coefficient was achieved for the FDE equation ( $R_s = .317$ ;  $F(2, 171) = 10.70, p < .0001$ ). The PRF linear combination for FDE reached a level of prediction similar to that achieved with the CPI. No PRF scales correlated significantly with IVD.

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<sup>32</sup>  $R_s$  represents the multiple correlation coefficient corrected (or "shrunk") for sampling error by means of the Wherry (1931) formula. This formula is an attempt to correct for capitalization on chance that occurs in the calculation of predictor weights in multiple regression. The Wherry correction is a more immediate and less onerous alternative to empirical cross-validation of predictor weights.

Table 25

*Multiple Regression Analyses Involving the CPI: Optimal Variable Sets**I. Second-Order Factor Forceful Drive and Expediency (FDE) Criterion Regressed onto the CPI Scales: An, Fe, Sc, Do, So, Cs, Sa, Sp.*

All Entered Method:  $R = .403$ ;  $R_s = .349$ ;  $F(8, 165) = 3.99$ ,  $p < .001$ .  
 Stepwise Method:  $R = .362$ ;  $R_s = .340$ ;  $F(3, 170) = 8.54$ ,  $p < .0001$ .

Predictor Scale	$r$	$p$	$\beta$	$p$
CPI-Anxiety	-.17	.050	-.172	.020
CPI-Dominance	.27	.001	.239	.001
CPI-Socialization	-.18	.050	-.207	.005

*II. Second-Order Factor Influence and Visible Drive (IVD) Criterion Regressed onto the CPI Scales: Ie, Sa, Ai.*

All Entered Method:  $R = .234$ ;  $R_s = .195$ ;  $F(3, 170) = 3.28$ ,  $p < .05$ .  
 Stepwise Method:  $R = .224$ ;  $R_s = .198$ ;  $F(2, 171) = 4.52$ ,  $p < .05$ .

Predictor Scale	$r$	$p$	$\beta$	$p$
CPI-Achieve. via Indep.	.15	.050	.149	.047
CPI-Self Acceptance	.17	.050	.164	.029

*Note:*  $R_s$  is the shrunken multiple correlation coefficient;  $r$  is the bivariate correlation between the predictor and criterion. Predictor variables were included in the regression equation if they possessed a significant ( $p < .05$ ) correlation with the relevant criterion.

Table 26

*Multiple Regression Analyses Involving the 16PF: Optimal Variable Sets**I. Second-Order Factor Forceful Drive and Expediency (FDE) Criterion Regressed onto the 16PF Factors:  $Q_{III}$ ,  $Q_I$ ,  $E$ .*

All Entered Method:  $R = .307$ ;  $R_s = .280$ ;  $F(3, 170) = 5.89$ ,  $p < .001$ .  
 Stepwise Method:  $R = .274$ ;  $R_s = .264$ ;  $F(1, 172) = 14.00$ ,  $p < .001$ .

Predictor Scale	$r$	$p$	$\beta$	$p$
16PF-Assertiveness	.27	.001	.274	.000

*II. Second-Order Factor Influence and Visible Drive (IVD) Criterion Regressed onto the 16PF Factors:  $M$ ,  $Q_3$ .*

All Entered Method:  $R = .234$ ;  $R_s = .209$ ;  $F(2, 171) = 4.97$ ,  $p < .01$ .  
 Stepwise Method:  $R = .234$ ;  $R_s = .209$ ;  $F(2, 171) = 4.97$ ,  $p < .01$ .

Predictor Scale	$r$	$p$	$\beta$	$p$
16PF-Controlled	-.17	.050	-.159	.034
16PF-Imaginative	.17	.050	.162	.031

*Note:*  $R_s$  is the shrunken multiple correlation coefficient;  $r$  is the bivariate correlation between the predictor and criterion. Predictor variables were included in the regression equation if they possessed a significant ( $p < .05$ ) correlation with the relevant criterion.

Table 27

*Multiple Regression Analyses Involving the PRF: Optimal Variable Sets**I. Second-Order Factor Forceful Drive and Expediency (FDE) Criterion Regressed onto the PRF Scales: Im, Ch, Ag, Ex.*

All Entered Method:  $R = .367$ ;  $R_s = .338$ ;  $F(4, 169) = 6.56$ ,  $p < .0001$ .

Stepwise Method:  $R = .333$ ;  $R_s = .317$ ;  $F(2, 171) = 10.70$ ,  $p < .0001$ .

Predictor Scale	$r$	$p$	$\beta$	$p$
PRF-Change	.17	.050	.190	.009
PRF-Aggression	.27	.001	.286	.001

*II. Second-Order Factor Influence and Visible Drive (IVD) Criterion Regressed onto the PRF Scales: No PRF scales correlated significantly with IVD.*

*Note:*  $R_s$  is the shrunken multiple correlation coefficient;  $r$  is the bivariate correlation between the predictor and criterion. Predictor variables were included in the regression equation if they possessed a significant ( $p < .05$ ) correlation with the relevant criterion.

### *Regression Analyses Involving The JAS Scales*

The multiple regression analyses involving the four JAS scales are reported in Table 28. A familiar pattern emerges once again, with the results for FDE reaching significance ( $R_s = .281$ ;  $F(2, 171) = 8.44$ ,  $p < .001$ ). The results are comparable to those obtained with the 16PF and PRF. No JAS scales correlated significantly with IVD.

### *Regression Analyses Involving The Role play Scales*

Results of the regression analyses involving the role play dimension scales appear in Table 29. A significant multiple correlation was achieved in connection with FDE ( $R_s = .272$ ;  $F(1, 164) = 14.17$ ,  $p < .001$ ). Although six role play scales could have entered the equation, only one scale—Initiative/Innovation—remained following the stepwise analysis. This was due largely to the fact that the role play scales were highly inter-correlated (their mean inter-correlation was  $r = .66$ ). Since none of the role play scales correlated significantly ( $p < .05$ ) with IVD, a predictive equation could not be derived for this second-order factor scale.

### *Regression Analyses Involving The Interview Scales*

The multiple regression analyses involving the interview scales are reported in Table 30. Since none of the Interview scales correlated significantly with IVD, multiple regression results could be reported in connection with FDE only. A significant multiple correlation was achieved with the FDE criterion ( $R_s = .327$ ;  $F(1, 171) = 21.57$ ,  $p < .0001$ ). Like the results reported above in connection with the role play, only one independent variable (Entrepreneurship) remained in the equation at the conclusion of the stepwise procedure. The mean inter-correlation among the interview scales was  $r = .57$ . Although six interview scales were included in the equation, only one remained at the end of the stepwise procedure, due largely to the high degree of inter-correlation among the scales.

Table 28

*Multiple Regression Analyses Involving the JAS: Optimal Variable Sets**I. Second-Order Factor Forceful Drive and Expediency (FDE) Criterion Regressed onto the JAS Scales: Type A, J, and S.*

All Entered Method:  $R = .311$ ;  $R_s = .285$ ;  $F(3, 170) = 6.08$ ,  $p < .001$ .

Stepwise Method:  $R = .300$ ;  $R_s = .281$ ;  $F(2, 171) = 8.44$ ,  $p < .001$ .

Predictor Scale	$r$	$p$	$\beta$	$p$
JAS-Job Involvement	.22	.005	.173	.019
JAS-Speed & Impatience	.26	.001	.229	.002

*II. Second-Order Factor Influence and Visible Drive (IVD) Criterion Regressed onto the JAS Scales: No JAS Scales correlated significantly with IVD.*


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*Note:*  $R_s$  is the shrunken multiple correlation coefficient;  $r$  is the bivariate correlation between the predictor and criterion. Predictor variables were included in the regression equation if they possessed a significant ( $p < .05$ ) correlation with the relevant criterion.

Table 29

*Multiple Regression Analyses Involving the Role-play: Optimal Variable Sets**I. Second-Order Factor Forceful Drive and Expediency (FDE) Criterion Regressed onto the Role-play Scales: Led, Com, Cmt, Int, In, Ctr.*

All Entered Method:  $R = .313$ ;  $R_s = .253$ ;  $F(6, 159) = 2.88$ ,  $p < .01$ .

Stepwise Method:  $R = .282$ ;  $R_s = .272$ ;  $F(1, 164) = 14.17$ ,  $p < .001$ .

Predictor Scale	$r$	$p$	$\beta$	$p$
Initiative/Innovation	.26	.001	.282	.000

*II. Second-Order Factor Influence and Visible Drive (IVD) Criterion Regressed onto the Role-play Scales: No Role-play Scales Correlated Significantly with IVD.*


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*Note:*  $R_s$  is the shrunken multiple correlation coefficient;  $r$  is the bivariate correlation between the predictor and criterion. Predictor variables were included in the regression equation if they possessed a significant ( $p < .05$ ) correlation with the relevant criterion.



Table 30

*Multiple Regression Analyses Involving the Interview: Optimal Variable Sets**I. Second-Order Factor Forceful Drive and Expediency (FDE) Criterion Regressed onto the Interview Scales: Led, Ent, Cmt, PSt, In, App.*

All Entered Method:  $R = .363$ ;  $R_s = .317$ ;  $F(6, 166) = 4.20$ ,  $p < .001$ .

Stepwise Method:  $R = .335$ ;  $R_s = .327$ ;  $F(1, 171) = 21.57$ ,  $p < .0001$ .

Predictor Scale	$r$	$p$	$\beta$	$p$
Entrepreneurship	.33	.001	.335	.0001

*II. Second-Order Factor Forceful Drive and Expediency (FDE) Criterion Regressed onto the Interview Scales: No Interview Scales Correlated Significantly with IVD.*


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*Note:*  $R_s$  is the shrunken multiple correlation coefficient;  $r$  is the bivariate correlation between the predictor and criterion. Predictor variables were included in the regression equation if they possessed a significant ( $p < .05$ ) correlation with the relevant criterion.

*Regression Analyses Involving The CPI, 16PF, PRF, and JAS Scales*

While the results above give information on the level of prediction possible using inventory-specific linear combinations, in this section a broader search was undertaken for an optimally-predictive linear combination of scales from the various inventories. Thus, the bivariate correlations between all scales from the standardized instruments were examined and chosen for inclusion in this section if the scale correlated with the relevant championship criterion at  $p < .05$ . The analyses in this section were designed to improve upon the predictive accuracy of inventory-specific prediction approaches.

Results of the stepwise multiple regression analyses are reported in Table 31. A highly significant shrunken multiple correlation coefficient was achieved between the various scales, on the one hand, and FDE, on the other. A statistically significant ( $p < .01$ ), but practically unimpressive, shrunken multiple correlation coefficient was obtained between IVD and the predictor scales.

*Stepwise results for FDE.* A shrunken multiple correlation coefficient of .42 was achieved when FDE was regressed onto the predictor set in Table 31 ( $R_s = .420$ ;  $F(4, 169) = 10.29$ ,  $p < .0001$ ). The CPI Dominance and PRF Aggression scales figured prominently in the equation in terms of their beta weights. The 16PF Tough Poise scale also entered the equation and carried the third-largest beta weight. Finally, the CPI Socialization scale had a negative beta weight in the regression equation, indicating that low scores on Socialization were associated with high scores on the FDE criterion.

Once again, we see themes of dominance and assertiveness associated with FDE, this time on the basis of the stepwise regression analyses. The CPI Dominance and the PRF Aggression scales are familiar correlates of FDE. With respect to the 16PF measure of Tough Poise, Cattell described high scorers on this scale as typically decisive, enterprising, and resilient. Finally, like dominance, the theme of low socialization was also a familiar one. Low scorers tend to be rebellious, impulsive, even manipulative; low scorers are willing to take risks and question conventions.

Table 31

*Multiple Regression Analyses Involving the CPI, 16PF, PRF, and JAS Scales: Optimal Variable Sets*

*I. Second-Order Factor Forceful Drive and Expediency (FDE) Criterion Regressed onto the Following Scales: JAS-J, JAS-Type A, JAS-S; CPI-Sc, CPI-An, CPI-Fe, CPI-Cs, CPI-So, CPI-Do, CPI-Sa, CPI-Sp; 16PF-Q<sub>III</sub>, 16PF-E, 16PF-Q<sub>I</sub>; PRF-Ch, PRF-Im, PRF-Ex, PRF-Ag.*

All Entered Method:  $R = .506$ ;  $R_s = .412$ ;  $F(18, 155) = 2.97$ ,  $p < .0001$ .

Stepwise Method:  $R = .443$ ;  $R_s = .420$ ;  $F(4, 169) = 10.29$ ,  $p < .0001$ .

Predictor Scale	$r$	$p$	$\beta$	$p$
16PF-Tough-Poise	.190	.050	.154	.029
CPI-Socialization	-.182	.050	-.150	.033
PRF-Aggression	.27	.001	.241	.001
CPI-Dominance	.27	.001	.277	.001

*II. Second-Order Factor Influence and Visible Drive (IVD) Criterion Regressed onto the Following Scales: CPI-Sa, CPI-Ai, CPI-Ie; 16PF-M, 16PF-Q<sub>3</sub>; PRF-Un.*

All Entered Method:  $R = .288$ ;  $R_s = .223$ ;  $F(6, 167) = 2.51$ ,  $p < .05$ .

Stepwise Method:  $R = .234$ ;  $R_s = .209$ ;  $F(2, 171) = 4.97$ ,  $p < .01$ .

Predictor Scale	$r$	$p$	$\beta$	$p$
16PF-Imaginative	.17	.050	.162	.031
16PF-Controlled	-.17	.050	-.159	.034

*Note:*  $R_s$  is the shrunken multiple correlation coefficient;  $r$  is the bivariate correlation between the predictor and criterion. Predictor variables were included in the regression equation if they possessed a significant ( $p < .05$ ) correlation with the relevant criterion.

*Stepwise results for IVD.* The multiple regression analyses conducted in connection with IVD yielded minimal dividends in terms of increasing our ability to predict this type of behavior. Two 16PF scales—Imaginative (M) and Undisciplined Self-Conflict (Q<sub>3</sub>)—were included in the stepwise algorithm.

High scores on the 16PF Imaginative scale indicate an imaginative open-minded orientation—an openness to new things and experiences. The negative beta weight for the other 16PF scale (Q<sub>3</sub>) indicates that high scorers on IVD may be relatively undisciplined and lax. They may tend to follow their own urges rather than the conventions and social rules of their environment. Thus, some degree of unconventionality and imaginativeness is associated with IVD, although the reader should bear in mind that these two scales correlated only .17 ( $p < .05$ ) with the IVD criterion.

*Summary.* In this section, stepwise multiple regression was used to identify optimally-predictive linear combinations of scales. Results were encouraging for FDE. That is, a multiple regression approach led to the development of inventory-specific and cross-inventory linear combinations that achieved levels of prediction surpassing those achieved with the individual scales featured in Tables 17 through 24. Results for IVD were generally disappointing, not surprisingly, given that so few scales correlated with IVD at  $p < .05$  (recall that none of the scales listed in Table 15 correlated with IVD at  $p < .01$ ).

### *A Contrasted Groups Analysis*

In this section, the characteristics of extreme groups of managers both high and low on FDE and IVD were examined. As noted earlier, in order to identify the four extreme groups, the sample of 174 managers was rank-ordered on the basis of their overall scores on the two second-order championship factor scales. The managers with the 20 lowest and highest scores on each of FDE and IVD constituted the four extreme groups. Two analyses were performed.

First, a discriminant function (DF) analysis was undertaken. Scales from the various standardized tests, the simulation exercises, and the structured interview that correlated significantly ( $p < .01$ ) with the relevant second-order factor scale were included in the DF. For FDE, it was possible to identify 20 scales (e.g., CPI-Dominance, Interview-Entrepreneurship) that correlated significantly with FDE. A parallel DF analysis on IVD could not be carried out, because not one of the elements of the AC battery correlated significantly ( $p < .01$ ) with IVD.

Secondly, the category proportions arising from the scoring of the biodata form were examined. Given the relatively small sample sizes in this section of Study 2 and the resulting low power of tests of proportional differences, the alpha level for the z-test was set at  $p < .01$ . For each of IVD and FDE, category proportions were compared for the high and low groups. For FDE, four category proportions were significantly different at  $p < .01$ . For IVD, the high and low groups differed in proportion on only one category. Thus, a comparison of low and high IVD managers was not made.

#### *A Discriminant Analysis For FDE*

*Conceptualization of the discriminant function.* Table 32 presents the results of a discriminant analysis comparing low and high FDE managers. Group means and standard deviations on the scales included in the DF are reported for the two groups. In addition, the standardized DF and structure coefficients are reported. Finally, the results of univariate *t*-tests comparing the group means are listed in the last column.

As noted in the Method section, a stepwise procedure was used to select the AC battery scales that would be included in the DF. Twenty scales initially entered the analysis; of those 20, 10 met the DF statistical criterion for inclusion. These 10 variables are reported in Table 32 in descending order by the size of their structure coefficients.

At the bottom of Table 32, the reader will note that the overall DF was highly significant [ $F(10, 29) = 11.74, p < .001$ ] indicating that the null hypothesis that the two sets of population means are equal is very unlikely. The canonical correlation for the DF

Table 32

*Results of the Discriminant Analysis For FDE*

Variable	Group <sup>a</sup>	Mean	SD	Standardized DF Coeff <sup>nt</sup>	Structure Coeff <sup>nt</sup> <sup>b</sup>	t <sup>c</sup>
1. Interview-Entrepreneurship	Low High	3.71 4.80	.67 .62	.291	.427	5.30****
2. JAS-Type A (JAS-A)	Low High	53.10 60.70	6.06 6.15	1.001	.317	3.94****
3. 16PF-Assertiveness (16PF-E)	Low High	53.40 62.40	7.20 7.65	.655	.309	3.83****
4. 16PF-Extraversion (16PF-QI)	Low High	53.40 61.55	8.04 6.85	1.126	.278	3.45***
5. Interview-Performance Stability	Low High	4.02 4.66	.69 .49	1.344	.273	3.39***
6. Interview-Leadership	Low High	4.03 4.71	.69 .65	-1.53	.258	3.20***
7. Role-play Leadership	Low High	3.25 3.92	.94 .63	.732	.212	2.63*
8. Interview-Appraisal & Dev't	Low High	4.00 4.63	.99 .91	.455	.170	2.10*
9. PRF-Impulsivity (PRF-Im)	Low High	44.15 48.75	6.79 9.66	-.739	.140	1.74
10. JAS-Factor J (JAS-J)	Low High	59.75 62.85	6.81 4.50	-.424	.137	1.70

<sup>a</sup> Low = low score on FDE (n = 20); High = high score on FDE (n = 20).

<sup>b</sup> Correlation with the discriminant function composite score.

<sup>c</sup> \* $p < .05$ ; \*\*\* $p < .005$ ; \*\*\*\* $p < .001$ .

Note: Wilkes lambda = .198,  $F(10, 29) = 11.74$ ,  $p < .001$ ,  $R_c = .90$ .

composite was  $R_c = .90$ . This represents the degree of association between the overall discriminant function score and group membership (low vs. high FDE). There is clearly a very high degree of association between group membership and the weighted linear combination of the 10 AC battery scale scores obtained from the DF analysis.

Turning to the individual 10 scales featured in Table 32, the group means are reported in the first column of numbers. Means are based on both raw and T-scores (T-scores have a mean of 50 and a standard deviation of 10). T-scores were calculated based on normative data supplied in each of the 16PF, PRF, and JAS test manuals. For the 16PF, the normative sample was roughly equivalent to the "general population"; for the PRF, the normative sample was made up of college students, while for the JAS, the normative sample consisted of middle- to senior-level managers. The interview and role play means were based on raw scores. These raw scores could range from a low of 1.00 to a high of 6.00.

Mean differences were significant for eight of the 10 scales; significance levels are reported with each  $t$  value. The first six scales showed the largest group mean differences. The largest difference between the low and high FDE groups was on the interview measure of Entrepreneurship. The next largest was for JAS-Type A, followed closely by the 16PF measure of Assertiveness. Mean differences were not significant for the PRF-Impulsivity and JAS-Factor J scales.

An examination of the standardized DF coefficients in Table 32 shows the largest weights for the interview measures of Performance Stability, and Leadership, 16PF-Extraversion, JAS-Type A, PRF-Impulsivity, and the role play measure of Leadership. These are the dominant variables in the discriminant function as revealed by the size of their standardized DF coefficients. Interpretation of the DF will not, however, be based on these coefficients. Rather, the interpretation will be drawn from the structure coefficients for the following reasons.

First, standardized DF coefficients are analogous to beta weights obtained in multiple regression analysis. They show each variable's degree of relationship with the DF *in the context of the other variables in the equation*. What was of most interest in the present study was the interpretation of the overall DF, not the relative weight assigned to each variable in the DF linear combination. More specifically, it was of interest to know which of the 10 AC battery scales, on their own, were most similar to the DF. Such information would be of assistance in developing an overall understanding of the psychological meaning of high and low scores on the DF.

Secondly, several variables appear as suppressers in the DF, making interpretation of the standardized DF coefficients problematic. Suppressers are measures with relatively weak correlation with the dependent variable but substantial correlation with other independent variables that have high validity for the dependent variable. Three such variables in the present study were: (a) the interview measure of Leadership, (b) PRF-Impulsivity, and (c) JAS-Factor J. High FDE managers scored higher than low FDE managers on each of these scales, as indicated by the group means. These three scales all correlated positively with the DF composite, yet all three received negative *weights* in the DF. Suppressor variables tend to be unstable and, for this reason, these results are not emphasized. Rather, the structure coefficients will be examined in order to explore the meaning of the DF.

The largest structure coefficient was for the Entrepreneurship scale of the interview (.427). This means that the DF composite is carrying information very similar to that measured by the Entrepreneurship scale. This scale is a measure of the psychologist's overall impressions of the assesses desire and ability to take risks, seek out challenges, and innovate and experiment with new approaches. The construct underlying the Entrepreneurship scale is a relatively large part of what is measured by the DF composite.



In addition to Entrepreneurship, five AC battery scales showed substantial correlation with the DF: (a) JAS-Type A (.317), (b) 16PF-Assertiveness (.309), (c) 16PF-Extraversion, (d) Interview-Performance Stability, and (e) Interview-Leadership. Of these five, three share a common psychological thread: 16PF-Assertiveness, 16PF-Extraversion, and the interview measure of Leadership. High scorers on these three scales are likely outgoing and socially uninhibited. They are likely direct and assertive in their interpersonal interactions and able to take on high-profile, leadership roles. The theme of interpersonal ascendancy is a familiar one, having been discussed in connection with results reported in previous sections.

The other two AC battery scales that showed high structure coefficients were JAS-Type A and the interview measure of Performance Stability. High scorers on the DF will tend to be competitive and driven to achieve. As well, the result for Performance Stability indicates that the DF contains a theme of low neuroticism: a resistance and tolerance for challenge and uncertainty.

Despite their significant correlation with the FDE criterion (for the entire sample), the PRF-Impulsivity and JAS-Factor J scales did not figure prominently in the DF. The mean scores of the low and high FDE groups did not differ significantly on these two scales.

*Classification based on the discriminant function.* The second reason for carrying out a DF analysis in the present study was to examine the extent to which AC battery scales could be used to correctly classify managers into either the low or high FDE group. The results of this analysis are reported in Table 33.

Although the results appear to be highly promising, the weights used to derive group membership need to be cross-validated in a new sample. The apparent accuracy of the present equation is likely due, in part, to error fitting. Nonetheless, the present results are encouraging and warrant further study in a new sample.

Table 33

*Classification Results From the Discriminant Analysis of FDE*


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		Actual Group Membership		
		Low	High	
Predicted Group Member- ship	Low	n = 18 90%	n = 0 0%	18
	High	n = 2 10%	n = 20 100%	22
		20	20	40

Hit Rate = 95%

Sensitivity = 100%

Specificity = 90%

The tabled results show that 38 of the 40 managers were correctly classified with the DF, for a hit rate of 95%. All 20 of the high FDE managers were correctly classified; thus, the sensitivity of the classification was 100%. Two of the 20 low FDE managers were incorrectly classified as belonging in the high FDE group, for a specificity of 90%.

*A Championship Profile Based on the Biodata Form*

*Inter-rater agreement.* Before turning to the results of the biodata form analysis, the inter-rater reliability of each of the 16 questions will first be reported. Flanders' (1967)  $\pi$  was computed for the 16 questions. These coefficients are reported in Table 34. They ranged from a low of .81 to a high of .94, with a mean coefficient of .88. Twelve of the 16 coefficients exceeded the criterion of .85 that Flanders recommended. Of the four that fell below this criterion, none fell below .81. Thus, all things considered, the coefficients reported in Table 34 reflect acceptable levels of inter-rater agreement. It appears that the categories chosen and the rater training provided resulted in the development of a coding procedure that was followed reliably (consistently) by the two raters.

*Category proportion comparisons.* As discussed in the Method section, for each question, a frequency count was made of the number of categories endorsed by the two groups of managers (high and low FDE). These category frequencies were then transformed to category proportions to permit  $z$ -tests of the differences between proportions for each category across the two comparison groups. A  $p$  value of .01 was chosen for the comparisons, rather than the more stringent  $p$  value of .005 used in connection with the bivariate correlational analyses reported in the first part of Study 2. A more liberal  $p$  value was chosen in this section given the relatively small samples sizes involved and the resulting low power of tests of proportional differences.

As noted earlier, four category proportions were significantly ( $p < .01$ ) different for low vs. high FDE groups, while for IVD the high and low groups differed in proportion on only one category. The discussion below is, therefore, based on the FDE

*Table 34**Results of The Inter-Rater Agreement Analysis Based on Flanders'  $\pi$* 

Question #	# of Categories	Flanders' $\pi$
Q1	4	.92
Q2	6	.89
Q3	3	.89
Q4	4	.84
Q5	5	.89
Q6	4	.82
Q7	8	.82
Q8	7	.92
Q9	6	.81
Q10	9	.93
Q11	4	.94
Q12	6	.90
Q13	7	.86
Q14A	2	.86
Q14B	8	.88
Q15	7	.92

results alone. The categories on which managers high and low on FDE differed are reported in Table 35. Where a significant category difference was found, all categories associated with that question were reported, in the interests of completeness. Each of the questions will now be discussed.

*Question 6. What is your own approach to supervision, i.e., your management style?* This question was coded for three categories. The intent was to measure the extent to which managers from either group reported using: (a) a participative and collaborative style (emphasizing teamwork, empowerment, and joint decision making), (b) a directive and closely monitoring style (providing direction, focusing on task objectives, tracking performance), or (c) a style that changes with the needs of the person being supervised. Of the three categories, significant differences in proportions were found on categories 2 and 3.

Of the 20 managers in the low FDE group, 17 (85%) reported that they used a style coded as participative/collaborative, while 9 of the 20 managers high on FDE (45%) reported using such a management style. Some sample answers from the low FDE group representing category 2 answers were: "...open approach; believe in people and believe that if you treat them correctly (with respect, give them challenging work etc.) they will react in a positive manner", "...respectful of people's feelings; honest, open", "group involvement and group decision making", "...total team involvement with open box supervision".

Turning to category 3, a significantly greater proportion of managers in the high FDE group (70%) reported using a management style coded as directive than in the low FDE group (30%). Some examples of high FDE group responses representing category 3 answers were: "...set objectives, ensure people know what is expected, keep employees informed", "I will work as hard as my subordinates; demanding but fair and honest", "I get along well with most people...I have a low tolerance for people who can't do their job or will not do their job".

Table 35

*Results From the Analysis of the Biodata Form**Question 6. What is your own approach to supervision, i.e., your management style?*

	Low FDE		High FDE	
	Frequency	Proportion	Frequency	Proportion
1 = Depends on Subordinate	0	.00	3	.15
2 = Collaborative/Participative	17	.85	9	.45
3 = Directive/Monitoring	6	.30	14	.70

*Question 12. How do your leisure and social activities relate to your career?*

	Low FDE		High FDE	
	Frequency	Proportion	Frequency	Proportion
0 = No answer	0	0	1	.05
1 = They don't	8	.40	1	.05
2 = Stress Relief	6	.30	5	.25
3 = Socialize with Same People	3	.15	5	.25
4 = Develop Contacts/Skills	10	.50	5	.25
5 = Enjoy/Do Similar Things	1	.05	6	.30

Table 35 cont.

*Question 13. What are your most outstanding personal qualities?*

	Low FDE		High FDE	
	Frequency	Proportion	Frequency	Proportion
1 = Conscientiousness	20	1	14	.70
2 = Calm/Stable	4	.20	4	.20
3 = Extraversion-warmth	17	.85	16	.80
4 = Extraversion-assertiveness	6	.30	10	.50
5 = Openness	5	.25	7	.35
6 = Cognitive/Intellectual	8	.40	8	.40

*Question 14b. What are your shortcomings; your areas for development?*

	Low FDE		High FDE	
	Frequency	Proportion	Frequency	Proportion
1 = Need More Education	2	.10	1	.05
2 = Need More Experience	6	.25	0	.00
3 = Specific Skill Deficiency	8	.40	11	.55
4 = Interpersonal Skill Deficiency	6	.30	6	.30
5 = Work Habits	0	.00	0	.00
6 = Openness to Innovation	1	.05	0	.00
7 = Neuroticism (e.g., impatience)	7	.35	12	.60

Considered together, the category 2 and 3 differences paint a coherent picture of differences between high and low FDE managers. Consistent with previously-reported findings on the interpersonal style of the manager high on FDE (e.g., dominant, aggressive, forceful), it appears that high FDE managers are less likely than low FDE managers to employ a participative and collaborative management style. Instead, they are more likely to keep power centralized rather than allowing the group to decide. Of the 20 high FDE managers, 70% indicated that they supervised by setting clear and demanding objectives and then tracking performance.

*Question 12. How do your leisure and social activities relate to your career?*

This question was coded for six categories. The purpose of question 12 was to explore the relationship between leisure and social activities on the one hand, and work/career on the other. Of the six categories, the group proportions were significantly different on category 1.

Eight of the 20 low FDE managers (40%) indicated in their open-ended response that career and leisure were separate domains of their lives—that there was no connection between what they did for pleasure and what they did for work. Only one of the 20 high FDE managers reported this separation of work and leisure. It appears that, for the 20 high FDE managers, work and leisure/social activities were tied together in some way.

We see some evidence hinting at a connection from the proportion differences in category 5 [note, however, that this difference was not significantly ( $p < .01$ ) different]. Of the 20 high FDE managers, six reported that they enjoyed doing similar things in work as in leisure. Some example answers reflecting category five answers were: "Most leisure activities are teaching/coaching/leading situations. This is exactly what I enjoy the most in my career. Work mates are no different from teammates or fellow church members in this matter", "They all display work ethic and a competitiveness to be the best you can", "...I realize now that both on and off the job I look for opportunities to help others out of their current difficulty and get them going again", and "I do find myself coaching and



giving guidance, planning and organizing activities". A common theme running through these answers was influence and guidance.

*Question 13. What are your most outstanding personal qualities?* The categories for this question were designed to measure the "Big Five" dimensions of personality: (a) conscientiousness, (b) (low) neuroticism, (c) extraversion-warmth, (d) extraversion-assertiveness, and (e) openness. Cognitive/intellectual ability was added as a sixth category, while agreeableness was not operationalized.

The low and high FDE groups differed significantly on category 1, Conscientiousness. All low FDE group managers described themselves as conscientious (reliable, hard working, dependable, etc.), while 14 of the 20 high FDE managers (70%) described themselves in this way. Clearly, we cannot describe the high FDE management group as low in conscientiousness; 70% is a relatively high endorsement rate. Compared with the low FDE group, however, the high FDE group was less likely to describe themselves in ways that were indicative of conscientiousness. Other proportion differences between the two groups on question 13 were non-significant. The trend in the data for category 4 was consistent with previous descriptions of FDE, but the proportional differences were not significant.

*Question 14b. What are your shortcomings; your areas for development?* On the basis of the responses of the 70 managers to question 14b, seven categories were created and scored. High FDE managers differed from low FDE managers on category 2. An interesting trend appeared for category 7, but the proportion difference between the two groups on this category was not significant.

Six of the 20 low FDE managers responded that they perceived a shortcoming in that they needed greater experience (more seasoning), while none of the 20 high FDE managers indicated a shortcoming in this area. Some sample answers were: "I need more experience supervising", "...experience is narrow; I must develop a career plan", "...new things that I haven't been exposed to", "...I need experience in different areas of the

company". A theme running through these answers was one of naiveté and a narrowness of experience. Presumably, high FDE managers felt that their shortcomings were in other areas unrelated to their level of experience and seasoning.

Although the proportion differences on category 7 were not significant, it was interesting to note that, of the 12 managers who acknowledged a shortcoming related to some form of neuroticism (perfectionism, impatience, impulsivity, etc.), all 12 described themselves as impatient, while three of the six low FDE managers who fell in category 7 acknowledged that they were perfectionistic in some way (e.g., detail oriented). Had a different categorical scheme been used (i.e., a separate category for impatience, for example) this difference would have emerged as significant. It is highlighted in the present context because such a difference would be consistent with results reported earlier in Study 2 in which significant correlations were reported between FDE and PRF Impulsivity and JAS Speed and Impatience.

### *Summary*

In this section a contrasted-groups design was used to identify elements of the AC battery that distinguished between extreme groups on FDE. A coherent picture of the high FDE manager emerged from this analysis, based, as it was, on the various components of the AC battery as well as the biodata form. Once again, results were non-significant for the IVD criterion.

In the next section, a case study approach was used to illustrate the results reported thus far. Files for two managers—one high and one low on FDE—were examined, in order to develop a richer, more descriptive profile of the low and high FDE manager.

### *The Two Cases*

*The case of Mr. A: high FDE.* Mr. A graduated with a high school degree in the early 1960's. After a few years in the family business, he joined BC Tel and began his career by working in a junior clerk position. After a few years with the company, he

began a three-year part-time diploma in marketing. Mr. A was promoted steadily up and into the management ranks, and, after a few years, was working in sales. With over 30 years of experience with the company, Mr. A currently holds a senior position in marketing.

In his life outside of work, Mr. A reported active involvement with a fraternal order, attending weekly meetings and participating in various social and fundraising events. At the time of assessment (1991), he was also an active member of a political party. Mr. A reported that these activities filled an important social need in his life. Mr. A noted that social activities were a very enjoyable and important part of his life.

Mr. A's scores on the various measures of cognitive ability indicate average levels of general and specific ability. Compared with general population norms, his scores on the Wonderlic Personnel Test and the Culture Fair averaged to a T-score of 54. Similarly, on the various tests used to measure English language skills—reading comprehension and writing skills—Mr. A also achieved average scores. Mr. A turned in a low-average score on Innovative Thinking (an average of the two CAB subtests, ideational fluency and spontaneous flexibility). Mr. A's intellectual results reveal adequate levels of general and specific ability, but they are not exceptional in any way. Rather, when his scores on the various tests are considered relative to norms for the general population, Mr. A appears about average with respect to cognitive ability.

Mr. A's personality results from the various tests paint a more dramatic picture; he appears to be a highly dominant, independent, tough-minded, and aggressive man. His scores from the 16PF [Factor A (outgoing, warmhearted) = 75; Factor E (assertive, aggressive) = 63; Factor H (venturesome, socially uninhibited) = 67; Factor Q<sub>I</sub> (extraverted) = 67; Factor Q<sub>IV</sub> (independent) = 61], CPI [Do (dominant) = 70; Cs (ambitious, forceful) = 70; Sy (outgoing, competitive) = 63; Sp (enthusiastic, expressive) = 63; Sa (outspoken, aggressive) = 68], and PRF [Ag (aggressive, combative) = 63; Do =

(dominant, forceful) 63; Ex (exhibitionistic, dramatic) = 67] converge in portraying Mr. A as assertive, direct, socially uninhibited, outgoing, competitive, and resilient.

Scores from the both the role play and interview, for the most part, are consistent with the results from the CPI, 16PF, and PRF reported above. Mr. A was rated as highly influential. Of the three role plays used in 1991 (New Manager, Employee Performance, and Marketing), Mr. A achieved the highest scores on the Marketing role play, not surprisingly, given his background. The raters coding the role plays made comments such as: "...has ability to think on his feet", "...uses metaphors effectively", develops rapport with ease", "...is able to be direct and pleasant through his informal approach", and "...in control in all three role plays".

Mr. A's responses on the biodata form give further evidence of an assertive and poised interpersonal style. Mr. A noted something that none of the other 69 managers involved in the contrasted groups analysis did—he noted that he had *presence*. Mr. A seemed to be portraying himself as more than just socially effective. He was portraying himself as charismatic.

Other results from the AC battery relating to Mr. A's personality indicate a fairly high degree of unconventionality and low socialization in the personality profile. Mr. A's T-score of 33 on the CPI Socialization scale indicates a tendency toward rule breaking and impulsivity. As well, we see a T-score of 43 on Self Control, indicating a moderately high degree of impulsivity and excitability. At the same time, Mr. A appears to be a fairly calm and stable person. His low score on the CPI Anxiety scale ( $T = 34$ ) and high score on the 16PF Second-order scale  $Q_{II}$  ( $T = 60$ ) were both in a direction indicating low anxiety. Mr. A's results indicate a lack of inner tension and worry.

Mr. A's scores on the JAS were very high, falling between a T-score of 63 (Job Involvement) and 76 (Speed and Impatience). His overall JAS score was 69 (97th percentile). His overall profile reveals an intense Type A pattern. Mr. A appears to be an extremely hurried and impatient person. His high score on Hard Driving and Competitive

indicates high levels of competitiveness, especially when coupled with his extreme score on Factor S. With such a pattern of scores, it is likely that Mr. A's career has been one marked by high levels of striving and achievement. These JAS results are consistent with Mr. A's self appraisal, based on his answers in the biodata form. When asked to describe himself, Mr. A noted that he had drive, ambition and dedication; that he was honest, loyal and committed.

Mr. A's scores show an interesting pattern on the ROCI-II. He stated a preference for using integrating, dominating, and compromising strategies when dealing with conflict. Mr. A's scores on obliging and avoiding were very low. These latter two strategies might be used, for example, as a way of minimizing one's involvement in conflict; neither strategy results in the satisfaction of one's own needs. Both integrating and compromising strategies involve searching for areas of communality and mutual benefit, while when using a dominating strategy, one seeks to maximize one's own outcomes.

When asked to reflect on his shortcomings, Mr. A acknowledged two areas: empathy and patience. He lacked both. While acknowledging his leadership skills and interpersonal "presence" as outstanding personal qualities, Mr. A seemed to be acknowledging an inability to deal with others in a sensitive and empathic way. Moreover, his mention of impatience is likely relevant to his behavior when interacting with others. Dominant and forceful in his approach, Mr. A may not take the time to consider the impact his behavior has on others.

All things considered, Mr. A's profile is a fairly accurate reflection of the characteristics of the high FDE manager developed in the previous sections of Study 2. His determination, drive, competitiveness, and social forcefulness are evident from a variety of sources of information. Mr. A's results paint the picture of the prototypically high FDE manager.

*The case of Mr. W: low FDE.* Mr. W achieved a Bachelor's degree in Engineering in the late 1970's and then went on to get his MBA (with a specialization in Finance) in the mid 1980's. He also pursued further specialized training in computer and telecommunications technology. When describing his strengths on the biodata form, Mr. W acknowledged a strong technical educational background.

Mr. W reported no involvement in any social clubs or organizations. In terms of social activities, he reported that occasions with the family were very important but that other types of social get-togethers (friends) were relatively unimportant. His most enjoyable social activities with family involved "party games" and dinner and lunch conversation.

Mr. W's results on the intellectual tests indicate a fairly high level of overall general intelligence. Relative to norms for the general population, Mr. W's averaged Wonderlic and Culture Fair test score falls at roughly the 90th percentile of the distribution for the general population. His analytical-reasoning ability appears to be fairly strong. On the various tests used to measure English language skills—reading comprehension and writing skills—Mr. W's scores were average, as were his scores on the two measures of Innovative Thinking.

Mr. W's results from the various personality tests revealed a moderately retiring and socially-reserved interpersonal style. His low scores on Dominance from the CPI ( $T = 39$ ), Exhibition from the PRF ( $T = 39$ ) and Aggression from the PRF ( $T = 40$ ) were the most obvious indicators. Mr. W's scores on a number of other personality scales related to extraversion and social dominance were roughly average [e.g., 16PF Factor E ( $T = 55$ ); 16PF Factor H ( $T = 47$ ); 16PF  $Q_I$  ( $T = 52$ )]. In contrast to the results discussed in connection with Mr. A, Mr. W cannot be described as an assertive, socially uninhibited, outgoing, and competitive man.

Mr. W's overall performance on the role play indicated a sensitive, supportive, and empathic interpersonal style. The raters coding the role play videotapes made the

following comments: "...cooperative and coaching style; quite sensitive in his approach—demonstrated strong commitment to a participative management team". Mr. W's lowest score was on the Industrial Relations role play ( $T = 45$ ), in which the objective was to negotiate a settlement to a collective agreement. It is likely that Mr. W's more participative and gentle style was a handicap in this scenario.

Other results from the AC battery indicated moderately high levels of conscientiousness, but low levels of achievement motivation. Mr. W's scores on both 16PF Factor G ( $T = 69$ ) and  $Q_3$  ( $T = 64$ ) revealed a tendency toward careful and methodical planning and organizing of activities. Mr. W appears to be a precise, controlled, and deliberate man. On the CPI Achievement via Conformance scale, his score was low ( $T = 33$ ). This scale measures one's drive to do well and preference for working in environments where expectations are clearly defined. Although seemingly conscientious and deliberate in his approach, Mr. W may not possess high levels of drive and ambition. Like Mr. A, Mr. W appears to be a calm and stable person. His score on the CPI Anxiety scale was about average ( $T = 45$ ), while his score on the 16PF Second-order scale  $Q_{II}$  was just slightly above average ( $T = 60$ ). Mr. W's results indicate a lack of inner tension and worry.

Turning to his results on the JAS, Mr. W's profile reveals a general absence of the Type A behavioral pattern. His T-scores on the scales ranged from 43 to 49; his overall T-score was 47 (38th percentile). Mr. W does not appear to be a particularly driven or impatient man. Rather, he shows average levels of job involvement and dedication. Mr. W is likely not terribly competitive in his job. Unlike Mr. A, he probably does not hurry himself in his work and, instead, shows patience when working toward objectives.

Mr. W's scores on the ROCI-II indicate that his preferred style of handling conflict is to use a compromising strategy; he tends to shy away from using dominating strategies. Compromising strategies involve one searching for middle ground; such strategies show a

concern for both self and others and usually involve giving up something in order to reach a mutually acceptable outcome.

When asked to reflect on his shortcomings, Mr. W acknowledged two areas: leadership and innovation. Mr. W appears to see himself as a hard-working dedicated technical contributor. Over his twelve years with the company, he has had no supervisory responsibilities. Mr. W has likely had few opportunities to practice and develop his competencies in the area of leadership.

With respect to his negative self appraisal on innovation, Mr. W acknowledged that assignments requiring creativity bring out the worst in him. Mr. W appears to find it difficult to think in non-linear ways. This was born out by his scores on the two measures of innovative thinking included as part of the cognitive assessment (Ideational Fluency T-score = 39; Flexibility T-score = 46).

In summary, Mr. W's profile is generally consistent with the characteristics of the low FDE manager developed in the previous sections of Study 2. His retiring and generally unassertive interpersonal style is evident from the results from a variety of the assessment procedures. As well, Mr. W's methodical approach and low levels of drive, urgency, and job involvement are consistent with previous descriptions of the low FDE manager. Mr. W's case study adds further descriptive detail to the profile of the low FDE manager.

*Summary.* Two case studies were examined in order to further illustrate differences between managers low and high on FDE. The cases of Mr. W and Mr. A were used to add descriptive richness to the correlational and contrasted-groups results reported earlier. The individual results for Mr. W and Mr. A reflected, for the most part, the results found in connection with the empirical examination of the individual-differences characteristics associated with FDE. That is, these two descriptive case studies support and add to the findings of the correlational analyses.



## *Discussion*

### *Overview*

The two sides of championship identified in Study 1 were carried forward to Study 2 and used as criterion rating scales. In the first part of Study 2, scores for 174 managers on an extensive assessment center battery were used to predict supervisory ratings on: (a) the two second-order factor scales, (b) the 10 first-order factor scales, and (c) the 5-item supervisory-report criterion measure of championship (5CC). A contrasted-groups analysis was used to expand on the correlational findings. Finally, a case study approach was used to develop a descriptively-based profile of the champion.

Across these three methods, a clear and consistent picture emerged of the manager high on FDE. A number of scales from the standardized personality tests and dimensions from the role play and interview were found to be related to FDE. The individual-differences profile that emerged was consistent with the meaning of FDE developed in Study 1. The individual-differences characteristics identified supported many of the hypotheses outlined in Table 14 and, thus, were consistent with previous researchers' descriptively-based accounts of the champion summarized in Table 3. Finally, results across the three methods of analysis led to a common interpretive profile of the high FDE manager.

Results were less illuminating for the second of the two higher-order factor scales, IVD. None of the scales from the various tests and simulation exercises correlated significantly with IVD ( $p < .01$ ). Only one of the 90 categories considered in the biodata form distinguished between high and low IVD managers. Study 2 does little to add to our trait-based understanding of the heroic side of championship developed in Study 1. This side of championship was not predictable using what Wernimont & Campbell (1968) termed *signs*, as distinguished from *samples*, of behavior.

The picture of the champion that emerged from Study 2 was slanted toward the dark side, unavoidably, given the failure of the AC battery scales to correlate with IVD.

This may represent a shortcoming of Study 2 if significant correlation *should* have emerged; that is, if some limitation in the IVD criterion scales precluded their correlation with the AC battery scales. If, on the other hand, IVD represents a class of behaviors—an aspect of championship—that cannot be predicted with standard tools of management assessment, then the lack of correlation is an illuminating, albeit disappointing and unexpected, outcome.

### *Correlational Findings*

The most salient feature of Tables 17 through 24 containing the bivariate correlations is the lack of significant AC battery scale correlation with IVD (and 5CC). The discussion of the correlational results will, therefore, start with an explanation for this outcome. Two seem possible. First, it may be that the heroic side of championship cannot be predicted using various forms of psychological assessment. It may be that drive, impatience, dominance, aggression, competitiveness, and impulsivity are the *traits* that set apart the champion from the non-champion and that FDE is the side of championship predictable from trait assessment. IVD, on the other hand, may be that side of championship that is largely behavioral and learned and can, therefore, be developed and demonstrated regardless of one's individual-differences profile.

Although possible, this explanation seems unlikely. The AC battery was extensive. A large number of both standardized and simulation exercises were employed. Recall that IVD correlated significantly with OMP, the latter being a measure of overall management performance. Much evidence exists from the meta analytic research of Schmidt, Hunter, and colleagues that psychological tests are powerful predictors of general management performance. Some elements of the AC battery should, therefore, have correlated with IVD, since the latter overlaps significantly with general management performance. As well, although not reported in Studies 1 or 2, OMP was also not predictable with the various components of the AC battery. Thus, it seems likely that

some characteristic of the IVD criterion and/or the present sample may be the causative factor.

Firstly, it is possible that the IVD criterion scales suffer from psychometric shortcomings that limit their ability to correlate with other measures. Although both FDE and IVD possessed high levels of internal consistency reliability (FDE  $\alpha = .92$ ; IVD  $\alpha = .91$ ), the distributional characteristics of these two second-order factor scales differed. FDE was more variable than IVD (FDE  $s = 19.12$ ; IVD  $s = 16.45$ ). Thus, restriction in range could be part of the reason for the lowered correlations, since variables possessing greater variability will, other things being equal, correlate more highly with other variables, in this case, the AC battery scales. As well, the IVD distribution was negatively skewed ( $sk = -.45$ ), while the distribution for FDE was neither positively nor negatively skewed. The mean of the IVD distribution was much higher than the mean of the FDE distribution, when the means are considered as percentages of the total score on each scale.

The overall mean for both men and women on FDE was 129.87, while the total possible score was 245 (53% of the total possible score). Ninety-five percent of the scores on FDE fell within the range of 90.65 (37% of total) to 168.11 (69% of total). Compare this with the IVD scale, where the raw score mean was 158.19 (74% of total) and 95% of the scores fell within the range of 124.70 (58%) to 191.35 (89%). Clearly, when rating their subordinates, managers were using the extreme scale points more often in connection with the IVD, than with the FDE, factor scales. Thus, we have a ceiling effect operating for IVD. The IVD items on which managers were rated may not have been of a sufficiently "challenging" (or high level) nature, in the sense that they represented examples of behaviors that the vast majority of managers were capable of exhibiting.

The 174 participants in Study 2 were largely middle- to upper-level managers who had been nominated for participation in an assessment center for the purposes of career

development. Thus, Study 2 consists of a sample of primarily successful, high-performing managers who, because they have shown potential for advancement in the company, have been given the opportunity to participate. Since there is evidence that IVD overlaps significantly with overall management effectiveness, it is not surprising to discover that the majority of managers in Study 2 were rated by their supervisors as high on IVD and its constituent elements. It appears that the IVD factor scales measure dimensions of championship on which effective managers show high levels of competence.

Focusing, then, on FDE—the dark side of championship and the side that was predictable in Study 2—a consistent and coherent picture of the champion emerged. This picture is consistent with that developed in Phase V of Study 1 when FDE and its first-order factor scales were discussed. Firstly, the manager high on FDE was found to be dominant, assertive, exhibitionistic, even aggressive. Support was found for hypothesis 1 under Interpersonal Effectiveness in Table 14; many of the scales hypothesized to correlate with championship correlated with FDE. Further support for hypothesis 1 came from the discriminant analysis and the case studies. Given the failure of the ROCI-II scales to correlate with either FDE or IVD, hypothesis 2 was not supported, although the case study results were suggestive. Finally, some support for hypothesis 3 was found in connection with the role play Interpersonal dimension.

The manager high on FDE was also found to be independent, competitive, and driven. Support was found for hypotheses 5 and 6 under Determined Achievement Orientation in Table 14, but not hypothesis 4. The Entrepreneurship dimension from the interview emerged as a significant correlate of FDE, as did the JAS overall score and the factor scales. Thus, the hard driving, competitive side of Determined Achievement Orientation emerged. Interestingly, elements of independence and achievement measured by the scales listed in connection with hypothesis 4 were not significantly correlated with FDE. In fact, PRF Achievement correlated negatively with Collaboration and Support.

The scales listed in hypothesis 4 might have been expected to correlate with Driven Commitment and Immediate Responsiveness, both dimensions of IVD related to achievement orientation. These relationships did not emerge, however.

Thirdly, the manager high on FDE was found to be impulsive, impatient, and likely to break rules and take risks—unsocialized and unconventional. Hypotheses 7, 8, and 9 were grouped under the heading of Openness/Willingness to Change. None of the scales listed in hypothesis 7 correlated with championship. Thus, with respect to FDE, tolerance, flexibility, openness to experimentation and change do not appear related to championship. Instead, low socialization and, to a lesser extent, low self control were related to championship, at least FDE. Supporting the findings from Study 1, elements of rule breaking, impulsivity, and unconventionality were found to be related to FDE. Support for hypothesis 9 was also found, in that the Initiative/Innovation dimension correlated significantly with FDE for both the role play and the interview. This dimension measures one's ability to come up with imaginative and novel ideas in a spontaneous and effective way. It calls for both creativity and social poise, and, sometimes, risk taking in that "creative" solutions are offered without all the facts.

Having gleaned a profile of the high FDE manager from the results obtained in Study 2, it is still true that, a perusal of the FDE and IVD columns in Tables 17 through 24 reveals a substantial number of non-significant correlations. Moreover, those correlations that were significant at  $p < .005$  fell below .30, with one exception (the interview measure of Entrepreneurship). A rationale for the lack of criterion correlation for IVD was provided above. Assuming that FDE was an adequate criterion measure of one side of championship, the following question bears consideration: how does the level of correlation reported in connection with FDE in Study 2 compare with that typically reported in other individual-differences research on championship? More specifically, how do the criterion correlations for scales from the four main areas or domains of assessment—cognitive ability, personality and temperament, management simulation,

and the structured interview—compare with those typically reported in the literature? Are the present results uncharacteristically low?

In order to address directly this question, previous validity research on championship would be needed. Since this information was not available, the level of criterion correlation obtained in Study 2 will be compared with that reported in meta-analyses of various predictor types (e.g., cognitive ability, personality, interview, etc.) against ratings of general management performance. This comparison will permit the results obtained in connection with each domain of assessment (i.e., personality, cognitive ability) to be viewed in a larger context in order to assess the extent to which criterion correlations were: (a) uncharacteristically low, (b) uncharacteristically high, or (c) roughly typical for that domain.

*Cognitive ability.* Not one of the cognitive ability tests correlated significantly with FDE. It was hypothesized that intelligence and thinking fluency and diversity would correlate with dimensions of championship, but these relationships did not emerge. It is possible that the nature of the criterion dimensions may have caused this lack of correlation. Had a cognitively-oriented criterion dimension emerged from Study 1 (like "innovation" or "conceptual analysis"), general intelligence and/or innovative thinking might have emerged as correlates. But given the present dimensional structure of the criterion, overall cognitive ability and innovative thinking do not appear related to any of the scales associated with either of the two sides of championship.

The present results can be considered in the context of Hunter and Hunter's (1984) findings related to general cognitive ability. In a meta-analysis of 515 validity studies of management performance, these authors reported a corrected (for both criterion unreliability and range restriction) validity coefficient of .53 between cognitive ability and rated performance. Uncorrected validity coefficients ranged from roughly .25 to .30. The Hunter and Hunter results suggest that cognitive ability is a salient correlate of overall management performance.

Interestingly, in earlier research, Korman (1968) reported that intelligence was a fair predictor of first-level supervisory performance, but not of higher-level management performance. He explained this difference as due to pre-selection. Although, of course, Korman (1968) could not critique the Hunter and Hunter review, it is worth noting that the majority of samples included in the Hunter and Hunter meta analysis consisted of lower-level managers. In contrast, the present sample consisted of primarily middle-to senior-level managers. Korman's earlier observations may apply to the present sample.

Returning to Table 17, the reader will note that the mean scores for the present sample on both the Wonderlic Personnel Test and the Culture Fair were above 60 (recall that these means were based on T-scores; thus, they represent fairly high group means). The Study 2 management group appears to be a fairly select group of managers, who possess a high level of general ability and aptitude for learning. Moreover, the low standard deviations reported in connection with the Wonderlic and the Culture Fair indicate that very few managers in this sample would have low scores on either of these two tests. In conclusion, the low and non-significant correlations noted in Table 17 were likely due to pre-selection, with a resulting restriction in range.

*Personality.* A number of the personality scales correlated with FDE. Of the 28 correlations that were predicted (for the CPI, 16PF, PRF, and JAS scales), the mean correlation was .13. Individual scale-FDE correlations ranged from 0 to .28. Some of the predicted relationships did not emerge. Although these correlations were low, results were consistent across the various inventories for a given trait. That is, for scales designed to measure ascendancy or dominance (e.g., CPI-Dominance, 16PF-Assertiveness), the mean correlation was .19. How do these results compare with results reported in the meta-analytic research?

In two recent meta-analyses of personality traits and job performance, Barrick and Mount (1991) and Tett, Jackson, and Rothstein (1991) reported validities for each of the "Big Five" dimensions. Focusing just on results for managers, Barrick and Mount

reported an uncorrected<sup>33</sup> mean correlation of .13 (.22) for Conscientiousness and .11 (.18) for Extraversion. Mean validities for the other three dimensions of personality were close to zero. Tett et al. reported mean uncorrected<sup>34</sup> validity coefficients of .12 (.16) for Conscientiousness and .10 (.13) for Extraversion. Their figures were based on a pooled sample of management and non-management personnel. The highest uncorrected validity coefficient reported by Tett et al. was for Agreeableness .22 (.28).

The magnitude of correlation reported in the meta-analytic research is not unlike that found in the present study, except that Conscientious was *positively* correlated with ratings of management performance, while it was negatively correlated with ratings on FDE [e.g., CPI-Socialization ( $r = -.18$ ), CPI-Self Control ( $r = -.19$ ), PRF-Impulsivity ( $r = .21$ )]. Barrick and Mount (1991) concluded that, for management samples, Conscientiousness and Extraversion were valid predictors of performance, but that the degree of association was not strong. They explained this as due to the fact that personality scales were not, after all, originally developed to predict performance, but rather to be valid measures of traits.

In summary, the magnitude of correlation reported between the personality scales and FDE was similar to that found in the meta-analytic research, despite the fact that, in the latter case, the criterion of interest was general management performance. If the sign of the correlations for Conscientious are reversed in the present study (to reflect the fact that FDE is largely a "bad manager" dimension given its negative, significant correlation with OMP reported in Study 1), the prominence of Extraversion and Conscientious is evident in Study 2, just as it was in the meta-analytic review of Barrick and Mount (1991).

*Management simulations.* While the typical validity for the in-basket reported in the research literature is roughly .25 (e.g., Schippman, Prien, and Katz, 1990), the two in-

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<sup>33</sup> Values in brackets have been corrected for range restriction and criterion unreliability.

<sup>34</sup> Tett et al. corrected for criterion unreliability only.



baskets featured in Study 2 failed to correlate with either FDE or IVD. Administrative skill does not appear to be related to championship, although it has been found to be a valid predictor of management performance (e.g., Hakstian and Harlos, 1993).

In contrast, results for the role play were much more favorable. The relative superiority of assessment centers (the managerial equivalent of a work sample) and situational exercises is generally acknowledged by the majority of reviewers, with the exception of Hunter and Hunter (1984) who stressed the superiority of cognitive ability tests. Reviews of assessment centers indicate that the typical validity is about .40 (Hunter and Hunter, 1984; Schmitt, Gooding, Noe, & Kirsch, 1984).

The criterion correlations reported in Table 23 for the role play scales ranged from .08 to .26 with a mean correlation of .18. The results from the role play scales demonstrated higher criterion correlation than those achieved with the personality scales. Although the individual role play scales did not correlate more highly with the FDE criterion than did the personality scales, they did, as a group, show a more consistent relationship. This was, in part, a function of their high inter-correlation. It may also have reflected the fact that the role play scale scores were not based on self-report data, like the personality data. Since the FDE criterion was obtained via supervisory ratings, the criterion correlations in Table 23 reflect the degree of association between other- (rater-) report and supervisory-report ratings (recall that the role plays were scored by two raters who observed a videotape of the manager interacting in the role plays).

Both the criterion and the role play scales were based on behavior, the latter, admittedly, based on considerably less behavior than that available to the supervisor in connection with the criterion data. Nevertheless, this fact may, in part, account for the generally higher validities found in connection with the role play in the present study, and the generally favorable results summarized in the meta-analytic research on assessment centers. Still, the level of validity found in connection with the role play in Study 2 was lower than that typically reported. Assessment centers, however, typically contain a

number of situational exercises, each of which might be scored by a number of raters. Role plays are typically included in assessment centers, but may be only one of several exercises employed. Thus, to some extent, the present comparison may not be a fair one, given that overall assessment center ratings are typically based on considerably more data and, therefore, may be more stable and valid than ratings based solely on performance in a role play.

*Structured interview.* Results for the interview were, like those reported for the role play, relatively positive. Four of the 11 Interview scales correlated significantly with FDE, and these correlations ranged from .21 to .33. These figures certainly appear favorable when compared with the Hunter and Hunter (1984) meta-analysis, in which they reported an average validity of .10 for the interview. More recent reviews have been more positive, however. A meta-analysis by Wiesner & Cronshaw (1988) and a recent series of studies by Motowidlo, Carter, Dunnette, Tippins, Werner, Burnett, and Vaughan (1992) suggest that the validity of the structured interview is roughly .20 to .25 for predicting overall management performance (after corrections for criterion unreliability and range restriction). These latter figures are likely more reasonable comparative standards for the present study, since a structured interview was used in Study 2 in that: (a) dimensional rating scales were used and, (b) an interview panel was employed.

Like the correlational results discussed in connection with the role play, correlations between the interview scales and the FDE criterion were based on other-report data in both the predictor and the criterion. The Interview scales may possess superior criterion validity to that achieved with the personality and cognitive ability tests because of this fact. Nevertheless, the interview performed well in the present study, particularly the Entrepreneurship scale—a dimension conceptually related to the FDE criterion. The level of correlation achieved ( $r = .33$ ) was similar to that often reported in connection with situational interviews. Although not based on a job (or, in this case,

criterion) analysis, the interview questions and rating scales were designed to measure a construct intimately related to the championship criterion of FDE.

### *Regression Analyses*

The purpose in this section was to boost criterion correlation through the development of optimally-predictive linear combinations of AC battery scales. This goal was only partially achieved. It was possible to bolster significantly the level of prediction for FDE through the use of a multiple regression approach. This approach did not, however, pay dividends with respect to IVD.

Although the disappointing results for IVD may be a function of the psychometric limitations of the criterion, the fact remains that the heroic side of championship was not predictable at practically-useful levels of validity in the present study. Given the low correlations between IVD and the AC battery scales, there was little hope of improving overall IVD prediction through the use of multiple regression. Nevertheless, inclusion criteria were dropped from  $p < .005$  to  $p < .05$  and an attempt was made to identify predictor *sets* that correlated significantly with IVD. These attempts were not successful.

On the other hand, prediction of FDE was bolstered by use of multiple regression techniques. Results for the PRF and CPI were the most promising of the inventory-specific linear combinations. If the results reported in connection with these two scales were to replicate in future research, one could use either of these two inventories to predict FDE, by linearly combining scores at the scale level and using the regression weights reported in Tables 25 and 27 to differentially weight the scales. Such an approach would permit a broad-based assessment of personality, while also permitting the measurement of a special-purpose, linear composite, designed to predict Forceful Drive and Expediency. Such application should, however, likely be postponed until a parallel set of correlational analyses have been conducted in a new sample—a sample not used to develop the regression weights. The present weights may be unstable.

Multiple regression results for both the role play and the interview were disappointing, given that such a high percentage of the scales correlated significantly with FDE. These disappointing results were due, largely, to multicollinearity: a high degree of inter-correlation among the independent variables in the regression equation. The interview and role play scales show poor discriminant validity.

The dimension scores arising from these two assessment procedures were based on ratings (pooled across two raters). It is possible that the dimensions inter-correlated to such a high degree due to rating bias, most notably halo. Although raters were carefully trained and the rating task was structured in that each dimension was anchored by various behavioral descriptors, it is possible that the ratings reflect an overall impression, either favorable or unfavorable of the ratee. An alternate and equally plausible explanation for the high degree of inter-correlation is that the various dimensions measure one higher-order construct (something analogous to social competence or skill seems the most likely candidate). If a ratee is socially-poised, able to think on his/her feet, persuasive, tactful, and otherwise effective, they will likely receive high scores on the various dimensions. Since these are the same interpersonal traits found repeatedly to correlate with ratings of championship in Study 2, it is not surprising to see the relatively large number of interview and role play dimensions that correlated with FDE.

Of final note, a shrunken multiple correlation coefficient of .42 was achieved for the cross-inventory linear combination made up of four scales from the CPI, PRF, and 16PF. Although this level of criterion-related validity might not hold up in a new sample, a modest decrement in criterion-related validity would still leave a linear combination with a practically useful level of validity. By using four scales from the 16PF, CPI, and PRF, a fairly high degree of predictive accuracy was attained for FDE.

Even if this equation held up upon cross validation, would organizations *want* to screen in managers with high predicted scores on FDE? As discussed earlier in Study 1, moderate levels of rule breaking, forcefulness, impatience, and competitiveness may be

adaptive in the context of promoting innovation, particularly when there might be considerable resistance to change. But how advisable would it be to select in managers with an extreme FDE profile, perhaps a profile approaching a clinical definition of psychopathy? Probably not advisable, given the upheaval they might cause during times when competitiveness and aggressiveness were neither adaptive nor required.

Thus, if the present results were used as a basis upon which to make selection decisions, it would be prudent to examine applicants' mean scores on the various predictor scales used to predict FDE. Extremely elevated scores on CPI Socialization and PRF Aggression, for example, might indicate areas of concern that would lead one to reject such applicants. Indeed, if one were selecting for both championship and integrity, one would be caught in a bind between choosing an applicant because of their high score on Socialization (indicating integrity) and yet wishing to reject that same applicant for their low predicted score on FDE.

#### *Contrasted Groups Analysis*

The contrasted groups analyses allowed a closer examination of the profile of the high FDE manager. These analyses contributed little to a better understanding of IVD, however. Beginning with results from the discriminant analysis, an equation was obtained for low vs. high FDE group that led to a remarkably high degree of classification accuracy (a hit rate of 95%). As acknowledged in a previous section, however, these results should not be understood as reflecting the degree of accurate classification possible using the 10 scales listed in Table 32 with a new sample of managers. The caveat in this section is the same one issued above in the discussion of the multiple regression results. Cross validation is needed.

An interesting feature of Table 32 is that four of the 10 scales included in the DF equation originated from the interview. Given the prominence of this assessment procedure in the DF, a separate, supplementary analysis was run which included the five Interview scales that correlated significantly ( $p < .01$ ) with FDE. The hit rate fell from

that reported in Table 33 (95%), but was still very respectable (80%). Thus, 32 out of the 40 cases were correctly classified. The implication from this result is that the use of a structured interview procedure might, on its own, pay dividends in accurately classifying managers as either low or high on FDE.

In summary, the discriminant function analyses did little to change the conceptualization of championship. The results echoed and supported those reported in other sections of Study 2. The high FDE manager continues to be described as driven, outgoing, assertive, independent, and opportunistic, and as willing to take risks. The structure coefficients reported in Table 32 stress the salience of: (a) an entrepreneurial approach (a willingness to take risks and innovate), (b) an interpersonal approach characterized by assertiveness and extraversion, (c) drive, impatience, and persistence, and (d) a high degree of composure and level-headedness. These were the individual-differences characteristics that were found to maximally differentiate between the two extreme groups.

Results from the biodata form lend further support to the results reported in the previous sections of Study 2. High FDE managers were more likely than low FDE managers to use a directive, and less likely to use a collaborative and participative, supervisory style. These results were consistent with and related back to the correlational results reported in connection with dominance. Managers who use a collaborative supervisory style (low FDE) are probably less likely to interact with others in a dominant, forceful, and aggressive manner. Thus, although the biodata form items measured a different type of information from the personality tests, for example (supervisory style vs. traits), a familiar and common theme emerged.

Also of note, the high FDE managers tended to see their business and personal lives as connected to a greater extent than did the low FDE managers. This result, considered in combination with the JAS-FDE correlations, indicated that the high FDE group were likely job involved and absorbed in their work. Other results suggested that

high FDE managers saw themselves as conscientious, but not to such a degree as did the low FDE managers. This result was consistent with the negative correlation found between the CPI Socialization scale and FDE. The high FDE management group was somewhat more rebellious and willing to go around authority.

None of the high FDE managers reported needing more work/supervisory experience, while six of the 20 low FDE managers did so. This latter result leads to a view of the high FDE manager as a person who sees him/herself as relatively well-seasoned and experienced. Although the proportional difference was not significant, a larger proportion (75% vs. 45%) of the high FDE managers reported work-related achievements when asked to reflect on their major accomplishments in life.

### *The Case Studies*

An illustrative case study approach concluded the reporting of results for Study 2. The objective was to use the case study as a vehicle to *illustrate* or "bring to life" findings from the other analyses. Clearly, the cases of Mr. A and Mr. W were illustrations of very different people with different needs and interests. Moreover, the differences found were generally illustrative of relationships discovered from the other analyses. The various methods of analysis employed in Study 2 led to convergence, or, in the language of qualitative analysis, triangulation. A clear profile of the manager low and high on FDE has emerged from the various analysis strategies.

### *Overall Summary*

The individual-differences characteristics that have been reported have been drawn primarily from the dark side of championship. Support was, however, found for the majority of hypotheses outlined in Table 14, based on the individual-differences characteristics of the champion gleaned from the literature review summarized in Table 3. Thus, although only one side of championship was predictable in Study 2, its correlates were similar to those reported by previous researchers.

The trait profile of the high IVD manager remains a mystery at the conclusion of Study 2. Such a gap is clearly undesirable, given the prominence that has been given the heroic side of championship. Although the psychometric shortcomings of the IVD criterion scales may, in part, account for the lack of significant findings, the magnitude of the effect suggests that criterion measurement may not be the sole culprit. It may be that the general approach to measurement taken in the assessment center is at fault. It is possible that a measurement approach designed around *samples* of behavior rather than *signs* or indicators might be a more fruitful approach, at least in connection with IVD.

Such an approach was taken in Study 3. The behavioral consistency model of Wernimont and Campbell (1968) was used as a guiding framework in the development of a low-fidelity championship simulation. This instrument was designed to measure the criterion dimensions arising from the analyses in Study 1. Given the degree of built-in point-to-point correspondence between the instrument and the criterion, the hope was that validity would be boosted over that which was achieved with the AC battery scales that were, after all, designed to measure constructs not directly related to championship.



### STUDY 3: DEVELOPMENT AND VALIDATION OF A LOW-FIDELITY SIMULATION

As a supplement to the procedures described in Study 2, a low-fidelity championship simulation was developed, based on the behavioral consistency model (Wernimont & Campbell, 1968). The focus remained on criterion-related validity in Study 3 (as in Study 2), and the structural model of championship described in Study 1 was used as a starting point for instrument development. Before describing the development of the simulation, work samples and simulations in general will be discussed in order to provide a context and theoretical rationale for Study 3.

#### *An Overview of The Behavioral Consistency Model*

The aim of most selection procedures is to be valid, practical, and legally defensible. The accurate prediction of future job performance—criterion-related validity—is a necessary but not sufficient cause for celebration. Other concerns relate to the practicality of the selection procedure: how long it will take to administer and score. As well, increasingly, attention has focused on issues related to the legal defensibility of selection devices.

One approach to instrument development designed to meet all three goals is the behavioral consistency model (Wernimont & Campbell, 1968). Wernimont and Campbell's model is grounded in the logic that the closer the predictor is to the criterion, the greater its potential validity. They noted that the standard validity model was too closely tied to the use of tests as *signs* or indicators of predispositions. They argued that it would be more fruitful to focus on *samples* of behavior instead. Thus, they recommended the development of predictor measures that were as close to the criterion as possible. The authors cited advantages such as: (a) increased criterion-related validity, (b) reduction of the problem of faking, and (c) reduction in charges of discrimination and invasion of privacy in testing.

Asher and Sciarrino (1974) later remarked on a key implication of the behavioral consistency model: predictors possessing a high degree of point-to-point correspondence with the criterion should be better predictors than those more dissimilar to the criterion. Following this logic, tests designed as mini-replicas of specific aspects of the job should have close point-to-point correspondence with the criterion and, hence, possess good criterion-related validity. Most management simulations have been developed around the behavioral consistency model and have incorporated the point-to-point correspondence notion (e.g., in-basket exercises).

#### *Work Samples and Simulations*<sup>35</sup>

Both work samples and simulations are examples of *performance tests*, designed to evaluate what a person can *do* rather than what one *knows* (Cascio & Phillips, 1979). A work sample is an example of one's job, work, or profession. A typing test given to a secretarial applicant is an example of a work sample; a typing test is a mini-replica of the job. A simulation is a work sample, but a *simulated* one (Howard, 1983). A popular example of a simulation used in management assessment is the in-basket exercise. The in-basket exercise is a simulation because the stimulus materials used do not *exactly* mirror the on-the-job situation.

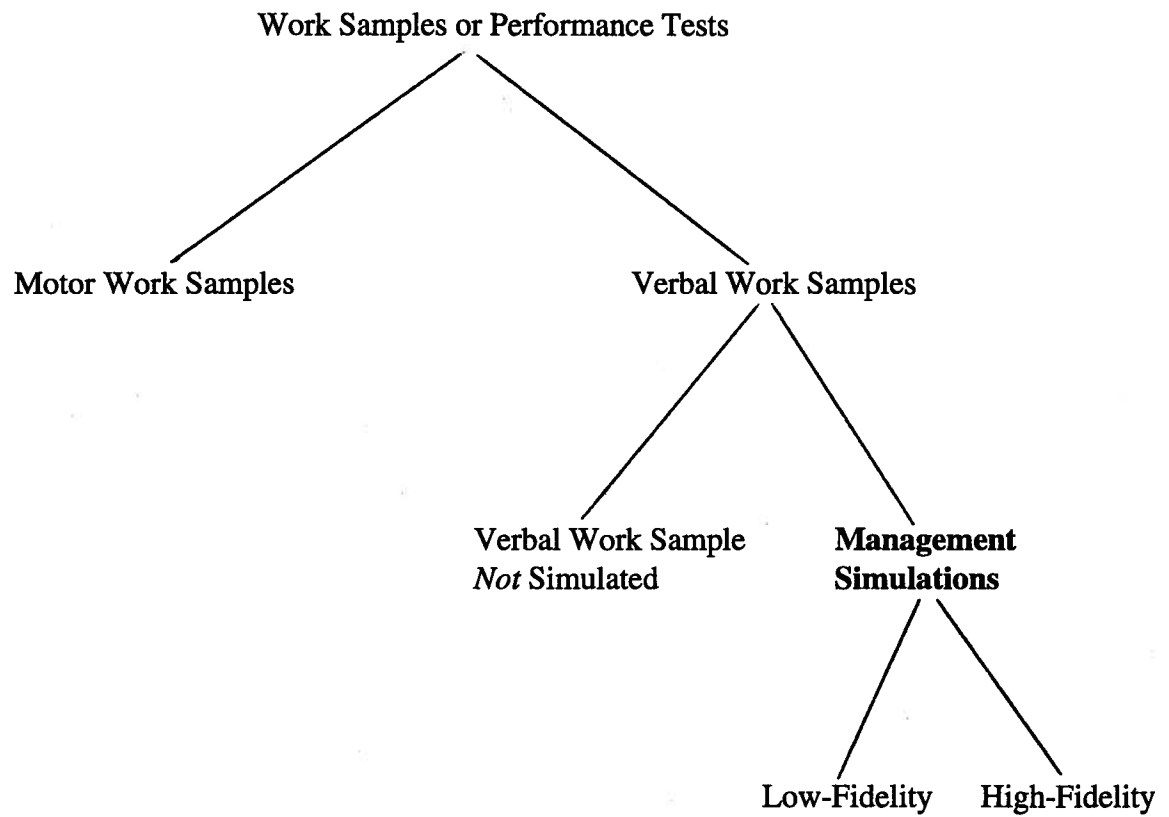
While all simulations are work samples, not all work samples are necessarily simulations. Those work samples that are actual mini-replicas of the job are not referred to as simulations, since nothing is simulated. Instead, aspects of the job are recreated and administered to the test taker.

Work sample tests involve the test taker in performing a task or set of tasks which have direct and central relevance to the job in question; their relevance is typically determined from a job analysis. Work samples have been categorized as either motor or verbal (Asher & Sciarrino, 1974). Motor work samples involve the physical manipulation of things (e.g., operating a typewriter), while verbal work samples involve

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<sup>35</sup> The reader will find it helpful to refer to Figure 1 while reading this section.

*Figure 1.* Management Simulations in the Larger Context of Work Samples



a problem situation that is primarily language-oriented or people-oriented. When used in the context of management selection, virtually all work samples have been of the verbal type.

Work samples vary along a key dimension: the extent to which test takers either engage in work behaviors or are asked to act *as if* they were actually on the job. In general, motor work samples tend to engage the examinee in behavior that is essentially identical to that in the job under examination. A typing test is an example of a motor work sample. An example of a verbal work sample might be a technical magazine editor's test designed to evaluate writing skills, choice of picture headlines, layout, etc. (Howard, 1983). Some work samples, however, can also be characterized as simulations. As noted earlier, a simulation is a work sample, but is a *simulated* one. The simulation is an imitative representation of the work involved in the job.

Virtually all of the commonly-applied work-sample exercises for management selection are verbal work-sample simulations (Thornton & Byham, 1982). A variety of simulations<sup>36</sup> have been developed over the years. Some examples are: (a) the situational interview (Latham, Saari, Pursell, & Campion, 1980), (b) the in-basket exercise (Lopez, 1965), (c) the leaderless group discussion (Bass, 1954; Wollowick & McNamara, 1969), and (d) the small business game (Hinrichs, 1969). Initial applications of simulations in field settings showed considerable promise. For example, Bray and Campbell (1968) and Bray and Grant (1966) documented impressive evidence for the predictive validity of management simulation exercises.

Results of meta-analyses (e.g., Hunter & Hunter, 1984; Schmitt et al., 1984) have also showed favorable results. Hunter and Hunter (1984) reported that work samples possessed the highest mean validity of all predictors ( $r = .54$ ) across a variety of jobs against a criterion of supervisory ratings of job performance. The mean validity of work

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<sup>36</sup> Henceforth, the term *simulation* will be used to refer to managerial work sample exercises, such as in-basket exercises, role-plays, and business games.

samples exceeded that associated with cognitive ability tests by the very-slight margin of .01.

Simulations vary in the extent to which they present the test taker with realistic materials and equipment. Recently, Motowidlo, Dunnette, and Carter (1990) distinguished between high- and low-fidelity simulations.<sup>37</sup> High fidelity simulations use realistic materials and equipment to represent a task situation; they provide test takers with an opportunity to respond as if they were actually in the job situation. Examples of high-fidelity simulations include the in-basket exercise and the role play, both often used in assessment centers. In a low-fidelity simulation, test takers might be presented with a written description of a work situation and be asked to describe *how they would respond*, instead of having them actually carry out some action or behavior in response to the test stimuli. An example of a low-fidelity simulation is the situational interview (Latham et al., 1980).

The strength of the simulation—whether high or low fidelity—appears to lie in the fact that it incorporates elements of the criterion one is attempting to predict. Based on a job analysis, simulations possess a high degree of content (and face) validity. The veridicality of the point-to-point correspondence argument forwarded by Asher and Sciarrino (1974) has been supported by the favorable results of two meta-analyses reported earlier (Hunter & Hunter, 1984; Schmitt et al., 1984). Management simulations appear to possess criterion-related validity that is superior to tests designed to measure signs of predispositions.

Although it may seem preferable to design and use high- vs. low-fidelity simulations, given their greater realism and documented validity in assessment centers, they present at least two challenges in practice. First, in order to achieve high fidelity,

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<sup>37</sup> The term *fidelity* used in connection with simulations by Motowidlo et al. (1990) should not be confused with the classic psychological testing definition of fidelity (and bandwidth) discussed by Cronbach and Gleser (1965). In the context used by Motowidlo et al., fidelity *does not* refer to the degree of clarity or dependability of information (typically associated with *narrow band* tests).

simulations must typically be complex both in terms of their presentation and support materials. As a result, in-basket exercises, to use one example of a high-fidelity simulation, can be both expensive and time-consuming to develop. Secondly, high-fidelity simulations pose a scoring challenge in two ways. They can be very time consuming to score. Assessors must be trained; in some types of high-fidelity simulations, like role play exercises and business games, assesseees must be carefully observed in order for the assessors to rate behavior. As well, time must be taken to combine information across raters in order to obtain summary ratings of performance. A second area of concern related to scoring is inter-rater reliability, always an issue when scoring is not objective.

#### *Low-Fidelity Simulations*

Because of the concerns raised above, Motowidlo et al. (1990) and Motowidlo and Tippins (1993) developed and validated an objectively-scored low-fidelity simulation. Their objective was to achieve levels of validity comparable to those associated with high-fidelity simulations, but without the associated costs. Thus, they moved down the fidelity continuum but still hoped to take advantage of the predictive logic of the behavioral consistency model.

In a sample of 120 entry-level management incumbents in the telecommunications industry, Motowidlo et al. (1990) reported correlations between scores on their situational judgment test and supervisory ratings of job performance in the range of .28 ( $p < .01$ ) to .37 ( $p < .01$ ). In a more recent article, Motowidlo and Tippins (1993) reported correlations of .25 and .20 between their instrument and rated job performance. These correlations were not corrected for either criterion unreliability or restriction in range.

As noted earlier, the situational interview (Latham et al., 1980) is also an example of a low-fidelity simulation. The validity evidence on the situational interview is encouraging as well. In a review article, Latham (1989) summarized several studies on

the reliability and validity of the situational interview. Concurrent validity coefficients ranged from .30 to .46, while predictive validity coefficients ranged from .14 to .45 against criteria of supervisory ratings and sales data. It appears, then, that low-fidelity simulations based on the behavioral consistency model can achieve respectable levels of criterion-related validity when evaluated against both objective and subjective performance criteria.

Low-fidelity simulations have typically been developed to predict overall performance for specific jobs or job families (i.e., management and sales positions). A single score is computed that represents the extent to which one is likely to do well in a given job. These overall scores have no direct or implied psychological meaning. Rather, they serve a predictive, rather than interpretive, purpose. In contrast, it was the purpose of Study 3 to design a simulation to measure a construct or role, that of the champion. Scale development procedures typically used in connection with low-fidelity simulations were adapted to the needs of the present application.

*An Overview of the Development of the Management Practices Simulation (MPS)<sup>38</sup>*

Motowidlo et al. (1990) broke down the development of their low-fidelity simulation into the following steps. First, several hundred behavioral incidents were generated, each reflecting examples of managerial effectiveness and ineffectiveness. These critical incidents were then used to script scenarios or task situations that were then given to managers who wrote sentences describing effective things that they might do in response to each scenario. Finally, each response for each scenario was rated for effectiveness by a group of experienced, senior managers, in order to develop an "effectiveness" scoring key for the instrument. In its final form, test takers were presented with a series of scenarios/situations and, for each, were asked to select the *one*

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<sup>38</sup> The simulation was given a generic, non-descriptive name, the *Management Practices Simulation*, rather than a name alluding to championship, in order to disguise the purpose of measurement.

response they would *most likely* take and the *one* they would *least likely* take in each situation.

Some of the approach and logic outlined above was retained in the development of the MPS, but some innovations in development and scoring were introduced that set the present instrument apart from previous low-fidelity simulations. These innovations were introduced, in large part, because the objective in Study 3 was to design a low-fidelity simulation to measure a *multi-dimensional construct*, rather than a single job or job family, as was the objective, for example, in the typical application of the low-fidelity simulation. Since the *meaning* of high scores on the MPS was of interest, careful attention was given to the development of content-valid, homogeneous subscales designed to measure the first- and second-order factors of championship identified in connection with criterion development in Study 1. The results of Study 1 were used as a blueprint for instrument development. The act statements were re-visited and adapted for use in the simulation.

Recall that acts (behavioral incidents) were generated by three panels of managers/incumbents representing examples of both championship and non-championship (refer to Phase I of Study 1 for a detailed description of the act generation). This early stage paralleled the approach of Motowidlo et al. (1990). Scenarios were then written based on: (a) the behavioral incidents, (b) research and popular business literature on championship, and (c) consultation with experienced managers. The purpose at this stage was to draft scenarios that would enable the present researcher to *use the acts already generated at the conclusion of Study 1 as response options*. Thus, the acts were used, in part, to script scenarios, but their primary purpose was to serve as response options already keyed for championship and dimensional membership.

The key innovation in the development of the MPS was the use of factor analysis to develop response options and a scoring key. Decisions related to response option keying were made on the basis of the results of the factor analyses conducted in Study 1,



rather than through the use of expert panels. This approach enabled the instrument to be scored for a number of dimensions, rather than just overall championship (analogous to overall effectiveness, as has been the norm with previously-developed low-fidelity simulations).

The factor analyses in Study 1 accomplished what the subject matter experts typically do when they rate the effectiveness of each response option for a given scenario in the development of a situational interview or low-fidelity simulation. The results of the factor analyses enabled acts to be: (a) classified as either champion (analogous to effective) or non-champion (analogous to ineffective), and (b) assigned to a specific dimension of championship (e.g., Self Promotion, Rebellious Drive). The challenge, then, was to draft scenarios that would fit with the response options already generated and keyed for championship, thus allowing the simulation to be scored for the 10 first- and two second-order factor scales identified in Study 1.

What was needed was a series of contexts within which the keyed acts could be embedded as response options. The contexts would provide challenging situations within which a champion could emerge and show him/herself to be champion-like by endorsing response options keyed as reflecting championship. The challenge of drafting appropriate scenarios was met with only minor modifications (typically stylistic) needed to the response options.

The fact that response options were generated and keyed prior to the scripting of scenarios was, perhaps, the biggest difference between the methodology used in Study 3 and the approach of previous developers of low-fidelity simulations. This approach was, however, followed for good reason. The scales generated at the conclusion of Study 1 represented carefully-constructed, empirically-based dimensions of the construct under study. This dimensional work was an important first step in the understanding of the construct under study and it was considered desirable to attempt to measure these same dimensions with the simulation. Had scenarios been scripted and new response options

generated, it is likely that the simulation would not have been scoreable for more than just overall championship. At the least, a new factor analysis of the simulation response options would have been needed in order to identify subscales, and this factor analysis would, by necessity, have been based on a relatively small sample size ( $n \approx 150$ ). Since a careful structural analysis of championship had already been accomplished in Study 1, this model of championship was applied in Study 3 for the purpose of scale definition.

One concern with the present approach was that the keyings based on the factor analysis might not be relevant when the response options were considered embedded within the context of the scenarios. Thus, scales that emerged in the context of self- and supervisory ratings, might no longer be present when measured with the MPS. This concern was addressed empirically in Study 3, by examining the degree of correlation between the various MPS scale items and their conceptually-related criterion scales as measured in Study 1. Thus, a response option keyed for Rebellious Drive in the MPS should correlate with the first-order criterion factor scale Rebellious Drive. These criterion-related validity issues were considered in selecting final item sets for the MPS, along with other relevant data.

## Method

### *Participants and Setting*

The participants were 147 entry, middle-, and senior-level managers at BC Tel (a subset of the 174 managers from Study 2 who agreed to participate in Study 3, representing an 84% response rate). Of the 147 participants, 37 were female and 110 were male. Once again, the sample was composed of managers who participated in a three-day assessment center at BC Tel between the years 1989 and 1994.

Participation was voluntary but encouraged by the Human Resource coordinator. Considerable effort was made to obtain the participation of all 174 participants who took part in Study 2. As an inducement, each of the 174 managers contacted was promised a

personalized feedback package in which their results on the simulation would be reported (see Appendix O for a sample feedback report).

Data collection began in early July 1994. After roughly six weeks, each of the participants who had not returned a simulation was contacted by telephone and encouraged to participate. A second, follow-up by telephone was done in the middle of September, 1994. Data collection was terminated in late September.

#### *Development of the Management Practices Simulation*

*Scripting of the scenarios.* As noted above, a large pool of acts (hereafter referred to as items or response options), was available for use in the simulation, already keyed for dimension membership and championship vs. non-championship. The challenge, then, was to compose several scenarios in order to provide a number of contexts within which the various response options would represent reasonable ways of responding. The present author was guided by three sources of information in scripting these scenarios. Firstly, and in all cases, the themes of the various scenarios were taken from the behavioral incidents generated in Study 1. Secondly, biographical vignettes of well-known champions were reviewed. Pinchot's (1985) book *Intrapreneuring* and Peters' (1987) *Thriving on Chaos* were valuable sources of information in this regard. Thirdly, the present author informally consulted with several business managers and asked them to describe situations in which they had seen champions emerge.

Twelve preliminary scenarios were drafted. An attempt was made to represent examples of both product and process innovations. As well, the various stages of innovation were featured, from idea conception to implementation. In each scenario, the test-taker would be presented with a role or identity (e.g., a middle manager), a context (e.g., you are working for a large "high tech" Canadian organization), and a problem situation (e.g., a new, but risky product innovation). They would then be instructed to imagine themselves in such a situation and indicate how likely it is that they would respond in each of a number of ways.

*Generating the initial pool of response options.* A total of 124 items were used as response options. The 92 items obtained at the conclusion of Phase IV of Study 1 were used as well as an additional 32 items taken from the results of the first factor analysis. These 32 items were added in order to obtain adequate measurement with the simulation at the dimension level. If only 92 items had been converted to response options, each of the 10 dimensions would have been measured by only 8 to 10 response options. The addition of 32 response options meant that each dimension could, initially, be measured by 12 or 13 response options, allowing a modest number of items to be deleted from each dimension following an item analysis of the simulation.

*Fitting the response options to the scenarios.* The 124 items were then distributed across the 12 scenarios. Some items, if modified slightly, could be placed with a number of the scenarios, while others could be placed in only one or two. In the process of fitting items to scenarios, it became clear that two of the scenarios were problematic; they fit with very few of the items. Although most scenarios could be matched with 15 to 20 items, these two problematic scenarios fit with only five or six items. They were, therefore, deleted. An additional scenario was deleted because it was redundant. Thus 9 of the 12 scenarios were retained.

An attempt was made to include response options representing a variety of dimensions in a given scenario. It was considered undesirable to use only response options originating from Persistent Dominance, for example, in a given scenario (in most cases, four or five dimensions were represented in each scenario). This step was taken in order to minimize the likelihood that test takers would "figure out" the test, understand what was being measured, and, perhaps as a result, fall into a response set within a scenario. As well, this step ensured that a given dimension was measured in a variety of contexts (scenarios). If a test taker endorsed response options keyed for the dimension Collaboration and Support, for example, across a variety of scenarios, this would be a

compelling indication of an orientation toward collaborating with and supporting with others.

*Drafting of instructions.* Although each scenario provided a clear set of instructions to the test-taker, in the interests of thoroughness and standardization, a one-page set of instructions was drafted to introduce the MPS and provide an illustration of how it should be completed. Test takers were instructed to act *as if* they were the manager in each scenario and indicate what they *would* do. As well, the instructions stressed that all response options following each scenario should be rated, not just the response options they considered best and worst, as in the Motowidlo et al. (1990) simulation. This was done in the interests of boosting the reliability and validity of the 10 individual dimension scores by obtaining measurement on a larger number of items and, therefore, having a larger item pool for the item analysis.

*Pilot testing the simulation.* A preliminary version of the MPS was administered to a sample of 14 managers working for a variety of lower-mainland organizations. The present author interviewed each manager after s/he had completed the simulation and asked for his/her reactions. Feedback from the pilot study participants led to minor changes in the scenarios. For example, abbreviations like "R&D" were changed to "Research and Development", a product innovation was replaced with a process innovation, and, in general, details were added to each scenario, providing the test taker with more information about the context.

As well, response options that did not appear to fit the scenario they followed were moved. In some cases, the response option could be slightly modified and retained in the same scenario, while, in other cases, response options were moved to a more suitable scenario. After incorporating the changes suggested by the pilot study participants, the simulation was ready for administration. At the same time, a Form B of the MPS was developed to obtain social desirability ratings on the response options.

*Rating of the MPS response options for social desirability.* As in Study 1, the social desirability of the items (response options) in the MPS simulation was a concern. Ideally, each of the 10 dimensions measured by the MPS would be balanced for social desirability across champion and non-champion items. Or, alternatively, this balance might be achieved at the second-order factor level. In order to obtain the information needed for a social desirability analysis, Form B of the MPS (see Appendix P) was developed and administered to 16 managers who rated each response option for its social desirability.

The respondents were instructed to judge the desirability of each response option in the context of each scenario. Form B of the MPS was identical in item content to the full (self-report) version of the MPS except that the instructions were varied and, of course, the response scale was modified to a nine-point social desirability response format. Although the response options had been rated for social desirability in their previous form as items in Study 1, these ratings were not, of course, made in the context of the scenarios used in the MPS. Thus, each social desirability rater was provided with Form B of the MPS and asked to indicate how desirable they judged each of the response options to be for the given scenario.

*Distribution of the MPS to the assessment center participants.* The present author assembled a package that was mailed to the participants that contained: (a) a *Management Practices Simulation* (see Appendix Q), (b) a covering letter from the present author, (c) a covering letter from the Director of Human Resources, and (d) an envelope stamped *Confidential and Personal* to be used to return the completed simulations. Instructions indicated that the simulations were to be returned, sealed, in the envelope to a contact person in Human Resources, care of the present author. As noted earlier, each participant was promised a personalized feedback report, in which his/her results on the simulation would be featured.

### *The Criterion Measure*

The questionnaire used to collect criterion data on championship was described in connection with Study 2. Once again, the first- and second-order factor scales obtained at the conclusion of Study 1 were used to compute scale scores for the 147 participants in Study 3. Scores for the 147 managers were computed for: (a) scales arising from the first-order factor analyses—Persistent Dominance, Impatient Expediency, Rebellious Drive, Self Promotion, Confrontive Candor, Influence & Political Savvy, Driven Commitment, Immediate Responsiveness, Collaboration & Support, and Visibility & Growth Seeking, (b) scales arising from the second-order factor analyses—Forceful Drive & Expediency and Influence & Visible Drive, (c) the 5-item supervisory-report criterion measure of championship, and (d) the 36-item BOS measure of OMP.

### *Data Analysis*

#### *Scale Development*

The item-level analyses carried out in this section were designed to produce two levels of scale scores for the MPS, primary and secondary, corresponding to the first- and second-order factor scales reported in Study 1. This was accomplished by examining both reliability (internal consistency) as well as criterion-related validity information while carrying out the item analyses. These primary and secondary scales were designed, therefore, to mirror the criterion scales developed and discussed in connection with Study 1.

When analyzing each of the 10 primary and two secondary scales, four pieces of item-level information were examined: (a) item-total correlation (in order to maximize scale internal consistency reliability), (b) item-criterion correlation, in order to maximize the criterion-related validity of the scale, (c) item mean social desirability (in order to achieve a balance on social desirability for the champion and non-champion items), and (d) balance of the number of champion and non-champion items within each scale (to control for acquiescence).

The 10 primary MPS scales were developed first. A similar item-level analysis was then conducted in order to develop the two secondary MPS scales. Thus, the 124 items were re-examined in light of the four item-analytic criteria described above.

Following the development of the primary and secondary scales, the issue of incremental validity was considered. The MPS scales were used *in combination* with the AC battery scales that, in Study 2, showed the highest multivariate correlation with the criteria. Multiple regression techniques were used to examine the extent to which the MPS secondary scales boosted the level of criterion correlation accomplished with the predictive equations reported in Table 31. Since Study 3 is based on a subset of the 174 Study 2 participants, it was necessary to re-compute the multiple regression results involving the AC battery scales for the present analyses in order to provide a baseline against which the incremental validity of the MPS scales could be examined.

#### *Examination of Primary and Secondary Scale Construct Validity*

Following the scale development analyses, issues related to the construct validity of the MPS scales were examined. Exploratory and confirmatory factor analyses of the primary scales were undertaken in order to examine the extent to which the factorial structure of the MPS mirrored that found in connection with the first-order criterion factor scales. In the case of the exploratory analysis, the 10 MPS primary scales were subjected to an unweighted least-squares common factor analysis (assuming a two-factor model), followed by a Harris-Kaiser transformation at three different degrees of obliquity ( $c = 0, .25, \text{ and } .5$ ); the best solution was chosen on the basis of complexity and hyperplanar count. This exploratory analysis was undertaken in order to examine the structure of the MPS scales unencumbered by any *a priori* imposed structural target.

A confirmatory factor analysis was then undertaken. The common pattern obtained via the Meredith (1964) Method One procedure in Study 1 was used as a target matrix, and the unrotated MPS factor pattern was transformed via standard oblique



procrustes techniques, to fit this target. The degree of fit obtained by both the exploratory and confirmatory factor analyses was then estimated with congruence coefficients.

Next, two multi-trait multi-method (MTMM) matrices were constructed (for the primary and secondary scales, respectively) in order to examine the patterns of convergence and divergence between the scales measured by the two methods (the management simulation and the supervisory-report data). Finally, in the interests of further exploring the psychological meaning of the MPS scales, bivariate correlations were computed between the MPS primary and secondary scales and the various components of the AC battery listed in Table 15.

## Results

### *Psychometric Properties of the Primary and Secondary MPS Scales*

Reliability, validity, social desirability, and summary scale information for the 10 primary and two secondary MPS scales are reported in Table 36<sup>39</sup>. See Appendix R for a detailed listing of the item content of the primary and secondary MPS scales.

Following the various item-level analyses, 87 of the original pool of 124 items were retained in connection with the 10 primary scales. Eight of the 10 scales listed in Table 36 were reasonably well-balanced for numbers of champion and non-champion items. Influence and Political Savvy and Collaboration and Support were not adequately balanced. A good balance of champion and non-champion items was achieved on the Forceful Drive and Expediency (FDE) secondary scale, while the Influence and Visible Drive (IVD) scale was, like two of its five primary elements, unbalanced, containing more than twice the number of champion as non-champion items. In general, many fewer non-champion items were available in connection with the MPS primary scales related to IVD, making it difficult, therefore, to properly balance the primary and secondary scales.

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<sup>39</sup> The MPS primary and secondary scales have been given the same labels as their criterion counterparts from Study 1, given that these scales contain very similar item content. They are distinguished from the criterion scales by the prefix "MPS" in the prose that follows.

Table 36

*Psychometric Properties of the Primary and Secondary MPS Scales*

MPS Scale	# C items	# NC items	SD C	SD NC	$\alpha$	1st-Order Crit. r	FDE Crit. r	IVD Crit. r
<i>The Primary Scales</i>								
Persistent Dominance	6	4	6.20	3.66	.48	<b>.25 (.27)</b>	<b>.20 (.21)</b>	-.04 (-.04)
Impatient Expediency	4	6	7.41	2.51	.76	.13 (.14)	.17 (.18)	.12 (.13)
Rebellious Drive	5	5	6.84	3.54	.70	<b>.23 (.26)</b>	<b>.21 (.22)</b>	.07 (.07)
Self Promotion	5	4	5.73	4.96	.65	<b>.26 (.29)</b>	.14 (.15)	.02 (.02)
Confrontive Candor	6	4	4.76	4.13	.49	.10 (.11)	<b>.27 (.28)</b>	-.03 (-.03)
Influence & Pol. Savvy	7	0	2.76	N/A	.45	.18 (.20)	.19 (.20)	.10 (.11)
Driven Commitment	5	3	4.40	7.08	.44	.16 (.18)	.07 (.07)	-.05 (-.05)
Immed. Responsiveness	4	3	3.75	5.60	.37	.02 (.02)	-.09 (-.09)	.02 (.02)
Collaboration & Support	6	2	2.26	7.69	.65	.09 (.10)	.02 (.02)	.16 (.17)
Visib & Growth Seek'g	5	3	3.01	6.94	.71	<b>.22 (.24)</b>	.10 (.10)	.17 (.18)
<i>The Secondary Scales</i>								
MPS-FDE	11	11	4.86	4.20	.70	NA	<b>.35 (.37)</b>	.03 (.03)
MPS-IVD	11	5	3.07	7.04	.72	NA	.11 (.12)	<b>.25 (.26)</b>

*Note.* Critical values for  $r$  for various (one-tailed) significance levels: .05: .137; .01: .192; .005: .213; .001: .254. Correlations significant at  $p < .01$  have been bolded.

The column and row headings refer to the following: MPS-FDE: the MPS measure of Forceful Drive and Expediency; MPS-IVD: the MPS measure of Influence and Visible Drive; FDE: the criterion measure of Forceful Drive and Expediency; IVD: the criterion measure of Influence and Visible Drive.

The values in brackets in the last three columns represent MPS scale-criterion correlations corrected for criterion unreliability.

### *Social Desirability*

With respect to the primary scales, the *overall* 87-item simulation was essentially balanced for social desirability. The 53 champion items were only slightly more desirable (.08 on a 9-point scale) than the 34 non-champion items. The mean social desirability for the champion items was 4.59, while the mean social desirability for the non-champion items was 4.67. Since it was virtually impossible to achieve a balance for social desirability at either the primary or secondary scale level (as it was in Study 1), the overall simulation was balanced for social desirability instead. This represents a shortcoming of the MPS scales.

With two exceptions (Self Promotion and Confrontive Candor), the primary MPS scales were not properly balanced for social desirability. In the case of the primary scales related to FDE, the championship items tended to be more undesirable, while for the other five primary scales, the non-champion items tended to be more undesirable. As discussed in connection with criterion measurement of the heroic side of championship, it is difficult to conceptualize championship items as representing undesirable behavior.

Turning to the secondary MPS scales, an attempt was made to balance each of the two *scales* for social desirability, rather than the overall simulation. This was very nearly accomplished for FDE, with the mean champion vs. non-champion social desirability figures being 4.86 and 4.20 respectively. The IVD secondary scale could not be balanced for social desirability, however. Of the 38 items that could potentially be used for this scale, only 11 were non-champion items and these 11 items had a mean social desirability of 6.75, while the mean social desirability for the available pool of 27 champion items was 2.99. Even if reliability and validity issues had been ignored and social desirability considerations given exclusive focus, the MPS-IVD scale could not have been balanced for social desirability.

### *Internal Consistency Reliability*

The primary and secondary scale internal consistency reliabilities are reported in the fifth column of Table 36. For the primary scales the alpha coefficients ranged from a low of .37 (Immediate Responsiveness) to a high of .76 (Impatient Expediency). Five of the 10 primary scales showed acceptable levels of internal consistency reliability, meeting a modest standard of .65, whereas the remaining five scale internal consistency reliabilities fell below .65.

The two secondary scales showed more satisfactory levels of internal consistency reliability, based, as they were, on a relatively large number of items. This adequate level of internal consistency reliability was achieved despite the fact that these two scales were designed to measure a broader, higher-order dimension of championship than the primary scales.

In summary, it is possible that the MPS primary and secondary scales might possess higher levels of other forms of reliability, such as stability. On the other hand, it should be noted that, since MPS items were chosen, in part, on the basis of their correlation with the total scale score, the internal consistency reliability figures reported in Table 36 may be inflated estimates; they would likely shrink somewhat, if these same figures were calculated in a new sample. On the basis of the internal consistency reliability results reported for the present sample, half of the primary scales must be seen as lacking in item homogeneity.

### *MPS Scale-Criterion Correlations*

Evidence for the criterion-related validity of the primary and secondary scales is reported in the last three columns of Table 36. The three criteria were: (a) the relevant first-order criterion factor scale (which depended on the primary scale being examined), (b) Forceful Drive and Expediency, and (c) Influence and Visible Drive. Criterion correlations appearing in brackets in the last three columns of Table 36 have been adjusted (upwards) for criterion unreliability, and, therefore, represent the "true"

correlation between a fallible predictor and a completely reliable criterion (Schmidt & Hunter, 1977).

Correlations in these last three columns were based on pooled-gender data, since mean scores for men and women did not differ, overall, across the 10 primary scales ( $T^2(10, 136) = 1.23; p > .10$ ). Moreover, follow-up  $t$ -tests revealed that none of the individual 10 primary scale means were significantly different for men and women. Thus, the two groups could be combined for the criterion-related validity analyses.

Three of the first five primary scales correlated significantly with their criterion counterpart. The first five MPS primary scales listed in Table 36 correlated between .10 and .26 with their conceptually-related first-order factor scale. Correlations between these same primary scales and the FDE criterion fell in the range of .14 to .27, with a mean correlation of .20. As was expected (and desired), bivariate correlations in the last column were low and non-significant, since these five MPS primary scales were not designed to correlate with IVD.

Turning to the lower part of Table 36, the MPS-FDE scale correlated .35 ( $p < .005$ ) with the FDE criterion. This is a solid result for a 22-item scale. Comparing this result with criterion correlations achieved with the various components of the AC battery, the MPS-FDE scale-criterion correlation surpassed all validity coefficients reported in Study 2, even the Entrepreneurship dimension measured by the structured interview. As well, the MPS-FDE scale correlated .03 with the IVD criterion, showing evidence of discriminant validity (this issue will be discussed in more detail in connection with the multitrait-multimethod results).

In what is, by now, a familiar pattern from Study 2, the bivariate correlations (uncorrected) between the second set of five MPS primary scales, on the one hand, and their related first-order criterion factor scales, on the other, were low, and, with only one exception (Visibility and Growth Seeking), failed to reach significance at  $p < .01$ . When these five primary scales were considered as a group, they correlated similarly in both the

FDE and IVD columns (the mean validity coefficient was .09 in the FDE column and .10 in the IVD column), indicating that these MPS scales do not converge with their conceptual counterpart, IVD, to a greater extent than with FDE. The five MPS primary scales fared no better than the many variables examined in Study 2 with respect to their correlation with the IVD criterion.

The secondary IVD scale (MPS-IVD) correlated .25 ( $p < .005$ ) with its related second-order criterion factor scale. The MPS-IVD scale far surpassed the level of criterion correlation achieved with the various AC battery scales, although it should be noted that this level of validity was attained in the same sample that was used to make item retention decisions. The MPS-IVD scale correlated .11 with the FDE criterion, showing evidence of discriminant validity.

Corrections for criterion unreliability in Table 36 ("true" validities are reported in parentheses) resulted in small increases in the magnitude of the predictor-criterion correlations. These increases were small because of the relatively high level of internal consistency reliability achieved in connection with the first- and second-order *criterion* factor scales. Given that the second-order criterion factor scales possessed particularly high levels of internal consistency reliability (both were  $> .90$ ), the convergent validities for MPS-FDE and MPS-IVD reported near the bottom of Table 36 increased only slightly after correction for criterion unreliability. The corrected convergent validities were .37 and .26 for MPS-FDE and MPS-IVD, respectively.

#### *Incremental Validity of the MPS Scales*

Results of the multiple regression analyses involving the two criteria—FDE and IVD—are reported in Table 37. For both criteria, the addition of the conceptually-related MPS scale led to increases in both  $R$  and  $R_s$  over that achieved with optimal linear combinations of AC battery scales.

For the FDE criterion, the addition of the MPS-FDE scale led to a significant multiple correlation coefficient ( $R_s = .424$ ;  $F(5, 141) = 7.38$ ,  $p < .0001$ ) that represented

Table 37

*Multiple Regression Analyses Involving the CPI, 16PF, PRF, and MPS Secondary**Scales: Incremental Validity**I. Second-Order Factor Forceful Drive and Expediency (FDE) Criterion Regressed onto the Following Scales: CPI-So, CPI-Do, 16PF-Q<sub>III</sub>, PRF-Ag, and MPS-FDE.**Without MPS-FDE: Baseline Multiple Regression Results*

All Entered Method:  $R = .402$ ;  $R_s = .371$ ;  $F(4, 142) = 6.83$ ,  $p < .0001$ .

Predictor Scale	$r$	$p$	$\beta$	$p$
16PF-Q <sub>III</sub>	.19	.050	.133	ns
CPI-So	-.18	.050	-.134	ns
PRF-Ag	.27	.001	.183	.05
CPI-Do	.27	.001	.291	.001

*With MPS-FDE: Evidence for Incremental Validity*

All Entered Method:  $R = .456$ ;  $R_s = .424$ ;  $F(5, 141) = 7.38$ ,  $p < .0001$ .

Predictor Scale	$r$	$p$	$\beta$	$p$
MPS-FDE	.35	.001	.242	.005
16PF-Q <sub>III</sub>	.19	.050	.130	ns
CPI-So	-.18	.050	-.152	.05
PRF-Ag	.27	.001	.105	ns
CPI-Do	.27	.001	.206	.01

Table 37 cont.

*Multiple Regression Analyses Involving the CPI, 16PF, PRF, and MPS Secondary**Scales: Incremental Validity**II. Second-Order Factor Influence and Visible Drive (IVD) Criterion Regressed onto the Following Scales: 16PF-Q<sub>3</sub>, 16PF-M, and MPS-IVD.**Without MPS-IVD: Baseline Multiple Regression Results*

All Entered Method:  $R = .201$ ;  $R_s = .165$ ;  $F(2, 144) = 3.03$ ,  $p < .05$ .

Predictor Scale	$r$	$p$	$\beta$	$p$
16PF-Q <sub>3</sub>	-.17	.050	-.163	.05
16PF-M	.17	.050	.116	ns

*With MPS-IVD: Evidence for Incremental Validity*

All Entered Method:  $R = .313$ ;  $R_s = .281$ ;  $F(3, 143) = 5.18$ ,  $p < .005$ .

Predictor Scale	$r$	$p$	$\beta$	$p$
MPS-IVD	.25	.005	.240	.005
16PF-Q <sub>3</sub>	-.17	.050	-.147	ns
16PF-M	.17	.050	.113	ns

*Note:*  $R_s$  is the shrunken multiple correlation coefficient;  $r$  is the bivariate correlation between the predictor and criterion. AC battery predictor scales were included based on the results of the cross-inventory stepwise multiple regression results reported in Table 31 of Study 2.



a .053 increase in the multiple correlation coefficient reported for the regression equation without the MPS scale. Inspection of the lower section of Table 37 shows that the MPS-FDE scale carried the largest beta weight of all predictors in the equation, followed closely by CPI Dominance. Beta weights for two of the scales (16PF Tough Poise and PRF Aggression) were non-significant.

Turning to results for the IVD criterion (reported on the second page of Table 37), the addition of the MPS-IVD scale led to an increase of .116 in the multiple correlation coefficient. The multiple correlation for the linear combination involving the MPS-IVD was significant ( $R_s = .281$ ;  $F(3, 143) = 5.18, p < .005$ ). The beta weight for MPS-IVD was the only significant one in the equation. The inclusion of the two 16PF scales made only a minimal impact on the level of overall criterion correlation with IVD.

#### *Construct Validity of the MPS*

In the previous section, the psychometric properties of the primary and secondary scales were reported. In this section, attention shifts to issues of construct validity—the meaning of scores on the various scales. Loevinger's (1957) conceptualization of construct validity was used to organize the presentation and discussion of results. Her model of construct validity is broad and includes criterion-related validity and internal consistency reliability as subcomponents; thus, some of the results reported above will be re-visited in the discussion below since they provide information on the psychological meaning of the MPS scale scores. It must be recognized that construct-related validation requires the gradual accumulation of information from a variety of sources (Anastasi, 1988). Thus, the analyses reported in this section begin a process requiring considerable further work.

According to Loevinger (1957), construct validity is examined with respect to substantive, structural, and external criteria. Loevinger's conceptualization of substantive criteria is analogous to content validity. She argued for a comprehensive sampling of the domain of interest—the collection of items that cover the substantive domain represented

by the theory. Phase I of Study 1 outlined this approach in connection with championship. The use of the behavioral consistency model has resulted in the development of MPS scales that sample the domain of interest in a comprehensive way and that reflect the substantive domain developed in Study 1.

Loevinger's (1957) structural considerations relate to both inter-item structure (internal consistency) and structural fidelity. Thus, the internal consistency reliability analyses reported earlier can, in Loevinger's broad view of construct validity, be seen as one source of information on construct validity, in that high scale internal consistency indices indicate that one is measuring a uniform measure of a single construct. Structural fidelity refers to how well the structural characteristics of the test mirror the structural characteristics of non-test manifestations of the trait. To a large extent, structural fidelity has been built in to the MPS at the level of item keying and final item selection. In the present study, the issue of structural fidelity was addressed at the primary scale (rather than the item) level. Factor analytic methods were used to examine the extent to which the higher-order structure of the MPS primary scales mirrored the structure of championship obtained via criterion measurement in Study 1.

Finally, Loevinger's (1957) external considerations relate to the pattern of relationships between the test and other measures of the trait, including non-test behavior. Thus, in Loevinger's view, criterion-related validity is a component of construct validity. Campbell and Fiske's (1959) notions of convergent and discriminant validity were of relevance in this section. While substantive and structural considerations relate primarily to issues associated with test construction, external considerations address the question: what does the overall test measure?

### *Substantive Considerations*

In contrast to strictly empirical approaches to item selection and, more generally, test design, Loevinger (1957) argued that, from a standpoint of substantive considerations, test constructors should generate their test items from theory and then

rigorously test those items to ensure that they conform to the theory. First, Loevinger called for systematic item sampling from a theory-based universe of content. This call has been answered by test developers who use the behavioral consistency model and/or conduct analyses of the criterion.

In the present study, the initial item pool for the MPS was extensive. As described in Study 1, items were generated by managers trained in the theory of championship. The items eventually considered for use in the MPS were those that had survived item and factor analyses designed to derive a comprehensive dimensional model of championship. The surviving items used in the MPS, then, qualify as theoretically-based, and were clearly sampled comprehensively from a highly-relevant domain of interest.

### *Structural Considerations*

*Inter-item structure.* In a previous section it was noted that only five of the 10 MPS primary scales had internal consistency reliability coefficients that exceeded .65. They ranged from a low of .37 to a high of .76, while the secondary scale internal consistency reliabilities were .70 and .72. Loevinger (1957) argued that the degree of inter-item structure on test items that one can expect depends upon the degree of inter-item correlation among the criterion behaviors. The degree of inter-correlation among criterion behaviors (items, in the present study) places an upper limit on the degree of item structure for a given trait and, therefore, the test item correlations should not exceed the criterion behavior inter-correlations.

The MPS scale items clearly do not exceed the criterion scale item inter-correlations in this regard. They are, in all cases, lower, and, in some cases, substantially lower. Some explanations for these low internal consistency reliability figures are offered below.

First, the MPS item format is different from that associated with most tests, in that the MPS items were embedded within a variety of contexts (i.e., scenarios). Thus, it is

possible that, for example, two items keyed for Persistent Dominance appearing in separate scenarios might not be highly correlated if the two scenarios were markedly different. This design feature distinguishes the MPS from the traditional test of personality, for example, that contains items embedded, implicitly, within a single context—one's most typical or usual behavior.

Another factor likely reducing the inter-item correlation was that the MPS scale items were not identified from a factor analysis of the *MPS*. Rather, the items were assigned to MPS scales as response options on the basis of item inter-correlations obtained on the *criterion* rating form discussed in Study 1. Thus, to the extent that the item structure of championship was different in the MPS, scale internal consistency reliabilities would be lower.

Regardless of the reason for the low internal consistency reliability figures, with a few exceptions, the MPS primary scales should not be seen as homogeneous. This suggests the following possibilities: (a) a different factorial structure exists among the MPS response options from that found in connection with criterion measurement, (b) the MPS primary scales are multi-dimensional, (c) the MPS primary scales measure dimensions of behavior that are context dependent. Given the multi-scenario format of the MPS, it may be unrealistic to expect the primary scales to achieve levels of internal consistency reliability typically associated with personality scales, for example.

#### *Structural Fidelity*

Since the MPS primary scales were patterned after the 10 first-order criterion factor scales, and their items were chosen, in part, because of significant correlation with the criterion scales, it was reasonable to expect that the pattern of inter-correlations among the *scales* arising from these two methods of measurement would be similar. More specifically, the second-order structure of championship arising from the inter-correlations among the MPS primary scales should be similar to the second-order structure of the first-order criterion factor scales reported in Table 7. If a high degree of

correspondence were found, it would follow that the structural characteristics of the "test" scales (the MPS) mirrored the structural characteristics of the criterion, an indication of structural fidelity.

The degree of structural similarity or fidelity between the MPS and the criterion was operationalized as the degree of fit between the factor structure of the 10 MPS primary scales, on the one hand, and a "target" factor structure, as represented by the common pattern obtained via the Meredith (1964) Method One procedure in connection with criterion development in Study 1. As described briefly in the Method section, two procedures were used to examine the degree of fit between the criterion and MPS structure.

An unweighted least-squares factor analysis of the 10 MPS primary scales was conducted in which two factors were extracted. This unrotated factor pattern matrix was transformed in two ways. First, an exploratory approach was taken in which the unrotated factor pattern matrix was rotated, via a Harris-Kaiser transformation, at three different degrees of obliquity ( $c = 0, .25, \text{ and } 5$ ). The transformed solution that best met the criteria for simple structure was the most oblique transformation ( $c = 0$ ). Second, the same unrotated factor pattern matrix was transformed, this time, via oblique procrustes procedures, into congruence with the target matrix. The criterion target matrix, the derived exploratory and procrustes patterns, congruence coefficients, and factor inter-correlations are reported in Table 38.

A visual inspection of the three pattern matrices reveals a high degree of similarity across the solutions, particularly between the two MPS patterns, not surprisingly. The two-dimensional higher-order structure obtained in connection with the criterion scales appears to provide a good fit for the 10 MPS primary scales, regardless of how the primary scales are transformed. The same two groups of primary scales clustered together in the two MPS patterns as in the criterion. A two-factor higher-order structure appears tenable in connection with the primary simulation scales.

Table 38

*Two-Factor Exploratory and Oblique Procrustes Solutions for The MPS*

		Target Pattern: Meredith's Common Pattern from Study 1		Exploratory H-K Pattern Based on the MPS		Procrustes Pattern Based on the MPS	
First-Order/Primary Scales		Factor		Factor		Factor	
		FDE	IVD	M-FDE	M-IVD	M-FDE	M-IVD
Persistent Dominance		<b>.51</b>	-.08	<b>.46</b>	-.08	<b>.46</b>	-.09
Impatient Expediency		<b>.42</b>	-.24	<b>.38</b>	-.17	<b>.37</b>	-.17
Rebellious Drive		<b>.54</b>	.04	<b>.48</b>	.18	<b>.49</b>	.17
Self Promotion		<b>.28</b>	.09	<b>.46</b>	.10	<b>.47</b>	.09
Confrontive Candor		<b>.32</b>	.14	<b>.47</b>	.14	<b>.48</b>	.13
Influence & Political Savvy		.03	<b>.47</b>	.17	<b>.44</b>	.21	<b>.43</b>
Driven Commitment		.14	<b>.26</b>	.18	<b>.20</b>	.20	<b>.20</b>
Immediate Responsiveness		-.04	<b>.45</b>	-.04	<b>.55</b>	.01	<b>.55</b>
Collaboration & Support		-.17	<b>.40</b>	-.41	<b>.59</b>	-.36	<b>.59</b>
Visibility & Growth Seeking		.17	<b>.51</b>	.07	<b>.77</b>	.13	<b>.77</b>

Congruence Coefficients					
Criterion-Target			MPS-Exploratory		
			FDE	IVD	
MPS- Exploratory	FDE	.986		-.015	
	IVD	.086		.968	
MPS- Procrustes	FDE	.945	.070	.994	.091
	IVD	.069	.963	-.016	.999

Primary-Factor Inter-Correlations							
Target			Exploratory		Procrustes		
	FDE	IVD	FDE	IVD	FDE	IVD	
M-FDE	1.00		1.00		1.00		
M-IVD	.15	1.00	.08	1.00	.02	1.00	

The column and row headings refer to the following: M-FDE: the MPS measure of Forceful Drive and Expediency; M-IVD: the MPS measure of Influence and Visible Drive; FDE: the criterion measure of Forceful Drive and Expediency; IVD: the criterion measure of Influence and Visible Drive.

Congruence coefficients were calculated between the second-order criterion factors scales and the two versions of the MPS second-order factors. For the two MPS patterns, the coefficients between the related factors were, of course, very high (.994 for FDE and .999 for IVD). Of more relevance, are the correlations between the related factors of the criterion, on the one hand, and the two MPS factor patterns, on the other. Congruence coefficients between the factors of the exploratory MPS pattern and the related criterion factors were very high (.986 for FDE and .968 for IVD), indicating good congruence. The degree of congruence between the factors reported in the procrustes MPS pattern and their related criterion factors was very high as well (.945 for FDE and .963 for IVD). The higher-order structure of the criterion and MPS appears to be highly similar.

Finally, results in the bottom third of Table 38 indicate that the two MPS secondary scales were orthogonal ( $r = .08$  for the exploratory and  $r = .02$  for the procrustes solutions), paralleling the results from Study 1 in this regard, despite the fact that *oblique* exploratory and procrustes transformations were performed.<sup>40</sup> All things considered, the structural characteristics of the MPS mirror closely those obtained in connection with criterion measurement, thus providing evidence of structural fidelity at the primary scale level.

### *External Considerations*

*A multitrait-multimethod examination of championship.* Campbell and Fiske's (1959) multitrait-multimethod matrix was used in this section to examine further the construct validity of the MPS primary and secondary scales. While evidence of convergent validity was presented in an earlier section (see Table 36 for monotrait-heteromethod correlations), discriminant validity is also an important requirement when developing new tests and/or examining issues of construct validity. Campbell and Fiske

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<sup>40</sup> An oblique transformation (whether to a target or not) allows the factors to correlate. The fact that the two higher-order MPS factors did not correlate significantly gives further evidence of similarity between the MPS and the criterion higher-order structures.

argued that, in order to estimate the relative contributions of method and trait variance, more than one method as well as more than one trait must be employed in the validation process. This information can be conveniently summarized in a multitrait-multimethod matrix.

Campbell and Fiske (1959) outlined four issues bearing on validity that can be gleaned from an examination of the matrix. First, the coefficients in the validity diagonal (heteromethod-monotrait) should be significantly different from zero; this is, of course, evidence of convergent validity. Secondly, the validity diagonal coefficients should be larger than the values contained in the heteromethod-heterotrait triangles. Although seemingly obvious, Campbell and Fiske noted that this requirement is often not met in application. Thirdly, the validity coefficients should be higher than the coefficients in the monomethod-heterotrait triangles. Finally, a similar pattern of trait inter-correlations should be seen in all of the heteromethod and monomethod blocks. The last three issues relate to discriminant validity.

Multitrait-multimethod matrices for the primary and secondary MPS scales are reported in the next two tables. Beginning with results for the primary scales in Table 39, four of the 10 validity coefficients were significantly different from zero ( $p < .01$ ), while the remaining six validity coefficients ranged from .02 to .18. The MPS primary scales do not, as a group, show strong convergent validity.

Evidence for discriminant validity was not encouraging. Two of the four MPS scales (VGS and PD) that correlated significantly in the monotrait-heteromethod diagonal, showed evidence of discriminant validity according to the first criteria; that is, the validity coefficients were greater than the correlations between each of these two variables and any other variable having neither method nor trait in common. The remaining eight scales failed to meet this criterion.

With respect to the second criterion for discriminant validity, a perusal of the monomethod triangles indicates, in some trait combinations, a fairly high degree of



Table 39

## A Multi-Trait-Multimethod Matrix For The MPS Primary Scales and The First-order Factor Criterion Scales

Method I: The Management Practices Simulation										Method II: Supervisory Criterion Rating												
Traits		PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	
Method I		(48)																				
	PD	08	(76)																			
	IE	22	42	(70)																		
	RD	17	04	12	(65)																	
	SP	30	07	20	36	(49)																
	CC	-03	10	32	19	04	(45)															
	IPS	15	04	05	18	06	08	(44)														
	DC	-01	-24	11	02	11	22	22	(37)													
	IR	-24	-20	00	-21	-08	23	02	27	(65)												
	CS	-00	-10	16	17	21	34	18	42	42	(71)											
	VGS																					
Method II												(83)										
	PD	25	14	22	09	-00	-06	01	-08	-06	02		41	(84)								
	IE	11	13	09	05	25	08	05	01	17	13		52	46	(78)							
	RD	17	06	23	09	24	-00	11	-05	03	14		49	31	36	(82)						
	SP	01	07	15	26	00	09	16	-11	-12	01		51	07	48	32	(80)					
	CC	24	15	16	27	10	11	-01	-09	-21	08		-16	-03	-02	16	14	(80)				
	IPS	00	14	23	22	10	18	05	-06	07	13		08	-15	22	-03	19	12	(82)			
	DC	13	-01	02	13	-03	-13	16	-07	-17	-02		-19	-38	02	-22	17	37	38	(80)		
	IR	-02	-11	-07	-03	-08	-05	06	02	-03	05		-40	-26	-28	-30	-13	46	12	38	(79)	
	CS	03	-06	01	04	07	03	16	13	09	12		02	-06	28	01	26	47	45	57	37	(83)
	VGS	06	00	01	23	04	15	15	02	01	22											

Note. Validity coefficients in the heteromethod-monotrait diagonal have been bolded and italicized. Row and column headings refer to the following: PD: Persistent Dominance; IE: Impatient Expediency; RD: Rebellious Drive; SP: Self Promotion; CC: Confrontive Candor; IPS: Influence and Political Savvy; DC: Driven Commitment; IR: Immediate Responsiveness; CS: Collaboration and Support; VGS: Visibility and Growth Seeking.

monomethod-heterotrait inter-correlation. This was to be expected given the two-dimensional structure obtained for both the first-order criterion factor scales and the MPS primary scales. Thus, these inflated coefficients were not solely a function of method variance. Nevertheless, the values in the validity diagonal, in all cases, failed to exceed some of the values in the monomethod triangles. Campbell and Fiske (1959) acknowledged that this was common in individual-differences research, but was likely pronounced in the present study given the structural properties of the scales arising from the two methods.

Given the number of variables contained in the matrices in Table 39, it was difficult to determine, from a visual inspection, the degree to which the variables inter-correlated similarly in the three heteromethod and monomethod blocks. This issue was, in part, addressed in connection with the exploratory and oblique procrustes analyses reported earlier. Given the relatively high degree of structural similarity that was reported, this third criterion for discriminant validity was met, at least with respect to the monomethod blocks.

Turning to Table 40, an MTMM matrix is reported for the MPS secondary scales. Results in Table 40 support the convergent and discriminant validity of the MPS secondary scales. The first criterion with respect to convergent validity was met. Validity coefficients of .35 and .25 were reported for each of Forceful Drive and Expediency and Influence and Visible Drive. These coefficients were both significantly different from zero ( $p < .005$ ).

With respect to discriminant validity, the two validity coefficients were clearly higher than the two heterotrait-heteromethod values ( $r = .03$  and  $.11$ ). As well, they were higher than the monomethod-heterotrait values in the upper-left and lower-right triangles of Table 40 ( $r = .15$  and  $.19$ ). The third criterion for discriminant validity (structural similarity) could not be assessed with only two traits. Clearly, the MTMM results related

Table 40

*A MultiTrait-Multimethod Matrix Analysis of The MPS Secondary Scales and The Second-order Factor Criterion Scales*

		Method I: The MPS		Method II: Supervisory Rating	
		MPS-FDE	MPS-IVD	FDE	IVD
Method I	MPS-FDE	(.70)			
	MPS-IVD	.19	(.72)		
Method II	FDE	<b>.35</b>	.11	(.92)	
	IVD	.03	<b>.25</b>	.15	(.91)

*Note.* Critical values for  $r$  for various (one-tailed) significance levels: .05: .137; .01: .192; .005: .213; .001: .254. Correlations significant at  $p < .01$  have been bolded.

The column and row headings refer to the following: MPS-FDE: the MPS measure of Forceful Drive and Expediency; MPS-IVD: the MPS measure of Influence and Visible Drive; FDE: the criterion measure of Forceful Drive and Expediency; IVD: the criterion measure of Influence and Visible Drive.

to convergent and discriminant validity were more positive in connection with the secondary, than the primary, scales.

*Cross-correlations between the MPS scales and scales from the AC battery.*

Further information bearing on the construct validity of the MPS can be gleaned from the pattern of correlations between the MPS scales and scales from the various tests and exercises in the AC battery listed in Table 15. Like the preceding section, analyses are reported separately for the MPS primary and secondary scales.

Correlations between all components of the AC battery, on the one hand, and the MPS primary and secondary scales are reported in Appendix S. A more concise summary of results is presented in Tables 41 and 42, corresponding to results for the primary and secondary scales, respectively. These two tables were organized to permit head-to-head comparisons between the championship dimensions measured via the MPS and the criterion scales; thus one can examine the extent to which the two methods (the MPS and supervisory ratings) share a common set of correlates. Assessment center scales were included in Tables 41 and 42 if they correlated significantly ( $p < .005$ ) with the relevant dimension measured by *either* the MPS or the criterion. Thus, in the first part of Table 41, for example, 10 AC battery scales are reported in connection with Persistent Dominance because these 10 scales correlated significantly with PD measured by *either* the MPS scale *or* the criterion scale. Given that: (a) the MPS scales share items in common with the criterion scales, and (b) their items were chosen, in part, because of correlation with the respective criterion scale, it was expected that the MPS scales would be found to measure constructs similar to those identified and discussed in connection with the criterion scales.

With respect to the relative magnitude of correlations that might be expected across the two columns for a given AC battery scale, it is likely that the AC battery scales would, other things being equal, correlate more highly with the MPS, rather than the criterion, scale as a result of method variance. Correlations based solely on self appraisal

Table 41

*A Comparison of Correlates For the MPS Primary Scales and the First-Order Criterion**Factor Scales*

Persistent Dominance			Impatient Expediency		
Scale	MPS	Criterion	Scale	MPS	Criterion
CPI-Dominance	.06	<b>.23</b>	CPI-Capacity for Status	<b>.25</b>	.13
CPI-Socialization	.07	<b>-.25</b>	CPI-Social Presence	<b>.26</b>	.20
16PF-Assertiveness	.07	<b>.25</b>	CPI-Self Control	<b>-.27</b>	-.18
PRF-Aggression	<b>.23</b>	<b>.23</b>	CPI-Intellectual Efficiency	<b>.25</b>	-.01
PRF-Impulsivity	.13	<b>.25</b>	16PF-Assertiveness	<b>.25</b>	.16
JAS-Type A Overall	.10	<b>.34</b>	16PF-Conscientiousness	<b>-.26</b>	-.07
JAS-Speed & Impatience	.11	<b>.23</b>	16PF-Imaginative	<b>.24</b>	-.03
RP-Initiative/Innovation	-.03	<b>.24</b>	16PF-Controlled	<b>-.41</b>	-.10
Int-Entrepreneurship	-.01	<b>.27</b>	16PF-Independence	<b>.28</b>	.14
Int-Appraisal & Dev't	-.01	<b>.22</b>	PRF-Aggression	.06	<b>.24</b>
			PRF-Autonomy	<b>.26</b>	.04
			PRF-Cognitive Structure	<b>-.40</b>	-.11
			PRF-Harm Avoidance	<b>-.29</b>	-.05
			PRF-Impulsivity	<b>.42</b>	.16
			PRF-Order	<b>-.32</b>	-.09
			ROCI-II-Integrating	<b>.25</b>	.02
			ROCI-Dominating	<b>.25</b>	.11

Table 41 cont.

*A Comparison of Correlates For the MPS Primary Scales and the First-Order Criterion**Factor Scales*

Self Promotion			Rebellious Drive		
Scale	MPS	Criterion	Scale	MPS	Criterion
CPI-Dominance	<b>.24</b>	<b>.26</b>	CPI-Dominance	<b>.23</b>	.17
CPI-Self Acceptance	.18	<b>.23</b>	16PF-Imaginative	<b>.24</b>	-.00
CPI-Self Control	<b>-.27</b>	-.16	16PF-Independence	<b>.29</b>	.08
16PF-Assertiveness	.15	<b>.22</b>	PRF-Autonomy	<b>.25</b>	.13
16PF-Enthusiastic	.11	<b>.23</b>	PRF-Change	<b>.24</b>	.10
16PF-Venturesome	.09	<b>.22</b>	PRF-Harm Avoidance	<b>-.29</b>	-.09
16PF-Suspicious	<b>.32</b>	.16	PRF-Understanding	<b>.24</b>	-.05
16PF-Group Dependent	-.11	<b>-.21</b>	JAS-Speed & Impatience	-.07	<b>.22</b>
16PF-Extraversion	.14	<b>.31</b>	Int-Entrepreneurship	<b>.32</b>	<b>.24</b>
PRF-Aggression	<b>.30</b>	<b>.23</b>	ROCI-II-Obliging	<b>-.25</b>	-.14
PRF-Defendence	<b>.29</b>	.07			
PRF-Dominance	.12	<b>.23</b>			
PRF-Exhibition	<b>.25</b>	<b>.34</b>			
PRF-Social Recognition	<b>.29</b>	.07			
JAS-Type A Overall	<b>.34</b>	<b>.31</b>			
JAS-Job Involvement	<b>.25</b>	<b>.21</b>			
JAS-Hard Drv'g & Compet.	.14	<b>.31</b>			

Confrontive Candor			Influence and Political Savvy		
Scale	MPS	Criterion	Scale	MPS	Criterion
CPI-Socialization	.04	<b>-.27</b>	PRF-Play	<b>.25</b>	.08
CPI-Flexibility	<b>-.25</b>	.04	Int-Entrepreneurship	<b>.25</b>	.16
CPI-Anxiety	<b>-.32</b>	-.10	Int-Planning & Organizing	<b>.26</b>	<b>.22</b>
16PF-Assertiveness	<b>.23</b>	<b>.21</b>			
PRF-Abasement	<b>-.28</b>	.05			
PRF-Aggression	<b>.34</b>	.13			
RP-Entrepreneurship	.04	<b>.29</b>			
RP-Performance Stability	.07	<b>.35</b>			
ROCI-II-Compromising	<b>-.27</b>	-.02			

Table 41 cont.

*A Comparison of Correlates For the MPS Primary Scales and the First-Order Criterion**Factor Scales*

Driven Commitment			Immediate Responsiveness		
Scale	MPS	Criterion	Scale	MPS	Criterion
CPI-Capacity for Status	.12	<b>.22</b>	Concept Mastery	<b>-.26</b>	.02
JAS-Hard Drv'g & Compet.	<b>.23</b>	.06	Read'g Comprehension	<b>-.25</b>	.00
RP-Leadership	<b>.26</b>	.20	PRF-Change	<b>.26</b>	.01
RP-Commitment	<b>.26</b>	.15	PRF-Dominance	<b>.26</b>	-.09
Int-Appraisal & Dev't	<b>.23</b>	.07	JAS-Type A Overall	<b>.26</b>	-.06

Collaboration & Support			Visibility & Growth Seeking		
Scale	MPS	Criterion	Scale	MPS	Criterion
PRF-Achievement	-.08	<b>-.25</b>	CPI-Dominance	<b>.30</b>	.13
PRF-Change	<b>.23</b>	-.02	CPI-Self Acceptance	<b>.26</b>	<b>.22</b>
			16PF-Enthusiastic	<b>.27</b>	.06
			16PF-Venturesome	<b>.31</b>	.15
			16PF-Adequacy of Adjust.	<b>.26</b>	.08
			PRF-Change	<b>.32</b>	.07
			PRF-Dominance	<b>.36</b>	.07
			PRF-Exhibition	<b>.24</b>	.20
			Int-Performance Stability	<b>.27</b>	-.05

*Note.* Critical values for  $r$  for various (one-tailed) significance levels: .05: .137; .01: .192; .005: .213; .001: .254. Correlations significant at  $p < .005$  have been bolded.

Row headings refer to the following: Int: interview; RP: role play; JAS-Hard Drv'g & Compet.: Hard Driving and Competitive; Int-Appraisal & Dev't: Appraisal and Development of Subordinates; Read'g Comprehension: Nelson Denny Reading Comprehension; 16PF-Adequacy of Adjust.: 16PF-Adequacy of Adjustment.

Table 42

*A Comparison of Correlates For the MPS Secondary Scales and the Second-Order Criterion Factor Scales*

	FDE Scales		IVD Scales	
	MPS	Criterion	MPS	Criterion
<i>Measures of Personality and Temperament</i>				
CPI Dominance	<b>.33</b>	<b>.27</b>	<b>.33</b>	.07
CPI Capacity for Status	<b>.23</b>	.20	.14	.10
CPI Social Presence	<b>.23</b>	.15	.19	.11
CPI Self Acceptance	<b>.30</b>	<b>.21</b>	<b>.24</b>	.17
CPI Self Control	<b>-.28</b>	-.19	.03	-.06
16PF Factor E (Assertive)	<b>.29</b>	<b>.28</b>	.10	.06
16PF Factor H (Venturesome)	.12	.13	<b>.26</b>	.06
16PF Factor L (Suspicious)	<b>.31</b>	.11	.03	.02
16PF Factor Q <sub>I</sub> (Extraversion)	.17	<b>.22</b>	<b>.22</b>	.04
16PF Factor Q <sub>IV</sub> (Independence)	<b>.28</b>	.14	.13	.09
PRF Aggression	<b>.29</b>	<b>.27</b>	-.07	-.04
PRF Exhibition	<b>.27</b>	<b>.21</b>	.18	.10
PRF Impulsivity	.17	<b>.21</b>	.08	.09
ROCI-II Integrating	<b>-.26</b>	.01	<b>.29</b>	.06
ROCI-II Obliging	<b>-.24</b>	-.08	.09	.06
JAS Type A Overall Score	<b>.28</b>	<b>.23</b>	.16	.00
JAS Job Involvement	<b>.26</b>	.20	<b>.23</b>	.09
JAS Speed & Impatience	.16	<b>.25</b>	-.03	.09



Table 42 cont.

*A Comparison of Correlates For the MPS Secondary Scales and the Second-Order Criterion Factor Scales*

	FDE Scales		IVD Scales	
	MPS	Criterion	MPS	Criterion
<i>Management Simulations</i>				
In-Basket Quality of Judgment	<b>.47</b>	-.02	.22	-.02
Role play Leadership	<b>.27</b>	<b>.24</b>	<b>.22</b>	.14
Role play Initiative/Innovation	.17	<b>.26</b>	.15	.00
Role play Interpersonal	<b>.23</b>	<b>.22</b>	<b>.23</b>	.09
<i>Structured Interview</i>				
Leadership	<b>.22</b>	<b>.22</b>	<b>.23</b>	-.01
Communication	<b>.23</b>	.06	.21	-.09
Entrepreneurship	<b>.25</b>	<b>.33</b>	<b>.29</b>	.06
Commitment	.19	.16	<b>.26</b>	-.03
Initiative/Innovation	.16	<b>.23</b>	.20	.10
Performance Stability	<b>.26</b>	<b>.21</b>	<b>.28</b>	-.03
Planning/Organizing	<b>.22</b>	.10	<b>.28</b>	.06
Appraisal and Development	.07	.20	<b>.23</b>	.00
<i>Criterion Measures From Study 1</i>				
Overall Management Performance	-.14	<b>-.50</b>	.07	<b>.80</b>
5-Item Championship Criterion	.05	.07	.18	<b>.73</b>

*Note.* Critical values for  $r$  for various (one-tailed) significance levels: .05: .137; .01: .192; .005: .213; .001: .254. Correlations significant at  $p < .005$  have been bolded. With the exception of IB7, all correlations are based on a sample size of 147; the IB7 correlation is based on a reduced sample size of 76.

data should be higher than correlations based on both self- and other-report data. This relationship holds true for the results in Table 42; the correlations in the first column (corresponding to the MPS) are generally higher than those reported in the second column (corresponding to the criterion). The same is not true in connection with Table 41. This may, in large measure, be due to the low internal consistency reliabilities of the MPS primary scales.

*The MPS primary scales.* Results in Table 41 show that, with one exception (Self Promotion), scale scores arising from the two methods (the MPS and the criterion rating scales) correlated with different components of the AC battery. This was, to some extent, due to the fact that very few of the AC battery scales correlated with the first-order criterion factor scales that loaded on IVD (see the second page of Table 41). Thus, an AC battery scale that correlated with these MPS primary scales would represent a departure from the criterion correlates. Correlations between the two measures of PD, IE, RD, and CC, on the one hand, and the AC battery scales, on the other, also showed little overlap, however. Clearly, with the exception of Self Promotion, the AC battery correlates for the MPS primary scales were different from those reported in connection with the first-order factor scales in Study 2. In some cases, these different correlates would lead to different conceptualizations of the MPS scale, while in other cases, common themes arose from the different correlates.

Although each of the MPS primary scales was designed to predict its criterion counterpart, results in Table 36 showed that this objective was met in connection with only four scales and even here the level of correlation obtained, although significant, was not high. It was, therefore, not surprising to discover that these two methods of measurement yielded scales that correlated with different components of the AC battery. Correlations between the AC battery scales and some of the MPS primary scales led to descriptive conceptualizations that were intuitive and supported the general theme of the dimension, as originally conceptualized in Study 1, while other MPS primary scales

correlated with so few AC battery scales (e.g., Collaboration and Support) that it was difficult to develop a conceptual understanding based on such limited convergence.

Confrontive Candor was an example of an MPS primary scale that shared only one common correlate with its criterion counterpart (16PF-Assertiveness) but appeared to measure a similar theme. Its correlates indicated that high scorers on this primary scale would likely be assertive, aggressive, somewhat inflexible and low in anxiety. Moreover, high scorers would likely not be self-effacing, would not show a high degree of humility (PRF-Abasement:  $r = -.28$ ), and would not typically compromise when in conflict situations (ROCI-II-Confronting:  $r = -.27$ ). Similarly, Rebellious Drive shared only one common correlate, Entrepreneurship, (as measured by the structured interview), but the correlates of this MPS primary scale led to a descriptive profile of the high scorer that was similar to that developed in connection with the item content of the RD criterion scale. Based on the correlations reported in Table 41, high scorers on MPS-RD would likely be dominant, independent, and imaginative. Moreover, they could be expected to enjoy and seek out change and opportunities for excitement and risk.

Given the results reported in Tables 36, 39, and 41 in connection with the primary scales, it would appear inadvisable to attach much interpretive significance to scores obtained via the MPS at the primary-scale level of measurement. The psychometric properties of the primary scales reported in Table 36 indicated, in some cases, low reliability and validity. The MTMM analyses provided further evidence of a lack of convergent and discriminant validity for the majority of the primary scales. Given these facts, it seems prudent, then, to examine the feasibility of using the MPS to measure the two higher-order championship dimensions. Thus far, the factor analytic and MTMM analyses support measurement at this level. In the section below, the correlates of the two secondary MPS scales will be reported in a format similar to that used in Table 41. Thus, head-to-head comparisons can be made of the degree to which the two methods share common correlates.

*The MPS measure of Forceful Drive and Expediency.* Results for the MPS secondary scales reported in Table 42 suggest that the behavioral consistency approach has led to the development of simulation scales that tap into similar constructs to the second-order criterion factor scales. Beginning with the first two columns in Table 42, of the nine personality scales that correlated significantly with the criterion measure of FDE, six of those scales correlated significantly with the MPS-FDE scale (CPI-Dominance, CPI-Self Acceptance, 16PF-Assertiveness, PRF-Aggression, PRF-Exhibition, JAS-Type A Overall); the three personality scales that did not correlate significantly with MPS-FDE correlated in the expected direction (16PF-Extraversion:  $r = .17$ ; PRF-Impulsivity:  $r = .17$ ; JAS-Speed and Impatience:  $r = .16$ ). Thus, there is evidence that the MPS-FDE scale converges with similar scales and measures similar constructs to those discovered in connection with the criterion measure of FDE. Familiar themes of aggressiveness, dominance, assertiveness, social boldness, and competitiveness emerged.

The MPS-FDE scale also correlated significantly with eight personality scales that its criterion counterpart did not. They were: CPI-Capacity for Status, CPI-Social Presence, CPI-Self Control (-), 16PF-Suspiciousness, 16PF-Independence, ROCI-II-Integrating, ROCI-II-Obliging, and JAS-Job Involvement. Related themes of social boldness (16PF-H), independence (16PF-Q<sub>IV</sub>), status seeking (CPI-Cs), social presence (CPI-Sp), and job involvement (JAS-Factor J) were evident. Like the related criterion scale, MPS-FDE appears to be tapping into social competence and dominance. The negative correlation between MPS-FDE and CPI-Sc (Self Control) was an interesting result in that this parallels the correlations found in connection with CPI-So and PRF-Im in Study 2. There is, therefore, some evidence that high scorers on MPS-FDE tend to be impulsive, excitable, and rebellious. Finally, the significant correlation with 16PF-Suspiciousness indicates that the high scorer on MPS-FDE is likely not trusting, but may, instead, be rather suspicious and self-opinionated.

The results in connection with the two ROCI-II scales indicated that high scorers on MPS-FDE are less likely than low scorers to use the two conflict resolution strategies labeled Integrating and Obliging. Interestingly, the common feature of these two strategies is a concern for others. Thus, the high scorer on the MPS-FDE scale tends not to use conflict resolution strategies that reflect a high degree of concern for others.

Results from the simulation exercises provided further information on the meaning of high scores on the MPS-FDE scale. One of the Telephone Supervisor In-Basket (TSIB) dimensions, Quality of Judgment, correlated significantly with MPS-FDE ( $r = .47$ ). Recall that none of the dimensions from the two in-basket exercises correlated with the second-order criterion factor scales. Quality of Judgment was designed to measure the overall appropriateness and quality of actions taken in the in-basket exercise. This correlation suggests that high scorers on MPS-FDE possess sound judgment, clearly distinguishing this secondary scale from its criterion counterpart.

Correlations between the role-play exercise dimensions and the two measures of FDE were very similar. For the most part, they built on, and were consistent with, results in connection with the personality tests. That is, high scorers on MPS-FDE were found to have strong interpersonal skills and were likely to take on leadership roles. The MPS-FDE scale did not correlate significantly with the Initiative/Innovation dimension, pointing up another potential source of difference between the two measures of FDE.

Turning to results for the structured interview, the two measures of FDE correlated significantly with Leadership, Entrepreneurship, and Performance Stability, while the MPS-FDE scale also correlated significantly with Communication. Both Leadership and Entrepreneurship are familiar themes. The Performance Stability correlation indicates that high scorers on MPS-FDE are likely able to react to pressure and challenge in a calm and level-headed manner. Finally high scorers on MPS-FDE also appear to be good communicators. The Communication dimension measures one's ability to present ideas and interact with others in an interpersonally-effective manner. It

includes both oral communication and body language and, therefore, can be seen as a measure of interpersonal poise and social effectiveness, at least in the context of one-on-one interactions.

Finally, at the bottom of Table 42, the correlations between the two criterion variables discussed in Study 1 [Overall Management Performance (OMP) and the 5-item Championship Criterion (5CC)], on the one hand, and the MPS and criterion measures of FDE, on the other, are reported in the first two columns. Unlike the criterion measure of FDE, the MPS-FDE scale did not correlate significantly with OMP. This result shifts, somewhat, the interpretation of the MPS-FDE scale away from its criterion counterpart. High scorers on the MPS-FDE scale are no more likely than low scorers to be rated as poor managers, overall. Finally, like its criterion counterpart, the MPS-FDE scale did not correlate significantly with the 5-item criterion measure of championship.

In summary, results in Table 42 indicate that the high scorer on the MPS-FDE scale is a dominant, outspoken, socially-poised, and independent person. When in conflict with others, s/he typically does not use strategies that show a concern for the other person's needs and objectives. S/he may be somewhat impulsive and mistrusting. The high scorer is likely very committed to his/her work and would tend to strive hard to achieve and compete. At the same time, the high scorer appears able to maintain a calm and level-headed approach to his/her work. S/he has a tendency to take on leadership roles and behaves in ways characteristic of entrepreneurs (e.g., risk taking). Finally, the high scorer is a good communicator who presents him/herself effectively in interpersonal situations.

*The MPS measure of Influence and Visible Drive.* Turning to the last column in Table 42, none of the AC battery scales correlated significantly with the criterion measure of IVD. This finding was reported and discussed in Study 2. The MPS-IVD scale, on the other hand, correlated significantly with a number of the variables measured in the AC battery, thus providing information on the meaning of MPS-IVD scores.

The profile of the high scorer on the MPS-IVD scale shares a common core theme of interpersonal effectiveness and poise with that developed in connection with MPS-FDE. Of the 12 AC battery scales that correlated significantly with MPS-IVD, seven also correlated significantly with MPS-FDE. Although there are some core similarities, the two MPS secondary scales can be clearly distinguished from one another. The MPS measure of IVD does not appear to measure the aggressiveness, assertiveness, and impulsivity found in connection with MPS-FDE. Evidence of suspiciousness and mistrustfulness do not appear to be present as well. Moreover, the high scorer on MPS-IVD does not appear to be as driven as is the high scorer on MPS-FDE. Finally, the high scorer on MPS-IVD is likely to use an Integrating style of handling interpersonal conflict, thus showing a concern for the views and needs of the other party. The correlates of MPS-IVD will now be discussed in more detail.

High scorers on MPS-IVD appear to be dominant, self confident, and outspoken people (CPI-Do:  $r = .33$ ; CPI-Sa:  $r = .24$ ; 16PF-H:  $r = .26$ ). They can also be described as extraverted, sociable, and uninhibited. Evidence of these characteristics can also be seen from the role play and interview results, particularly the latter. The role play Interpersonal dimension correlated significantly with MPS-IVD (as it did with MPS-FDE). Thus, high scorers on MPS-IVD appear to be socially skilled and effective in one-on-one interactions.

As noted briefly above, the high scorer on MPS-IVD is different from the high scorer on MPS-FDE in that the former is likely less aggressive, forceful, and independent. The MPS-IVD scale did not correlate significantly with some of the MPS-FDE correlates like CPI-Capacity for Status, CPI-Self Promotion, 16PF-Assertiveness, 16PF-Independence, PRF-Aggression, and PRF-Exhibition. Thus, although outgoing, sociable, and dominant, to a point, the high scorer on MPS-IVD would likely not display the degree of aggressiveness or hostility that a high MPS-FDE manager might. Moreover, the high scorer on MPS-IVD does not appear to be outgoing to the point that s/he engages

in behavior in order to draw others' attention. Rather, they appear to be assertive and outgoing, but not to the point of overpowering other people with demands that their needs be met and their ideas accepted.

A similar theme is seen from results on the ROCI-II. The manager high on MPS-IVD is likely to use an integrating style when dealing with interpersonal conflict. Such an approach reflects an attempt to meet both one's own and others' needs. Rahim (1983) noted that an integrating style involves an exchange of information and an examination of differences in order to reach a solution acceptable to both parties. It is a style that he noted often leads to creative solutions.

Turning to results for the structured interview, there is overlap between the MPS-FDE and MPS-IVD correlates. The Leadership, Entrepreneurship, and Performance Stability interview scales correlated significantly with both of the MPS secondary scales. Thus, like the high scorer on MPS-FDE, the manager with a high score on MPS-IVD could be expected to readily assume a leadership role in group situations and behave in ways characteristic of an entrepreneur. Finally, high scorers on MPS-IVD would likely be able to tolerate pressure and uncertainty effectively, with minimal disruption to their job performance.

Other results from the interview suggest that high scorers are well organized and carefully plan for future events. Moreover, their scores reveal a high level of commitment and dedication. They likely follow through on their promises and work diligently toward objectives. Finally, the significant correlation between Appraisal and Development and MPS-IVD suggests that high scorers pay attention to the needs of their subordinates and take the time to provide them with feedback and opportunities for development.

In terms of their attitudes and orientation toward work, the high scorer on MPS-IVD tends to be job involved—dedicated to his/her occupation. The JAS overall Type A scale did not correlate significantly, however, with MPS-IVD, as it did with MPS-FDE.



Although job involved and committed, the high scorer on MPS-IVD would not necessarily display the prototypic Type A behavioral pattern, manifested by extreme competitiveness, aggressiveness, impatience, and haste.

Turning to the lower right-hand corner of Table 42, the correlations with the two criteria collected in Study 1 are reported. Unlike the criterion rating scale measure of IVD, MPS-IVD does not appear to be significantly related to either OMP or 5CC. The lack of correlation with OMP suggests that MPS-IVD measures a construct unrelated to general management performance. One might expect (and hope) that the MPS-IVD scale would, however, correlate significantly with 5CC, the 5-item championship criterion that correlated significantly with IVD in Study 1 ( $r = .73$ ). The MPS-IVD scale correlation with 5CC, although significant at  $p < .05$ , cannot be construed as indicating strong evidence of convergence or overlap between these two variables. Whether this is a shortcoming of the MPS scale or the 5-item championship criterion is not clear. As noted and discussed in Study 1, it would be beneficial, in future research, to obtain an objective measure of the criterion (rather than supervisory ratings) in order to more definitively examine the validity of both the MPS, and the criterion, scales.

In summary, results in Table 42 suggest that the manager high on the MPS measure of Influence and Visible Drive tends to be outgoing, poised, and, in general, interpersonally effective. S/he likely lacks some of the abrasiveness and aggressiveness of the manager high on the MPS measure of Forceful Drive and Expediency. Such managers could be expected to take on leadership and entrepreneurial roles. When in conflict with others, high MPS-FDE managers likely work toward solutions that recognize the needs of the other party while also seeking to maximize their own needs. The high scorer is likely involved in and committed to his/her job, but is not likely to exhibit the extreme range of behaviors associated with the Type A behavioral syndrome (as was the high MPS-FDE manager).

The high MPS-IVD manager is likely to carefully plan and organize his/her activities, unlike the high scorer on the MPS-FDE scale who was likely to be somewhat impulsive. As well, s/he is likely to pay attention to the needs of his/her subordinates by providing feedback and developmental suggestions. The high MPS-IVD scorer may be more of a team player than the high MPS-FDE manager, who appears to have a strong streak of independence. Finally, high MPS-FDE managers tend to deal with stress and pressure in a manner that enables them to maintain a high level of effectiveness.

### Summary and Discussion

#### *Overview*

The higher-order model of championship developed for criterion measurement in Study 1 was used as a starting point for the development of a low-fidelity simulation of championship, called the *Management Practices Simulation (MPS)*. Based on the behavioral consistency model, the MPS was scored for 10 primary and two secondary scales, corresponding to the first- and second-order criterion factor scales.

Internal consistency reliabilities for the MPS primary scales ranged from a low of .37 to a high of .76. Correlations between the primary scales and their first-order criterion factor counterparts ranged from .02 to .26. As discussed, the psychometric adequacy of the 10 primary scales varied widely. A variety of techniques was used to examine the construct validity of the primary scales. A consideration of the available reliability and validity data led to the conclusion that, in its present form, the MPS primary scales suffered from shortcomings that would limit their usefulness as predictors of behavior.

MPS secondary scale internal consistencies were .70 and .72. These two secondary scales correlated .35 and .25 with their conceptually-related second-order criterion factor scale (.37 and .26 after correction for criterion unreliability). A variety of analyses designed to examine the construct validity of these secondary scales indicated

that the scales: (a) possessed adequate levels of internal consistency reliability, (b) showed adequate convergent and discriminant validity, (c) demonstrated a second-order factor structure highly similar to that associated with the first-order criterion factor scales, (d) correlated with many of the same AC battery scales as did their two criterion counterparts, and (e) were largely orthogonal, thus mirroring the orthogonality of the two second-order criterion factor scales.

Social desirability was, however, still a concern in connection with one of the two secondary scales, MPS-IVD. As reported earlier, this scale could not be balanced for social desirability. As a result, the measurement of championship and social desirability is confounded: high scores on MPS-IVD may reflect both high levels of championship as well as a tendency to present oneself in a positive light. This was, to some extent unavoidable, given the "heroic" or desirable elements of this secondary scale. The MPS-FDE scale is well-balanced for social desirability. In fact, the champion items were slightly more undesirable than the non-champion items.

#### *The Meaning of High Scores on the Management Practices Simulation*

A variety of methods were used to provide information on the construct validity of the MPS scales. Synthesizing the results from these various methods, it was found that measurement at the primary scale level was problematic. Many of the scales showed poor convergent and discriminant validity. The primary scales were, in some cases, empirically unrelated to the criterion scale they were designed to measure, despite the fact that they shared similar item content. A decision was made, therefore, to consider only the secondary scales as meaningful units of measurement, given their relatively superior psychometric properties.

The MPS-FDE scale was found to covary with many of the same AC battery scales as its criterion counterpart. The meaning of high scores on MPS-FDE was, therefore, similar in some respects to the meaning attached to high scores on the related criterion scale. It was found that high scorers could be described as dominant, assertive

and socially poised. They are likely somewhat impulsive and tend to be hard driving and job involved. Finally, the high scorer has a tendency to take on leadership roles and behave in ways characteristic of the entrepreneur. For the most part, this profile can be gleaned from both operationalizations of FDE.

The two most salient differences between the MPS-FDE scale and its criterion counterpart are found on the second page of Table 42. The MPS-FDE scale correlated significantly ( $r = .47$ ) with Quality of Judgment as measured by the TSIB; as well, it failed to correlate significantly with Overall Management Performance. These two results converge to suggest that high scores on the MPS-FDE scale are not necessarily indicative of low overall management performance, as they were in connection with the criterion measure of FDE. Rather, high scores on MPS-FDE appear to be unrelated to one's overall management performance, but are, rather, significantly related to one's level of judgment when carrying out administrative tasks.

Still, the MPS-FDE scale, like its criterion counterpart, taps into themes of interpersonal behavior that support the conceptualization of this simulation scale as a measure of the dark side of championship. The pattern of correlations reported in Table 42 together with the item content (reported in Appendix R) suggest that high scorers on this simulation scale would likely be similar to high scorers on the criterion scale. The dark side appears to have been replicated in a new context of measurement.

Turning to the MPS-IVD scale, there is evidence to suggest that the simulation is measuring components of the heroic side of championship. What it fails to measure is overall management performance. The IVD criterion scale correlated .80 with OMP, while the MPS-IVD scale correlated .07 with OMP. This secondary MPS scale appears to be unrelated to OMP.

The MPS-IVD scale correlations with the AC battery scales listed in Table 42 lead to a characterization of the high scorer as outgoing, poised, and socially effective and, as noted earlier, lacking in the aggressiveness and abrasiveness associated with high scorers

on MPS-FDE. High scorers on both secondary scales would likely be outgoing and ascendant people, but the high scorer on MPS-IVD might not have the "edge" that the high scorer on MPS-FDE might demonstrate. Like the high scorer on the MPS-FDE scale, the high MPS-IVD manager would tend to take on roles related to leadership and entrepreneurship. As well, the high scorer would tend to be involved in their job, but not to the point of demonstrating the typical Type A behavioral pattern of impatience and extreme haste. Rather, s/he would likely be planful and level-headed. S/he would tend to pay attention to the needs of others, by developing and providing feedback to his/her subordinates and by considering other peoples' needs when working through conflict.

Thus, although the MPS-IVD and MPS-FDE scales contain a common theme of interpersonal assertiveness and extraversion, they can be meaningfully distinguished on the basis of both their item content and their correlates. The picture of the high scorer on MPS-IVD that emerged from the analyses in Study 3 was one of dedication, focus, steadiness, planfulness, and concern for others. This dimension contained an element of *communion* that did not emerge from a consideration of both the item content and correlates of MPS-FDE. The high scorer on MPS-IVD may be a champion who is able to consider the other person and the needs of the organization.

#### *The Predictive Usefulness of the Management Practices Simulation*

Given that the main purpose of Study 3 was to design an instrument that could be used as an assessment tool to aid in the identification and selection of organizational champions, the relative predictive validity of the MPS is of central importance. Can the MPS be used to predict championship and would its use result in more accurate prediction of championship than the use of standardized, widely-used, generic assessment procedures? The results of Study 3 allow a conditional, not an absolute, answer to this question.

The two MPS secondary scales correlated with their conceptually-related criterion scales .35 and .25, respectively. None of the scales reported in Study 2 correlated with

these two criteria at levels that exceeded the MPS results. Recall that none of the AC battery scales correlated significantly at all with the IVD criterion. Thus, the present validity coefficient of .25, while not outstanding, represents the best measurement option in connection with the heroic side of championship reported thus far. The nearest competitor to the MPS-FDE scale was the Entrepreneurship dimension measured by the structured interview. Interestingly, this variable (along with the Entrepreneurship dimension scored from the role play exercises) comes closest to having been designed specifically for the purpose of measuring behavior relevant to championship.

Results of the multiple regression analyses demonstrated that the MPS scales added to the overall criterion-related validity of the AC battery scale linear combinations. In fact, for both the FDE and IVD criteria, the conceptually-related MPS scales had the largest beta weights. The results of Study 3 suggest that the MPS scales can be used to boost substantially the level of criterion-related validity achieved with scales from standardized personality inventories.

The present results do not, however, permit an unqualified celebration of the relative superiority of the MPS secondary scales as criterion correlates of championship. First, the MPS scales were constructed by means of item-analytic procedures that resulted in the selection of the most *promising* items from a larger item pool. The items included in the secondary (and primary) scales were chosen, in part, on the basis of item-criterion correlation. It is likely that the validity coefficients calculated overestimate the true validity of the instrument. The MPS items chosen because of their high item-criterion correlation may not, in a new sample, sum to yield secondary scales that are equally as valid as the level of validity obtained in Study 3. The issue is one of generalizability and the appropriate resolution calls for cross validation, a goal that should be pursued in future research.

The same is also true of the scale internal consistency reliabilities. These figures may be over-estimates of the level of scale homogeneity that might be found if the MPS

were administered and evaluated in a new sample. Ideally, both reliability and validity estimates of tests and their scales should be based on a sample separate from the one used to make item selection decisions. Thus, at present, the reliability and validity figures reported in connection with the MPS secondary scales must be interpreted with caution and viewed as possible over-estimates of true internal consistency reliability and criterion-related validity.

The 22- and 16-item versions of the two secondary scales should be validated in a new sample against criterion ratings of championship that incorporate the two-dimensional structure identified in Study 1. If such research were done, it is likely that the validity coefficients obtained in Study 3 would shrink. But this is an empirical issue and should be addressed in this manner.

A second issue in connection with the criterion-related validity of the MPS scales relates to criterion measurement. The MPS scales were correlated against supervisory ratings of championship. This approach is typical of validity studies in general. Rarely are objective criteria of performance available or even relevant. In the present study, criterion measurement was carefully done with a high level of reliability. Nevertheless, it should be noted that the validity coefficients reported in both Studies 2 and 3 relate to *ratings* of championship behavior rather than documented on-the-job accomplishments in the context of product or process innovation. To the extent that supervisory ratings of championship might disagree with actual, documented accomplishments related to championing products and processes, the findings of both Studies 2 and 3 can be challenged.

Finally, in connection with the two secondary MPS scales, it should be noted that, while it was possible to very-nearly balance the MPS-FDE scale for social desirability, such a balance could not be achieved on the MPS-IVD scale. Thus, if used as an assessment tool, it is likely that one could achieve a high score on IVD by choosing the most desirable response options. As noted in both Studies 1 and 3, it was difficult to

conceptualize the IVD dimension as anything other than a desirable, prosocial component of championship. This heroic side of championship is inherently socially desirable; its measurement was, therefore, plagued with this reality.

Notwithstanding these limitations, results from the MPS were encouraging and support its further study. Its overall level of validity (at the secondary scale level) compares favorably with validity coefficients reported by Motowidlo et al. (1990) in connection with their low-fidelity simulation, although, clearly, the MPS needs to be validated in a new sample. Importantly, as well, satisfactory levels of validity were achieved even though significant modifications were made to the traditional methodology of low-fidelity instrument development. This latter issue bears further discussion.

#### *Low-Fidelity Simulations as Measures of Multi-Dimensional Constructs*

The development of the MPS, although patterned after the low-fidelity simulation approach of Motowidlo et al. (1990) was unique in a number of ways. First, it was designed to predict behavior related to a role rather than a job. Second, because that role was found, in Study 1, to be multi-dimensional, the MPS was designed to be scored for a number of discrete dimensions. In order to address these unique measurement objectives, response options were generated and keyed for championship and dimensional membership prior to the drafting of scenarios. Dimensional keying (as well as keying for championship) was then done on the basis of results from two factor analyses.

Despite these modifications to the traditional developmental methodology of the low-fidelity simulation, respectable levels of criterion-related validity were achieved at the secondary scale level. Moreover, unlike the low-fidelity simulations designed to predict overall job performance, a moderate degree of interpretive significance can be attached to high and low scores on the two secondary scales: the scale scores are psychologically meaningful. Indeed, Motowidlo et al. (1990) acknowledged that their simulation was not designed to measure "...any particular predispositional sign or



construct" (p. 641). Its usefulness and utility was its predictiveness rather than its power to explain or describe behavior.

The results of the present study suggest that low-fidelity simulations can be developed as valid measures of a construct and that the methodology can be generalized from the analysis of jobs to the analysis of constructs or roles. There is some question, however, as to the ability of these simulations to measure a number of dimensions related to such constructs. In the present study, satisfactory measurement was achieved with the two secondary scales, but, as has been discussed throughout, this was not the case at the primary scale level.

It may be that, in a multi-scenario simulation, the various contexts change the meaning of response options originally designed to measure the same thing. Thus, what might be construed as an obvious and flagrant example of rule breaking in one context may be a trivial, insignificant impropriety in another. The context can change the meaning (certainly the degree) of the behavior. This is not a problem in connection with the Motowidlo et al (1990) approach because the dimensional membership of a response is irrelevant; rather, total scores represent the number of "correct" response options endorsed across the various scenarios.

#### *Application of the Management Practices Simulation*

As noted in the introductory section of this study, the aim of most selection procedures is to be valid, practical, and defensible in court (Schmitt & Ostroff, 1986). In this regard, the MPS was found to correlate significantly with supervisory ratings of championship and at levels that exceeded criterion correlations of a variety of standardized tests and simulation exercises. There is preliminary evidence, then, of criterion-related validity for the MPS secondary scales, but, as noted before, these scales should be cross-validated.

The MPS is practical. It takes approximately 30 minutes to complete. It can be administered in a group setting and its instructions are simple and straightforward.

Finally, it can be objectively scored in a matter of minutes. The MPS enjoys many of the benefits associated with low-fidelity simulations.

The issue of legal defensibility is one that, in Canada, is decided on a case by case basis. Like our neighbours to the south, we have professional standards for test construction [i.e., the Canadian Psychological Association (CPA) Guidelines] but these have not been codified by the judicial system. Our Guidelines clearly articulate standards for test development and validation that require publishers and distributors of tests to report information related to reliability, validity, and adverse impact. But the legal defensibility of a test is established in court, following, typically, a complaint by an individual who charges adverse impact. In such a court case, our CPA Guidelines are consulted by the court as a reflection of the professional standards of practicing psychologists but not as a legally-binding document.

As noted above, the legal process in Canada is complaint driven. The complainant must establish that the selection instrument shows adverse impact—a term that has been borrowed from the United States federal government as defined in their 1978 Uniform Guidelines on Employee Selection Procedures. To demonstrate adverse impact, the complainant must show that the selection rate for a given protected group is less than four-fifths the rate for the group with the highest selection rate. In practice, the Canadian Human Rights Commission (CHRC) has considered other information, as well, in determining adverse impact.

If a case of adverse impact can be proven, then it is up to the defendant (typically an organization) to show that the test is job related. This is done by showing that the test was developed following a careful job analysis and/or that the test is valid. In short, they must show evidence that the test is related to and relevant for the job in question.

The extent to which use of the MPS might result in adverse impact for various minority groups is, at present, unknown. The Study 3 sample was almost exclusively Caucasian. There is, however, gender data relevant to adverse impact. Mean scores for

men and women did not differ significantly overall on the 10 primary MPS scales. In addition, individual *t*-tests comparing mean scores for men and women for each primary scale failed to reveal any significant differences. There is no reason, therefore, to suspect that the MPS is likely to adversely affect the selection rate for women.

The technical information currently available on this test is likely adequate to enable the MPS to withstand a legal challenge if it were put into use and, in the future, found to adversely effect a given ethnic minority group. The MPS is based on a careful role (job) analysis, and, therefore, satisfies the CHRC specifications pertaining to job relatedness. Moreover, results related to criterion-related validity have been presented and are positive, at least in connection with the secondary scales. The research results, to date, are encouraging, but clearly, from a professional standpoint, further research is needed to: (a) cross-validate the present findings, and (b) examine issues related to adverse impact with minority groups.

In closing, the MPS is a special-purpose low-fidelity simulation that incorporates a number of innovations in simulation development. It was designed to measure a role or construct and it measures more than one dimension related to that construct. Its secondary scales correlated significantly with supervisory ratings of championship and at levels that exceeded the criterion correlations of a variety of scales from an extensive assessment center battery. The results thus far are promising and support the validity, practicality, and legal defensibility of the MPS. Nevertheless, further research on this instrument is needed before it is put into use for organizational decision making.

## SUMMARY AND CONCLUSIONS

The overarching and common purpose of the present research was to examine, in depth, the champion, with special attention given to an examination of his/her role and individual-differences characteristics. A structural model of championship was developed in Study 1 in which the champion role was defined by two levels of behavioral dimensions. In Study 2, individual-differences correlates of championship were reported and a psychological profile of the champion was developed in order to: (a) better understand the psychological profile of the champion, and (b) predict ratings of champion behavior. Finally, in Study 3, a low-fidelity simulation of championship, based on the behavioral consistency model, was developed and its psychometric properties examined.

The purpose of this chapter is to summarize concisely the main findings of the three studies and discuss the extent to which the results are consistent with the hypotheses outlined in the chapter preceding Study 1. That is, have the results reported in Studies 1, 2, and 3 changed our conceptualization of championship? Which hypotheses were confirmed and which were rejected and to what extent did new findings emerge that indicate interesting and promising areas for further investigation? Issues related to the generalizability of the results will be discussed throughout. Finally, some discussion on the implications of the results for theory and application will be offered.

### *Study 1*

In this study, it was hypothesized that a hierarchical model of championship would emerge to define and describe championship. This model would consist of three levels or strata. At the highest level would be championship, subsumed by two second-order dimensions, labeled Conceptualizing/Developing/Designing Innovation and Working to Promote Innovation in Table 2. These two second-order dimensions would, in turn, each be subsumed by a number of more specific behavioral dimensions. The dimension labeled Working to Promote Innovation would be judged to be most prototypic or central to championship.

The hypothesized structural model of championship did not emerge in Study 1. Instead, championship was represented by two (not three) levels or strata. Two second-order factors emerged that were orthogonal; thus, a third-level construct, championship, could not be defined. Moreover, the two second-order dimensions that emerged did not correspond to those hypothesized. Innovation was not one of the two second-order dimensions, as hypothesized. Rather, as discussed in some detail in Study 1, a *dark* and a *heroic* side to championship emerged and these two dimensions were judged to be roughly equal in prototypicality to overall championship.

Based upon the results obtained, the following conclusions appear warranted. First, championship is a multi-dimensional construct. Those persons who champion projects engage in a variety of behaviors that can be coherently organized into a number of discrete and specific dimensions. Application of the act frequency approach to the construct of championship led to the development of a refined and concrete multi-dimensional model of championship that illustrates the specific acts that champions perform.

Second, championship is a matter of degree. Managers can be ordered along a continuum of championship on the various first- and second-order dimensions. It appears justified to measure championship as a continuous, rather than discrete, variable. Managers are not either champions or non champions; behavior varies in degree. Like most variables in the behavioral sciences, championship is not truly dichotomous.

Third, championship is not solely the domain of the hero; rather, there exists a dark side to championship that is equally as central or prototypic to the construct as is the heroic side. In order to achieve their objectives, champions will, at times, need to break rules, promote themselves, behave impulsively, and aggressively dominate others.

Fourth, the heroic side of championship overlaps considerably with overall management performance ( $r = .80$ ), while the dark side correlates negatively with this same criterion ( $r = -.50$ ). The heroic champion will tend to be a successful manager, as

defined by conventional performance indicators (e.g., Communication Skills, Reasoning, Planning and Organizing), while the "dark" champion will tend to be rated as a lower-performing manager. There may be a price to pay for organizations who encourage behaviors that anchor the dark side.

The following research projects would represent logical "next steps" in the study of championship. First, the two dimensional higher-order structure should be replicated. Although steps were taken to obtain a stable and generalizable higher-order structure of championship in Study 1 (i.e., through the use of both self- and supervisory-report data and the generation of a common pattern), the existence of a heroic and dark side should be confirmed in a new sample. As well, the *criterion-related validity* of the first- and second-order factors should be explored. That is, do ratings on these dimensions correlate with objective indicators of championship? Finally, the implications of a dark side of championship for innovation should be pursued. Are innovations more likely to succeed if championed by a manager high on FDE or IVD? What types of innovations require forceful vs. collaborative championship? A brief outline of proposed research is given below.

#### *Replication of the Factor Structure of Championship*

A limitation of Study 1 was that the panel members who generated the initial pool of behavioral incidents were all BC Tel managers. This issue was discussed briefly in Study 1 and it was pointed out that the panel members: (a) worked in a variety of different operational divisions in the company (e.g., Finance, Sales and Marketing), and (b) worked in a "high-tech" business environment and, therefore, should be cognizant of issues related to product innovation. Nevertheless, if it was desired to replicate Study 1, it would be prudent to involve managers from a variety of industry types in the act generation process. As well, it would also be advisable to stress to panel members that some acts or behaviors might be cognitive in nature—that some behavior may be

designed to solve problems and create new things—in the hopes of obtaining statements related to innovation, a dimension absent from the present structural model.

In the interests of further testing the boundaries of the structural model, subordinate and/or peer (rather than self and supervisory) ratings might be used to obtain the item-level data needed for the factoring. As in Study 1, large samples would be required in order to obtain stable results. If these various steps were undertaken and a similar structure emerged, this would be compelling evidence for the generalizability of the dimensional structure reported in Study 1, and the existence of a heroic and dark side to championship.

#### *Validation of the Criterion Dimensions*

Although scores on the first- and second-order factor scales were correlated with a 5-item "criterion" measure of championship, this cannot be seen as a rigorous test of the *validity* of the factor scales. All data were obtained from supervisory ratings. The factor scales require validation against an objective, verifiable, criterion measure of champion participation and status—an index approaching an ultimate criterion, to use Dunnette's (1963) term for the ideal, but unreachable, criterion for validation research.

A realistic and suitable objective criterion measure of championship could be obtained through use of an approach similar to that employed by Howell and Higgins (1990a). It would start with the identification of innovation projects across a variety of industries and organizations. Individuals intimately involved in the innovation project would be asked to nominate a key figure who championed the project. Individuals would be recognized as champions only if nominated by all knowledgeable parties. These individuals would be administered the criterion checklist and their mean scores compared with the scores of managers who were also involved in the innovation project but not as champions. Such an approach would result in the development of a dichotomous criterion and the formation of two extreme groups. The group of champions should

receive significantly higher mean scores on the various first- and second-order factor scales than the non-champion group.

### *Championship and Psychopathy*

The connection between the dark side of championship and psychopathy was discussed in Study 1 and overlap between these two constructs was noted. The literature on psychopathy was used to better understand the meaning of high scores on FDE. At the same time, it was stressed that high scorers on FDE were not necessarily psychopaths. This connection bears further examination.

Beginning with a case study approach, the following research issues might be addressed. First, are there psychopaths among the corporate champions and how do these "corporate psychopaths" or white-collar/sub criminal psychopaths behave? Do they demonstrate the interpersonal and affective traits of the psychopath? Are they able to cover up their anti-social and irresponsible behavior by acting in charming and otherwise socially-effective ways? Secondly, what is the incidence of psychopathy among self-selected champions of innovation? It is almost certainly not as high as in the criminal population, but is likely higher than in the adult general population where the incidence is roughly 1% (Hare, 1993).

The relationship between psychopathy and innovation success would also be worth examining. Specifically, is there a relationship between both: (a) initial innovation success (implemented vs. not implemented), and (b) long-term innovation success, on the one hand, and psychopathy? It seems likely that a champion motivated by his/her inner needs is more likely that a heroic champion to persist with "bad" ideas that are likely to fail or lead to negative organizational outcomes. Thus, one might expect a negative correlation between psychopathy and long-term innovation success, but no correlation between psychopathy and initial innovation success.



### Study 2

Hypotheses for Study 2 (as reported in Table 14) were drawn from the findings of previous research, organized in Table 3 into dimensions of personality and cognitive ability. Some of the hypothesized relationships emerged, whereas others did not. As discussed in Study 2, it is possible that some relationships did not emerge due to psychometric limitations acknowledged in connection with IVD.

Hypotheses were originally proposed with reference to *overall* championship. Since the two second-order factor scales uncovered in Study 1 were orthogonal, an overall score for championship was not computed. Instead, hypotheses were examined in light of AC battery scale correlations with the two second-order criterion factor scales. Not one of the AC battery scales correlated significantly ( $p < .01$ ) with IVD. Thus, as noted in Study 2, the individual-differences profile of the champion was based, exclusively, on AC battery scale correlations with FDE.

Notwithstanding these limitations, a number of hypotheses were supported and a clear and consistent profile of the champion emerged at the conclusion of Study 2. The following conclusions appear warranted.

First, the champion is an interpersonally forceful, dominant, even aggressive and exhibitionistic figure. A number of previous researchers had commented on this aspect of the champion personality. Correlations between a number of scales from the personality inventories, the role play, and the interview support this conclusion.

The sensitivity, consideration, and tact reported by previous researchers did not emerge, although this was not hypothesized. Although collaboration and support was a component of the criterion scales, traits related to this criterion did not emerge. The champion's interpersonal effectiveness appears to come from forceful persuasion rather than considerate accommodation and empathic support.

Second, the champion is a competitive, ambitious, and driven individual. These conclusions are based on the criterion correlations involving the JAS and the

Entrepreneurship scale from the Interview. These relationships support hypotheses 5 and 6 in Table 14.

Third, the champion is somewhat impulsive, impatient, and likely to break rules. These relationships were predicted in hypothesis 8. Hypothesis 9 was also supported in that the role play and interview measures of Initiative/Innovation correlated with championship. Taken together, these results paint the picture of a manager willing to take risks, try new things, bend the rules, and behave in an opportunistic manner.

None of the hypotheses related to cognitive ability were supported. General cognitive ability and innovation do not appear to covary with rated championship. The managers in Study 2 were, on average, a fairly select group, in terms of general intelligence (the group average on the Wonderlic Personnel Test was just above 60). Thus, pre-selection may have driven down the correlations for general intelligence, but the same explanation would not apply to innovative thinking, given that the mean score for the group was just below 50.

Some limitations apply to the Study 2 results. This study was supported by one large Western Canadian organization. This was desirable since the objective was to conduct a validity study (cross-organizational validity studies pose a number of methodological problems). The generalizability of the results from the present research, are, as a result, limited somewhat by this fact. To the extent that the correlates of championship at BC Tel are different from the correlates that might be found in other organizations, the present results may not generalize. These are empirical issues that can and should be addressed in future research.

In support of the generalizability of the present results, the profile obtained overlapped significantly with that reported in Table 3, based on the literature review. Thus, in a sense, the descriptively-based individual-differences profile of the champion reported in Table 3 can be seen as a retrospective cross-validation of the Study 2 findings. Moreover, it was also encouraging to see the same traits emerging as correlates of

championship across the various tests (e.g., CPI and PRF) and assessment domains (e.g., personality assessment and the interview).

*Individual-Differences Characteristics and the Two Faces of Championship*

As noted before, the psychological profile of the champion obtained was based largely on AC battery scale correlates with FDE. As a result, the individual-differences profile is slanted toward the dark side. There are two possible explanations for the lack of AC battery scale correlation with IVD. As noted before, this may be a methodological artifact; that is, the low IVD criterion scale variability may be to blame for the lack of significant AC battery scale correlation. A second possibility is that the heroic side of championship is largely unrelated to basic traits.

The plausibility of this latter possibility could be examined in future research. If the dark side is largely trait related, then, barring concerted and long-term efforts at change (i.e., psychotherapy), one might expect this class of behavior to remain relatively constant within people over time. If the heroic side is not trait related, but, instead, develops with experience and training, then one might expect to see shifts in people's behavior over time. It appears likely that many of the behaviors associated with IVD might develop with exposure to corporate life. For example, political skill and competence related to collaboration and teamwork could be expected to develop with experience in most people.

This issue could be operationalized, for example, as part of a longitudinal study in the spirit of the Management Progress Studies conducted by Bray and Campbell (1968) and Bray and Grant (1966) at American Telephone & Telegraph (AT&T). Managers could be rated by their supervisors on the criterion checklist after one year of employment with the organization (to provide an entry base-line) and, then, at 5-year intervals over the course of, say, 20 years. If the heroic side of championship is largely a result of training (rather than predisposition), then one might expect to see changes in the IVD scale scores over time that exceed those associated with the FDE scales.

This would be, obviously, an ambitious research project, that might pay only minimal dividends. A simpler and more direct approach would be to attempt to replicate the results of Study 2 in a new sample. Future research on the individual-differences characteristics of the champion should include criterion measurement of the two sides of championship in order to test empirically this issue.

### *Study 3*

The purpose of Study 3 was to develop a new instrument, a low-fidelity simulation. Based on the behavioral consistency model, this instrument was designed to measure the factor scales obtained in Study 1. Items were chosen for the simulation scales in order to both maximize scale: (a) internal consistency reliability, and (b) criterion-related validity. No hypotheses were made with respect to Study 3. Rather, the objective was to develop a new assessment tool that should, based on the logic of the behavioral consistency model, possess criterion-related validity exceeding that achieved with conventional assessment instruments.

Results of Study 3 point to five major conclusions. First, the *Management Practices Simulation (MPS) secondary* scales possessed a satisfactory level of criterion-related validity. The MPS-FDE and MPS-IVD scales correlated .35 and .25 with their two criterion counterparts FDE and IVD, respectively. Second, the criterion correlations exceeded those achieved in connection with any scale contained in the assessment battery. Third, the secondary scales measure what they were designed to measure—the constructs articulated and discussed in connection with criterion measurement in Study 1. Fourth, significant modifications can be made to the traditional methodology of low-fidelity simulation development that still lead to the development of an instrument with desirable psychometric properties. Fifth, low-fidelity simulations can be designed to measure validly multi-dimensional constructs. Their use need not be restricted to prediction of *overall* job performance.

### *The Criterion-Related Validity of the Management Practices Simulation*

An attempt was made to obtain adequate measurement with the MPS at the primary scale level. As discussed in Study 3, this objective was not met. Although the criterion correlations of some of the primary scales (particularly those associated with FDE) were significant, results of the MTMM analysis revealed poor discriminant validity for the primary scales, overall. As well, a comparison of the correlates of the MPS primary and conceptually-related first-order factor scales revealed, in most cases, minimal conceptual overlap. As a result, MPS measurement was restricted to the secondary scale level.

As noted above, the MPS-FDE and MPS-IVD secondary scales correlated .35 and .25 respectively, with their criterion counterparts. Admittedly, this level of criterion correlation was achieved by selecting items on the basis of their correlation with the criterion. Although this was not the sole criterion for item selection (item-total scale correlations and item social desirability were also salient concerns), the MPS secondary scale validities will likely shrink somewhat upon cross validation. A higher level of criterion-correlation for each scale could easily have been achieved if concerns related to internal consistency reliability and/or balance for social desirability were neglected. This was, however, deemed unwise, given that the scales were designed to be used in a selection context where applicants would likely be motivated to present themselves in a positive light.

In terms of the relative validity of the MPS secondary scales, recall that none of the AC battery scales correlated significantly ( $p < .01$ ) with the IVD criterion. Since the MPS-IVD scale correlated  $r = .25$  ( $p < .005$ ) with its criterion counterpart, it surpassed the level of criterion-related validity achieved with any component of the AC battery. The same was also true for the MPS-FDE scale. Its criterion correlation of .35 surpassed even that achieved with the interview measure of Entrepreneurship. Results of the multiple regression analyses demonstrated the incremental validity of the MPS secondary

scales over the level of multivariate correlation that can be achieved with standardized personality scales. The MPS secondary scales do a better job of correlating with the two second-order factor scales than any component of the AC battery.

As noted above and in the discussion section of Study 3, the MPS secondary scale criterion validities will likely shrink somewhat upon cross-validation. Thus, although they correlated with the criteria to a greater extent than any of the AC battery scales, this relative advantage might not hold up if the study were replicated in a new sample. Nevertheless, the validity results achieved are promising and compare favorably with the validities reported in connection with other low-fidelity simulations (e.g., Motowidlo et al., 1990; Motowidlo and Tippins, 1993). The use of the behavioral consistency model appears to have resulted in the development of an instrument with two secondary scales that possess desirable psychometric properties.

#### *Construct Validity of the Management Practices Simulation*

The secondary scales of the MPS appear to measure constructs similar to those measured by the second-order criterion factor scales. This was demonstrated by: (a) the MTMM analysis, (b) the exploratory and oblique procrustes factor pattern solutions, and (c) the correlational analyses in which it was shown that the AC battery scale correlates of the MPS secondary and second-order criterion factor scales were very similar. A high degree of construct similarity was, of course, expected, since the MPS items were taken from the criterion scales, thus building in item overlap, and, as a result, content validity.

Based on the results reported in Study 3, the high scorer on MPS-FDE can be described as dominant, assertive and socially poised, familiar adjectives from Studies 1 and 2. They are likely somewhat impulsive and tend to be hard-driving and job involved. Finally, the high scorer has a tendency to take on leadership roles and behave in ways characteristic of the entrepreneur. The high scorer on MPS-IVD can be described as outgoing, poised, and socially effective but lacking in the aggressiveness and abrasiveness associated with high scorers on MPS-FDE. Like the high scorer on the MPS-FDE scale,

s/he would likely take on roles related to leadership and entrepreneurship. The high scorer would tend to be involved in his/her job, but not to the point of demonstrating the typical Type A behavioral pattern of impatience and extreme haste. Finally, the high scorer would tend to pay attention to the needs of others, by developing and providing feedback to his/her subordinates and by considering other peoples' needs when working through conflict.

The overlap between MPS-FDE and its criterion counterpart is obvious. The relationship between MPS-IVD and its conceptually-related second-order factor scale is more difficult to ascertain, in large part because none of the AC battery scales correlated with this second-order criterion factor scale. Nevertheless, the MPS-IVD correlates do paint a prosocial picture of the high scorer on MPS-IVD. Moreover, the MTMM and factor analytic solutions support the notion that the two operationalizations of IVD converge.

#### *Innovations in Low-Fidelity Simulation Design*

As discussed in some detail in Study 3, the development of the MPS did not follow closely the developmental steps outlined by Motowidlo et al. (1990). These differences were due largely to the fact that: (a) the MPS was designed to measure a construct rather than a job or job family, and (b) the MPS was designed to measure a multi-dimensional construct. Even though significant modifications were made to the traditional methodology, promising levels of criterion-related validity were achieved. The secondary scale validities achieved in Study 3 ( $r = .25$  and  $.35$ ) compare favorably with those reported by Motowidlo et al. ( $r = .28$  to  $.37$ ).

It appears reasonable to conclude that low-fidelity simulations can be designed to measure more than overall job effectiveness. The results of Study 3 show that a low-fidelity simulation can be developed and scored to measure reliably and validly two dimensions of championship. Multi-dimensional measurement was likely achieved successfully because the dimensionality of the criterion was established as a first step,

thus providing a solid, empirically-based blueprint for the development of multiple MPS scales. Admittedly, adequate measurement was not possible at the primary scale level, but this might be asking too much of a relatively brief assessment tool.

### *An Overall Summary And Synthesis of the Three Studies*

Considering the results of all three studies together, some common and core themes are apparent. First, and most generally, championship can be meaningfully studied using an individual-differences, assessment-based paradigm. That is, individuals can be scaled along a continuum on criterion and predictor scales and this scaling reflects meaningful differences in behavior and temperament. Second, championship appears to be a multi-dimensional construct that can be described according to a number of behavioral and trait dimensions. Third, a heroic and dark side of championship emerged in all three studies. Fourth, championship is, in large part, an interpersonal phenomenon. It has little to do with cognitive ability, general or specific. Fifth, men and women do not appear to differ with respect to their group mean scores on the various scales—both criterion and predictor—at least in Studies 1 and 3 where mean differences could be tested.

Given that the champion has been found to be such an important figure in the process of innovation, it seemed desirable to explore this role in the context of assessment. The development of behavioral scales and the identification of trait correlates of these scales was guided by few precedents. As has been acknowledged throughout this document, quantitative data on the behavioral and/or the individual-differences characteristics of the champion is scant. The application of traditional assessment methodology to this construct has led to the development of an empirically-based view of the champion that overlaps but is different in a few key respects from the image reported by others.

Part of this unique view of the champion involves the notion of a continuum: that managers can be ordered along a scale reflecting their degree of championship. The



implication is that championship is not a true dichotomous variable, as it has been treated by previous researchers. Just as people in the general population can be ordered along a continuum on such variables as extraversion or leadership, individuals who work in organizations can be meaningfully characterized as possessing varying degrees of championship. Some will be prototypic champions or non-champions, but most will fall somewhere in between.

Moreover, championship is a multi-dimensional construct and should be treated as such in future research. Such a treatment reflects the individual-differences paradigm adopted in the present research and respects the complexity of the phenomenon when studied at this level. The finding of two orthogonal higher-order dimensions of championship forces one to consider that there might be more than one side to championship...more than one road or path that leads to implementation of innovation. This finding, if corroborated, could lead to interesting new research on the relationship between championship and innovation success. At the least, perhaps we should stop discussing championship as if it were a single, coherent, homogeneous construct and begin recognizing its diversity.

Championship appears to be largely a function of personality, rather than cognitive ability. This is reflected by the absence of criterion dimensions related to analytical reasoning ability and, especially, innovation in the structural model of championship developed in Study 1. It is also reflected by the failure of the cognitive ability tests in the AC battery to correlate with the criterion dimensions. Themes of dominance, persistence, interpersonal skill, drive, impulsivity, and unconventionality surfaced repeatedly. But intelligence or creativity appear to have little to do with the construct.

Interestingly, and surprisingly, no gender differences were found. That is, mean scores on the criterion and simulation scales did not differ significantly for men and women (mean differences on the various components of the AC battery could not be

examined). For the select group of men and women studied, championship was unrelated to gender.

### *Implications for Application and Theory*

Since this research project was guided by an assessment paradigm, with a focus on selection, the *application* of the present findings must be considered. That is, has the present research resulted in the development of instruments that can be used to assist the Human Resource function in identifying and selecting champions? A definitive answer must await the results of further investigation.

A variety of assessment tools have been developed in this research project that show promise for identifying champions. But these are new instruments, and, therefore, require further evaluation. This does not preclude their use, but it does call for an ongoing commitment to instrument development and refinement. Specifically, the issue of the validity of the criterion scales was raised earlier as was their generalizability. Similarly, the generalizability of the criterion-related validities reported in Studies 2 and 3 should be addressed. At present, it seems fair to conclude that the results of the three studies have led to the development of instruments that have been tailored specifically to the measurement of championship and that these instruments show desirable psychometric properties.

Should others wish to use the instruments developed in this research project, they should be counseled to make a commitment to collect further data on the reliability and validity of these tools. With respect to the criterion scales developed in Study 1, norms are currently available for self- ( $n = 433$ ) and supervisory- ( $n = 174$ ) report ratings. Given the current interest in bottom-up appraisal, it might be of interest to use the criterion scales for this purpose. At present, no norms exist for ratings made by either subordinates or peers; this data would need to be collected if subordinate or peer ratings on championship were desired.

Of the various instruments examined in Studies 2 and 3, the following showed promise in the prediction of one side of championship, Forceful Drive and Expediency: (a) the MPS, (b) the structured interview, (c) the JAS, and (d) a combination of 16PF, CPI, and PRF scales (based on the multiple regression results). Organizations who wish to select champions using psychological assessment, should be informed, clearly, that this may be possible for one side or aspect of championship, that associated with forcefulness, self promotion, rebelliousness, and impatience, but that prediction of the other side has not been adequately demonstrated. The MPS shows promise for this purpose and should be evaluated further, but, at present, it appears that selection systems may have only minimal utility in the prediction of the heroic side of championship.

Turning to less applied concerns, has the *theory* of championship been advanced? The answer to this question is, I believe, an unqualified yes for many of the reasons noted earlier. First, we have a structural model of championship, based on the behavior of the champion. This model is empirically-based and was found to generalize across both self- and supervisory report data. The emergence of a dark side raises interesting and highly relevant research issues that, if pursued, should lead to further developments in the theory of championship.

The present results confirm the findings of previous descriptive research on the champion. Thus, a common core set of traits and characteristics have been identified from both empirical and descriptive research. As a result, we can have greater confidence in the validity of the trait profile of the champion that has, until now, been based largely on general impressions of character and style. It was both re-assuring (and, in some ways, ironic) that the results of Study 2, based, as they were, on highly standardized and structured assessment tools, lent support to the validity of trait descriptions obtained via largely descriptive and unstructured methods.

The results of Study 3 lend support to the behavioral consistency model. A *predictor* instrument was designed based on the *criterion*. Wernimont and Campbell

(1968) and Asher & Sciarrino (1974) predicted that the closer the predictor to the criterion, the greater its potential validity. As discussed earlier, the MPS secondary scales showed greater criterion-related validity than any of the AC battery scales in Study 2. The results of Study 3 thus confirm this early prediction, as do many of the reports of assessment center, situational interview, and low-fidelity simulation validity.

Looking toward future research on championship, the two most central issues appear to revolve around the two-dimensional structure of championship obtained. First, we need to examine further the relationship between the dark side and psychopathy. If a more definitive connection between the two is established, how high should scores on FDE be before they signal trouble? Second, we need to think very carefully about the implications of selecting managers on the basis of high predicted scores on the dark side. Selection for the dark side may be advantageous if forceful championship is needed. There may a cost, however, if the behavior of persons so selected is, in other respects, counterproductive.

As in most industrial assessment situations, selection decision making is (should be) guided by corporate strategy. Given the relationship established earlier between innovation success and championship, organizations wishing to pursue a strategy of innovation would be advised to hire managers who can champion projects. Organizations pursuing a maintenance or low-growth strategy will, other things being equal, be less likely to require champions and their selection (and performance appraisal) systems will likely reflect this difference.

The results of the present research can be of value to those organizations pursuing a strategy of innovation. But, with respect to selection, given the "unpredictability" of the heroic side of championship, those who design and implement selection systems and those who make hiring decisions need to consider carefully the potential costs associated with the selection of managers based on tests that correlate with the dark side. Unmitigated and high levels of FDE among those selected could lead to a variety of

negative outcomes like internal conflict, even white-collar crime. If such a selection strategy were pursued, then it would also be important to examine the extent to which those hired later demonstrate the behaviors associated with the heroic side. Assuming these behaviors can be trained, efforts toward this end might permit the more communal and heroic aspects of championship to balance those associated with the dark side.

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APPENDICES

APPENDIX A

BOOKLETS USED IN FIRST TWO PANELS TO GENERATE THE BEHAVIORAL  
INCIDENTS OR ACTS

CORPORATE INNOVATION AND THE IDENTIFICATION OF  
CHAMPIONS

RATING BOOKLET FOR BCTEL PANEL  
MEMBERS

PART A

NAME: \_\_\_\_\_

GENDER: \_\_\_\_\_

DEPARTMENT: \_\_\_\_\_

ROSS M. WOOLLEY  
DEPARTMENT OF PSYCHOLOGY

DECEMBER 1992

## PART A

The champion is an individual who informally emerges to take a new idea for either an administrative or technical innovation (an idea s/he may or may not have generated) and introduces, pushes, promotes, and sells the idea to others in the organization.

Please think of two people you know who you would describe as champions, ideally, one man and one woman. With these individuals in mind, write down 15 or 20 statements describing behaviors they might perform that would reflect their status as a champion.

Please keep in mind the following things when composing the statements below:

1. The champion can be either male or female
2. The champion can be involved with either technical or administrative innovation
3. The champion need not have been the one to originally generate the new idea
4. Please ensure that the statements you write describe behaviors--things the champion does--and are not just adjectives (e.g., creative, innovative, aggressive) that describe the champion
5. The statements you write need not describe either positive/desirable or negative/undesirable behavior

---

Please record your 15 to 20 statements below:

- 1.
- 2.
- 3.
- 4.
- 5.



**PART A cont.**

**Remember.....The champion is an individual who informally emerges to take a new idea for either an administrative or technical innovation (an idea s/he may or may not have generated) and introduces, pushes, promotes, and sells the idea to others in the organization.**

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# **CORPORATE INNOVATION AND THE IDENTIFICATION OF CHAMPIONS**

## **RATING BOOKLET FOR BCTEL PANEL MEMBERS**

### **PART B**

**NAME:**

---

**ROSS M. WOOLLEY  
DEPARTMENT OF PSYCHOLOGY**

**DECEMBER 1992**

## PART B

Now, consider the individual who you would consider to be entirely lacking in the characteristics of the champion. Such a person would never engage in any of the behaviors characteristic of the champion. Think of two people you know who you would describe as completely lacking in any of the characteristics of the champion. Such individuals would never have engaged in any of the behaviors you have just scripted. These people could, however, be very good--performing managers, valued people in the company operating at junior or senior levels.

In thinking about these two individuals, reconsider, the highly-characteristic champion behaviors you just composed. These next 15 to 20 statements should reflect a complete absence of the fifteen behaviors you just wrote. They should **not** be merely a negative re-statement of the highly-characteristic champion behaviors. Please write down 15 to 20 behaviors that would reflect or exemplify a complete absence of championship.

---

Please keep in mind the following things:

1. The non-champion can be either male or female
2. Please ensure that the statements you write describe behaviors--things the non-champion does--and are not just adjectives that describe the non-champion.
3. The statements you write need not describe either positive/desirable or negative/undesirable behavior

**Please record your 15 to 20 statements below:**

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- 2.
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- 4.
- 5.
- 6.

## PART B cont.

- 7.
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- 10.
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- 14.
- 15.
- 16.
- 17.
- 18.
- 19.
- 20.

APPENDIX B

BOOKLETS USED IN THE THIRD PANEL TO GENERATE THE BEHAVIORAL  
INCIDENTS OR ACTS

CORPORATE INNOVATION AND THE IDENTIFICATION OF  
CHAMPIONS

RATING BOOKLET FOR BCTEL PANEL  
MEMBERS

PART A

NAME: \_\_\_\_\_

GENDER: \_\_\_\_\_

DEPARTMENT: \_\_\_\_\_

ROSS M. WOOLLEY  
DEPARTMENT OF PSYCHOLOGY

JANUARY 1993

## PART A

The champion is an individual who informally emerges to take a new idea for either an administrative or technical innovation (an idea s/he may or may not have generated) and introduces, pushes, promotes, and sells the idea to others in the organization.

Please think of two people you know who you would describe as champions, ideally, one man and one woman. With these individuals in mind, write down 15 or 20 statements describing behaviors they might perform that would reflect their status as a champion. Please focus exclusively on generating behaviors that are **not** particularly desirable or are less than desirable.

Please keep in mind the following things when composing the statements below:

1. The champion can be either male or female
2. The champion can be involved with either technical or administrative innovation
3. The champion need not have been the one to originally generate the new idea
4. Please ensure that the statements you write describe behaviors--things the champion does--and are not just adjectives (e.g., creative, innovative, aggressive) that describe the champion

---

**Please record your 15 to 20 statements below:**

- 1.
- 2.
- 3.
- 4.
- 5.

**PART A cont.**

**Remember.....The champion is an individual who informally emerges to take a new idea for either an administrative or technical innovation (an idea s/he may or may not have generated) and introduces, pushes, promotes, and sells the idea to others in the organization.**

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# **CORPORATE INNOVATION AND THE IDENTIFICATION OF CHAMPIONS**

## **RATING BOOKLET FOR BCTEL PANEL MEMBERS**

### **PART B**

**NAME:**

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**ROSS M. WOOLLEY  
DEPARTMENT OF PSYCHOLOGY**

**JANUARY 1993**



## PART B

Now, consider the individual who you would consider to be entirely lacking in the characteristics of the champion. Such a person would never engage in any of the behaviors characteristic of the champion. Think of two people you know who you would describe as completely lacking in any of the characteristics of the champion. Such individuals would never have engaged in any of the behaviors you have just scripted. These people could, however, be very good--performing managers, valued people in the company operating at junior or senior levels.

In thinking about these two individuals, reconsider, the highly-characteristic champion behaviors you just composed. These next 15 to 20 statements should reflect a complete absence of the fifteen behaviors you just wrote. They should **not** be merely a negative re-statement of the highly-characteristic champion behaviors. Please write down 15 to 20 behaviors that would reflect or exemplify a complete absence of championship. **These statements should reflect highly desirable behavior.**

---

Please keep in mind the following things:

1. The non-champion can be either male or female
2. Please ensure that the statements you write describe behaviors--things the non-champion does--and are not just adjectives that describe the non-champion.

Please record your 15 to 20 statements below:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

## PART B cont.

- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
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## APPENDIX C

## LIST OF EDITED NON-REDUNDANT BEHAVIORAL INCIDENTS, ORGANIZED INTO FOUR GROUPS: (A) CHAMPION, (B) CHAMPION UNDESIRABLE, (C) NON-CHAMPION, AND (D) NON-CHAMPION DESIRABLE

## CHAMPIONSHIP BEHAVIORS GENERATED BY FIRST TWO PANELS

1. I relate daily to individuals at all levels in the department (e.g., talk with clerks, check on progress of team members).
2. I use humor to put people at ease.
3. I listen attentively to people's ideas and feelings.
4. I present a professional image to others through clothing choice.
5. I only speak in meetings when I have a thought or idea that I strongly believe in; I don't make comments simply to attract attention.
6. I make sure I rub shoulders with powerful individuals in other departments and business units in the company.
7. I'm able to sell ideas to subordinates one-on-one.
8. I publicly announce my intentions and objectives (e.g., we will get this contract by years end).
9. I can display anger and frustration at the "work-to-rule" attitudes of others.
10. I tend not to bow/defer to the voice of authority.
11. I tend to use effectively my political contacts in the company.
12. I tend to do everything very quickly (walking, talking, writing, driving, etc.).
13. I am generally aware of news of current events both nationally and internationally, especially in terms of how that news might impact the business world.
14. I am informed and aware of outside market influences on the company.
15. I tend to start early and work late when I'm emotionally involved in a particular project.
16. I tend to dominate meetings with my opinions and visions when I wish to convince others to accept my point of view.
17. I'm able to sell ideas to subordinates in meetings.
18. I ensure that my successes in the company are known.
19. I socialize primarily with people in the company and key suppliers.
20. I network with company people in other departments.
21. I enjoy challenging established methods at work; I rather enjoy rocking the boat.
22. I volunteer for task forces and other related activities that allow me to be a change agent.
23. I develop and mentor others in the company.
24. I am involved in personal development both at work and outside of work (e.g., continuing education, cooking classes, etc.).
25. I'm able to sell ideas to superiors in meetings.
26. When I speak about topics at work, I do so in a very enthusiastic manner.
27. I make very distinct eye contact with others when I talk with them.

28. When I'm at a meeting or in a more casual setting at work, I tend to be the center of attention.
29. I am constantly organizing and re-organizing my daily, weekly, and monthly schedule to maximize efficiency.
30. I am involved in community activities.
31. I am very serious when at work, maintaining my focus on the task at hand.
32. I'm not afraid to speak up when with large groups of people.
33. When I communicate, I tend to do so with my body (e.g., hands, arms) as well as my voice.
34. I tend to greet people at work in a very enthusiastic and friendly manner.
35. I work to motivate teamwork--cooperation and collaboration among team members.
36. I am successful when I attempt to "rally the forces" in support of an idea.
37. I'm able to sell ideas to superiors one-on-one.
38. When I make a decision, I like to push ahead and take action--implement.
39. I try to keep an open mind to new ideas.
40. I work to communicate with others frequently by practicing "management by walking around".
41. I empower subordinates to take action on their own.
42. I use a wide variety of skills to analyze a situation when working toward making a decision.
43. I focus on the pragmatics of the situation at hand; I work to find a solution without allowing more peripheral issues or outside forces to complicate the issue.
44. I hold brainstorming sessions to determine the "ideal world".
45. I analyze a situation/problem from a variety of perspectives and consider all options before selecting a solution.
46. I obtain the needed resources to do the job; I convince people of the need for change so that others will resource the idea.
47. I have a keen ability to see the process or the "overall picture": I'm able to understand inter-relationships and effect an action linked through multiple disciplines.
48. I am able to often gain the cooperation of others through various means.
49. I get frustrated when I see things that have been done at work that are not correct.
50. I have good time management skills.
51. I am able to reduce an overall process to it's smaller parts and then systematically, take action on each of the parts.
52. When I hand off a job to someone else, I go out of my way to include all details that the new person will need.
53. When I make a promise to someone in the organization, I always keep it.
54. I am considerate of other peoples' well being in the company.
55. I take a positive and optimistic stance in working toward the resolution of problems.
56. I am good at getting people and groups to clarify their points.
57. I have a vision of how I would ideally like to see things accomplished at work.
58. After I have spent time pondering and considering an idea, I won't leave it alone until some action begins.

59. I'm not afraid to tell others, in a direct and forceful manner, what should be done.
60. I support people to get the best out of them.
61. I coach others about their weaknesses.
62. I usually think of other peoples' needs and priorities before making decisions.
63. I celebrate my own and other peoples' accomplishments at work.
64. I develop a comprehensive "game plan" complete with time frames and then stick to it.
65. I remain focused on tasks; I'm not easily distracted.
66. I am always able to find solutions to old and new problems by myself.
67. I tend to challenge existing ways of doing things.
68. I never take "no" for an answer.
69. When someone says that a new idea just won't work, I always challenge that belief.
70. I initiate status updates: I follow up in meetings or on the phone.
71. I usually deliver persuasive presentations.
72. I hold others accountable for delivering what they promise.
73. I recognize the achievements and accomplishments of others both publicly and privately.
74. I sell ideas to senior managers through presentations, reports, or voice messages.
75. I tend to speak my mind, regardless of the audience.
76. I always come to meetings well prepared.
77. I address every task with urgency.
78. When confronted with a series of tasks, I do the most important one first, do it only once, and don't over analyze or agonize over my actions.
79. I rebound from disappointments easily and quickly and get back to work.
80. I'm good at identifying winning solutions and then aligned myself with them.
81. I'm able to motivate individuals *required* to participate in projects.
82. I have worked, over time, to develop credibility with peers, subordinates, and superiors.
83. I'm comfortable taking risks at work and moving out into unknown business areas.
84. I'm able to generate easily a number of new ideas each day.
85. I am able to get the time of executives in the company in order to communicate my ideas.
86. I enjoy getting recognition from others in the company for my accomplishments.
87. I am able to thrive when working under conditions of unusually high pressure.
88. I embrace and truly enjoy change in the workplace.
89. I push my ideas to others every chance I get.
90. I am interested in other people's ideas and work to support and encourage them.
91. I solicit and incorporate input from others.
92. I don't tend to back down in the face of negative political pressure at work.
93. I am not discouraged or side-tracked by other peoples' resistance to my ideas.
94. I have risked disappointing others in order to get my own ideas across.
95. I rarely have any free time at work; I always find myself doing something.
96. I am stubborn and resistant, even in the face of legitimate criticism.

97. I have taken on challenges and responsibilities unrelated to my area of job responsibility.
98. I am easily consumed by challenges, sometimes to the point where I will neglect some of my normal responsibilities.
99. I have persisted in pursuing an idea even when I was explicitly directed to stop.
100. I have too little time to accomplish my work.
101. I am able to use time and other resources to my best advantage.
102. I track projects/activities on more than one level, blending ideas and actions from various projects together.
103. I tend to "wing it"; I improvise on the spot.
104. In my daily activities at work, I am not restricted by norms or conventions in the company.
105. I am able to draw others to my ideas.
106. I am able to link--to connect--what may appear, at first, to be entirely unrelated ideas, items, situations.
107. I seek out diversity in people, places, things.
108. I am able to adapt quickly to changing situations.
109. I tend to remain focused on the end product and persist until I achieve my objective, regardless of what happens.
110. I am able to obtain the very best from the resources I obtain.
111. I am able to admit to having made mistakes when I make them.
112. I know when to push hard for an idea and when to back off.
113. I am able to easily shake off personal criticism.
114. I readily accept constructive criticism.
115. I tend not to obey established rules, and instead, create rules for myself and others.
116. I take action immediately on important projects or initiatives; I never "drag it out" if the item is critical.
117. I am very careful in the way I choose my words in communicating with others.
118. I have a good understanding of organizational psychology.
119. I get much of my work done in the back room. I convince others of my ideas before holding large-group discussions.
120. I frequently consult with inside or outside specialists if I need help.
121. I track and manage the financial aspect of my projects at work; I rarely let others do it.
122. I make sure that every discussion I have with someone has a definitive outcome.
123. I interact with others in the office very differently from how I interact outside of the office.
124. I have an excellent memory for details and conversations.
125. I tend to write very short and cryptic memos/notes.
126. When I am having a discussion with another person, I am always able to remain completely focused on my own ideas.
127. I orchestrate situations (e.g., meetings, one-on-one conversations) so that my wishes are approved.
128. I become very impatient with trivial details that interrupt my plans.

129. I am often able to very accurately anticipate the reactions of others in the organization to my plans.
130. I always rigorously review plans to ensure their accuracy prior to them being presented.
131. I confront situations head on; I never "ostrich".
132. I don't usually attend a lot of large-group meetings.
133. I don't compare myself with others.
134. I don't follow many routines in my work life; I like a lot of change.
135. If some company rule or procedure gets in my way, I go around it.
136. I have difficulty engaging myself--getting involved and enthusiastic--in projects that I have not "bought into".
137. I tend to work pretty irregular hours.
138. I read a diverse range of business literature.
139. I tend to make personal sacrifices in my work, when I am dedicated to a task or project.
140. I tend to share moments of doubts about projects with only a select few.
141. I tend to work well in team settings: I get along with others in a group *and* can delegate.
142. I have very clearly defined goals both for myself and for the projects in which I'm involved.
143. I watch other successful managers and try to adopt the methods they use that work.
144. I spent a fair bit of time gathering information about my work environment (e.g., I ask others both inside and outside of my work unit how they are doing).
145. If I'm asked to become involved in a project, I rarely ever say no.
146. I hate waiting for things to be completed; I tend to get impatient with people if they take too long.
147. I always meet my deadlines at work.
148. I am almost always willing to deal with difficult decisions, such as redundant employees.
149. I question and challenge all processes and procedures.
150. I evaluate risks just once, and then go on to act.
151. I always make time for people.
152. In meetings, I tend to seek out both pros *and* cons.
153. When engaged in some form of problem-solving, I always consider and list items that will need follow up.
154. I am able to inspire and motivate others.
155. I have made quick decisions, that later turn out to be poor ones.
156. I have taken a bad plan for a good idea and changed it to make it work.
157. When I give advice to others, I give them the *whole* picture.
158. When I'm at the office, I have an "open-door" policy.
159. I always join in in company social functions.
160. When someone asks me for information, I give a quick response, and then follow up.
161. I am very careful to always keep my time commitments.

- 162. I share the concerns of upper management, with those in entry-level management jobs.
- 163. When someone complains about a problem, I ask *them* what, specifically, *they* would do.
- 164. When working on a project, I delegate items to people I know will take a positive and inspired approach.
- 165. I can easily recognize and appreciate talent in others; I always try to use other people's talents.
- 166. I get impatient with others when they don't work to my own high standards.
- 167. I am very direct in expressing what I want; I don't "beat around the bush".
- 168. I am always willing to share information with others.
- 169. I am fairly good at managing upwards.
- 170. I know a lot of people in the company and I'm able to ask for their input and commitment when its needed.
- 171. I'm always looking for ways to do things just a little bit better and a little bit faster.



## CHAMPION BEHAVIORS GENERATED BY THE THIRD PANEL

1. I disregard rules and procedures.
2. I focus only on results without regard for important sideline issues.
3. I am typically unwilling to listen to others.
4. I am always willing to "weed out" team members who are not immediately productive.
5. I focus on my own needs, not the needs and vision of the corporation.
6. I do not pay attention to administrative details.
7. When I think that someone is incompetent, I tell them.
8. I typically disregard the financial implications of risk.
9. I am unwilling to consider recovery strategies if things don't go as initially planned.
10. I compromise on issues in order to keep projects going.
11. When attending a meeting, I often disregard the topic of the meeting, and, instead, talk about what interests me.
12. I show up late for meetings and appointments.
13. I will often argue with others, if I disagree with their ideas on an intellectual level.
14. I tend to disrupt meetings.
15. I communicate my ideas using a loud voice.
16. I'm candid with people; I tell them exactly what's on my mind and what I think of them.
17. I ignore authority.
18. I show others when I'm angry.
19. If I think that somebody has made a mistake or is not measuring up, I will make negative comments about that person to others.
20. I talk down to those who are not "up to speed" or operating at a highly competent level.
21. When I'm annoyed, I show it through my body language.
22. I frequently act without a well-thought-through action plan.
23. In meetings, I don't tend to build on other peoples' observations; instead, I disagree with them.
24. When talking about something I'm interested in, I tend to "run ahead" with my ideas, assuming my points are linked for the listener.
25. I take action without first seeking approval; I'll get forgiveness later.
26. I will always reject others' attempts to control my behavior.
27. I assume that all problems can be sorted out in the future.
28. I don't recognize hierarchies in the organization; I bypass management levels in working toward my goals.
29. I don't keep my superiors informed of all my activities.
30. I don't typically take the time and effort to document all my plans and activities.
31. I'll go after new ideas, before following through on previous ones.
32. I monopolize discussions.
33. I have written letters and memos that attack others personally.
34. I come and go as I please (i.e., meetings).
35. I lead others into confrontational situations.
36. I'm not afraid to confront an opponent in public.

- 37. I will sometimes bend the truth in order to achieve my goals.
- 38. I ignore people who are not key players in my area of business and work.
- 39. I usually don't take the time to document things.
- 40. I know how to use my political connections in the company to make things happen.
- 41. I'm not averse to pointing out other peoples' faults and shortcomings behind their back.
- 42. I will break confidences with others, if it will increase the likelihood that I will meet my own goals.
- 43. I don't always credit the person who originally comes up with a new idea; instead, I will, at times, take credit for the idea myself.
- 44. I promote ideas that have the highest visibility and likelihood of success.
- 45. I communicate only what I absolutely have to about a new project; I leave areas of challenge or doubt in the background.
- 46. I focus on the long-range goal, sometimes at the expense of managing short-term needs.
- 47. I don't concern myself with the people I offend or annoy in the pursuit of my objectives.
- 48. I'm persistent in voicing my opinion over and over again, even if my ideas are rejected.

# ABSENCE OF CHAMPION BEHAVIORS GENERATED BY THE FIRST TWO PANELS

1. When confronted with a new idea, I tend to think through the reasons why it can't be done (e.g., lack of people, no money, against company policy, etc.).
2. I don't usually persist in arguing a point.
3. I tend to defer or pass on responsibility to other departments outside of my own control.
4. I don't typically expend a lot of energy in accomplishing my job.
5. I usually try to fit in fairly long coffee and lunch breaks when I get the chance.
6. I typically don't volunteer for extra work projects.
7. I spend most of my day behind my desk.
8. My own department is my priority; I make decisions that maximize payoff for my department.
9. I always try to stay within budget; even if extra work is anticipated, I try to get by with the current staff.
10. I am sometimes slow to take action in solving problems; I like to take my time and carefully consider the options first.
11. I tend to work fairly slowly, but consistently.
12. I usually start work at around 8 and leave pretty close to 4.
13. When I'm on a coffee break, I don't like to talk about work issues.
14. I usually don't work overtime.
15. I have difficulty admitting to my mistakes.
16. I prefer to work independently, rather than in a team setting.
17. I concentrate on doing what needs to be done to complete a task, and then moving on to the next issue.
18. I accept the rules and guidelines at work; I don't question why we do things the way we do.
19. I like to focus on specific aspects of a project; I prefer looking at the smaller, rather than the larger, picture.
20. I sometimes run into snags at the implementation stage of projects in which I am involved.
21. I sometimes put important items on the back burner for a bit too long.
22. I'm not always that clear in conveying messages to others; at times, the subject matter may be just too complicated to get the point across.
23. I like to get deeply involved in the more specific details of projects.
24. I try to have a hand in all aspects of a project; I prefer not to delegate responsibilities.
25. I focus on the issue at hand; I don't worry about future issues until they arise.
26. My base of operation is my office; I conduct my business from there.
27. I expect others to comply with company guidelines, no exception.
28. I will confront others for bending or going around company guidelines and rules.
29. I easily conform to company expectations.
30. I will always try to obtain consensus from others when proposing a given course of action.
31. I prefer to avoid conflict and, instead, work to smooth out disagreements and reach consensus.

32. I am good at playing a mediating role.
33. I take all the time that is needed to discuss important issues.
34. I can be critical of others if their recommendations are flawed in some way.
35. I like to play a "devils advocate" role at times; I encourage people to examine both sides carefully before making decisions.
36. When a request for action comes down from above, I'm very quick to respond.
37. I defend the position of my department.
38. I take tight control of projects, and very closely monitor their progress.
39. I think it is sometimes best not to speak your mind.
40. I sometimes have difficulty really "seeing" other peoples' points of view.
41. I tend to accept ideas and situations at face value.
42. I am a methodical, orderly worker, carefully considering and taking action on one issue, and then moving on to the next.
43. I'm happy to sit and talk with people at work at any time.
44. I prefer to delay decision making at times, so that I can think through the issues more carefully.
45. I am usually very patient in my dealings with others.
46. I'm good at following the direction of others.
47. I prefer to work within my own department/office.
48. I am good at finding faults in new ideas and explaining why they likely will not work.
49. It's important to let upper management know if the departmental workload becomes excessive.
50. I have blamed other people and their demands on me for being overworked.
51. If I don't like an idea, I'll try to secure the support of upper management so that it's delayed, or not implemented.
52. If someone has made a mistake, I'm not afraid to pass on criticism to that person in a public forum.
53. If things get too hot, I prefer not to participate.
54. I prefer to let others worry about the "big picture".
55. I see the company from the perspective of my own department.
56. I prefer to be asked, rather than to volunteer, for new assignments.
57. When faced with a number of alternatives, I seek out direction from others.
58. I sometimes have difficulty working under pressure.
59. I relate best to people at my own management level in the company.
60. I enjoy being with people who have similar attitudes to mine.
61. I can react jealously to other peoples' accomplishments.
62. I stay in one job for a long time, so that I become an expert in that one area.
63. I am interested in the technical side of projects.
64. I tend to listen more than talk when I'm around other people.
65. I enjoy routine, and use routine to organize my work schedule.
66. I'm able to say "no" to others, when I feel that I have enough work to do already.
67. I favor concrete rewards, such as pay and a nice office, over less concrete awards (e.g., praise, opportunities for participation in other projects).
68. I enjoy working with new technology, tinkering with new gadgets, new software, etc.

69. I keep my office very neat and tidy.
70. I'm more concerned with getting all the details right on a project, than with meeting a deadline.
71. I prefer working on my own.
72. I tend to present options and let someone else make the final decision.
73. My focus is more on the specifics of the task at hand, rather than the environment around me.
74. I work best in a highly structured work environment.
75. I study carefully all issues and then pass on decision making to someone else.
76. When I communicate with others, it is usually through mail (or voice mail), rather than face-to-face.
77. I accept and follow company guidelines/rules even if they appear to be poor ones.
78. I manage upward, sometimes at the expense of people below me.
79. I don't shy away from confrontations.
80. I am an extremely reliable team player.
81. I do my best work when I am given specific tasks and then guided through their completion.
82. I carefully analyze situations; I work to understand all details, maybe more than is even necessary.
83. When a project I'm working on runs into an impasse, I look to others to solve the problem.
84. I don't speak up at meetings.
85. I follow a fairly precise schedule at work (e.g., coffee at 9:00, lunch at 12:00)
86. I don't tend to spend time socializing at work; I'm there to focus on the job, not other people.
87. I maintain an immaculate work area and an empty "in" basket.
88. I refer to policies and procedures to define and support my work behavior.
89. I define success, in part, by the quantity of work generated.
90. I enjoy and seek out repetitive tasks.
91. I dislike and avoid customer contact.
92. I take my time when working on assignments.
93. I wait for others to contact me regarding project updates, missed deliverables, etc.
94. I tend to follow the direction of superiors without question.
95. I'm not very comfortable meeting new people.
96. I'm not very comfortable speaking in front of others.
97. I can experience difficulty arranging my work in order of priority.
98. I don't ask an awful lot of questions at work.
99. I avoid conflict and confrontation in my day-to-day work.
100. I will not take risks with company time, people, and money.
101. I have a lot of patience for completing the more tedious tasks.
102. I'm always punctual, arriving at meetings and other work obligations right on time.
103. I listen carefully when others debate a point, but I don't usually participate.
104. I'll take on boring tasks without complaint.
105. If told to, I'll do a job even if I believe it's the wrong move for the company.

- 106. I enjoy the implementation stage, more than the stages of planning and idea generating.
- 107. I'm able and willing to do repetitive tasks.
- 108. I prefer to work in a fairly stable and unchanging work environment.
- 109. I will resist taking on a leadership role in a team.
- 110. I don't volunteer for "visible" jobs, preferring to remain more in the background.

## NON-CHAMPION BEHAVIORS GENERATED BY THE THIRD PANEL

1. I know and follow the corporate rules very closely.
2. I have no problem completing the more tedious and repetitious tasks at work.
3. I follow instructions very accurately.
4. I refer all difficult or "non standard" issues on to a higher level in management.
5. I pay close attention to the details of what I am doing.
6. I don't criticize others in their work.
7. I do my best to accommodate to other peoples' wishes in order to keep them happy.
8. I am very punctual.
9. I keep very good records, documenting all events and activities.
10. I enjoy working closely with others in a parallel manner.
11. I find the time to take care of personal details in my work (i.e., writing letters of thanks).
12. I approach most issues in a very systematic, analytical, and disciplined manner.
13. I respond to problems immediately.
14. I am usually polite and sensitive to others' feelings.
15. I support people consistently; I don't change allegiances with projects.
16. I try to support and help others in the organization meet their goals.
17. I always keep my appointments.
18. I'm very good at planning and organizing my activities.
19. I recognize and can anticipate potential problems before they occur.
20. I don't seek out attention from others.
21. I plan my actions well in advance.
22. I follow direction easily and accurately.
23. I don't go out of my way to look for new opportunities or change.
24. I communicate very clearly and succinctly.
25. I turn in a solid and consistent performance every day I come in to the office.
26. I always strive to meet my performance objectives.
27. When I communicate with others, I do so in a clear manner and get right to the point.
28. I typically do what is correct and accepted in the company.
29. I'm a good team player; I work easily with peers with few conflicts.
30. I embrace changes in procedures, processes and practices willingly.
31. I try to get consensus on issues before taking action.
32. I'm almost always willing to compromise somewhat.
33. If I come up with a new idea, I get the team to carry it forward.
34. I'm usually willing to take on extra tasks, if asked to do so.

**APPENDIX D**

**BOOKLET USED TO OBTAIN SOCIAL DESIRABILITY RATINGS**

**MANAGERIAL ACTIVITY PROJECT**

**CONDUCTED BY ROSS WOOLLEY  
UNIVERSITY OF BRITISH COLUMBIA**

**FEBRUARY 1993**



On the following pages, you will find some statements that describe activities in which a manager might engage. Using the nine-point scale shown below, please judge whether each statement reflects a generally desirable or undesirable activity as performed by a manager in a large company in North America. You should judge the desirability of these activities as they would seem if performed by other managers and not how desirable they would be if performed by yourself. Base these judgements on your own, personal attitudes about how managers should manage.

Please record your judgements on the answer sheet appended to the back of this package. For each item, circle the number corresponding to your choice on the answer sheet. Please respond to every item. Note that this form is to be completed anonymously. Your judgements will be combined with judgements made by a large number of other people in determining the desirability of each of the management activities contained in this booklet.

## RESPONSE SCALE

DESIRABLE					UNDESIRABLE			
Extreme	Strong	Moderate	Mild	Neutral	Mild	Moderate	Strong	Extreme
1	2	3	4	5	6	7	8	9

---

**Here's an example item:** S/he is able to sell ideas to subordinates one-on-one.

If you think that the above item relates to a very desirable behavior--that the act of selling ideas to subordinates one-on-one is a very desirable and positive one--then you would circle the number "1". Remember, we are interested in your **own, personal** ratings of the desirability of the statements contained in this booklet.

Thanks for your participation.

- (1) S/he refers all difficult or "non standard" issues on to a higher level in management.
- (2) S/he relates daily to individuals at all levels in the department (e.g., talks with clerks, checks on progress of team members).
- (3) S/he uses humor to put people at ease.
- (4) S/he knows and follows the corporate rules very closely.
- (5) S/he disregards rules and procedures.
- (6) S/he listens attentively to people's ideas and feelings.
- (7) When confronted with a new idea, s/he tends to think through the reasons why it can't be done (e.g., lack of people, no money, against company policy, etc.).
- (8) S/he presents a professional image to others through clothing choice.
- (9) S/he focuses only on results without regard for important sideline issues.
- (10) S/he has no problem completing the more tedious and repetitious tasks at work.
- (11) S/he only speaks in meetings when s/he has a thought or idea in which s/he strongly believes; s/he doesn't make comments simply to attract attention.
- (12) S/he'll take on boring tasks without complaint.
- (13) S/he makes sure to rub shoulders with powerful individuals in other departments and business units in the company.
- (14) S/he doesn't usually persist in arguing a point.
- (15) S/he is typically unwilling to listen to others.
- (16) S/he is able to sell ideas to subordinates one-on-one.
- (17) S/he follows instructions very accurately.
- (18) S/he publicly announces his/her intentions and objectives (e.g., "We will get this contract by years end").
- (19) S/he can display anger and frustration at the "work-to-rule" attitudes of others.
- (20) S/he tends to defer or pass on responsibility to other departments outside of his/her own control.
- (21) S/he tends not to bow/defer to the voice of authority.
- (22) S/he does not pay attention to administrative details.
- (23) S/he doesn't typically expend a lot of energy in accomplishing his/her job.
- (24) S/he tends to use effectively his/her political contacts in the company.
- (25) S/he is always punctual, arriving at meetings and other work obligations right on time.
- (26) S/he tends to do everything very quickly (walking, talking, writing, driving, etc.).
- (27) S/he pays close attention to the details of what s/he is doing.
- (28) S/he is generally aware of news of current events both nationally and internationally, especially in terms of how that news might impact the business world.
- (29) S/he is informed and aware of outside market influences on the company.
- (30) S/he usually tries to fit in fairly long coffee and lunch breaks when s/he gets the chance.
- (31) S/he typically disregards the financial implications of risk.
- (32) S/he tends to start early and work late when s/he is emotionally involved in a particular project.
- (33) S/he typically doesn't volunteer for extra work projects.
- (34) S/he is very punctual.
- (35) S/he tends to dominate meetings with his/her opinions and visions when s/he wishes to convince others to accept his/her point of view.
- (36) S/he is unwilling to consider recovery strategies if things don't go as initially planned.
- (37) S/he spends most of his/her day behind a desk.

- (38) S/he is able to sell ideas to subordinates in meetings.
- (39) S/he ensures that his/her successes in the company are known.
- (40) S/he doesn't criticize others in their work.
- (41) S/he socializes primarily with people in the company and key suppliers.
- (42) S/he networks with company people in other departments.
- (43) His/her own department is the priority; s/he makes decisions that maximize payoff for the department.
- (44) When attending a meeting, s/he often disregards the topic of the meeting, and, instead, talks about what interests him/her.
- (45) S/he enjoys challenging established methods at work; s/he rather enjoys rocking the boat.
- (46) S/he always tries to stay within budget; even if extra work is anticipated, s/he tries to get by with the current staff.
- (47) S/he volunteers for task forces and other related activities that allow him/her to be a change agent.
- (48) S/he shows up late for meetings and appointments.
- (49) S/he does her/his best to accommodate to other peoples' wishes in order to keep them happy.
- (50) S/he develops and mentors others in the company.
- (51) S/he is involved in personal development both at work and outside of work (e.g., continuing education, cooking classes, etc.).
- (52) S/he is sometimes slow to take action in solving problems; s/he likes to take his/her time and carefully consider the options first.
- (53) S/he will often argue with others, if s/he disagrees with their ideas on an intellectual level.
- (54) S/he is able to sell ideas to superiors in meetings.
- (55) S/he tends to work fairly slowly, but consistently.
- (56) When s/he speaks about topics at work, s/he does so in a very enthusiastic manner.
- (57) S/he tends to disrupt meetings.
- (58) S/he usually starts work at around 8 and leaves pretty close to 4.
- (59) S/he makes very distinct eye contact with others when s/he talks with them.
- (60) S/he listens carefully when others debate a point, but doesn't usually participate.
- (61) When s/he is at a meeting or in a more casual setting at work, s/he tends to be the center of attention.
- (62) When s/he is on a coffee break, s/he doesn't like to talk about work issues.
- (63) S/he communicates ideas using a loud voice.
- (64) S/he is constantly organizing and re-organizing daily, weekly, and monthly schedules to maximize efficiency.
- (65) S/he usually doesn't work overtime.
- (66) S/he is involved in community activities.
- (67) S/he is candid with people; S/he tells them exactly what's on his/her mind and what s/he thinks of them.
- (68) S/he finds the time to take care of personal details in his/her work (i.e., writing letters of thanks).
- (69) S/he is very serious when at work, maintaining his/her focus on the task at hand.
- (70) S/he is not afraid to speak up when with large groups of people.
- (71) S/he has difficulty admitting to mistakes.
- (72) S/he ignores authority.
- (73) When s/he communicates, s/he tends to do so with his/her body (e.g., hands, arms) as well as voice.
- (74) S/he approaches most issues in a very systematic, analytical, and disciplined manner.
- (75) S/he tends to greet people at work in a very enthusiastic and friendly manner.

- (76) S/he shows others when s/he's angry.
- (77) S/he prefers to work independently, rather than in a team setting.
- (78) S/he works to motivate teamwork--cooperation and collaboration among team members.
- (79) S/he is successful when s/he attempts to "rally the forces" in support of an idea.
- (80) S/he concentrates on doing what needs to be done to complete a task, and then moves on to the next issue.
- (81) If s/he thinks that somebody has made a mistake or is not measuring up, s/he will make negative comments about that person to others.
- (82) S/he is able to sell ideas to superiors one-on-one.
- (83) S/he responds to problems immediately.
- (84) When s/he makes a decision, s/he likes to push ahead and take action--implement.
- (85) S/he talks down to those who are not "up to speed" or operating at a highly competent level.
- (86) S/he accepts the rules and guidelines at work; s/he doesn't question why we do things the way we do.
- (87) S/he tries to keep an open mind to new ideas.
- (88) S/he works to communicate with others frequently by practicing "management by walking around".
- (89) S/he likes to focus on specific aspects of a project; s/he prefers looking at the smaller, rather than the larger, picture.
- (90) S/he empowers subordinates to take action on their own.
- (91) When s/he is annoyed, s/he shows it through his/her body language.
- (92) S/he is usually polite and sensitive to others' feelings.
- (93) S/he uses a wide variety of skills to analyze a situation when working toward making a decision.
- (94) S/he enjoys the implementation stage, more than the stages of planning and idea generating.
- (95) S/he is able and willing to do repetitive tasks.
- (96) S/he focuses on the pragmatics of the situation at hand; s/he works to find a solution without allowing more peripheral issues or outside forces to complicate the issue.
- (97) S/he sometimes runs into snags at the implementation stage of projects in which s/he is involved.
- (98) S/he holds brainstorming sessions to determine the "ideal world".
- (99) S/he frequently acts without a well-thought-through action plan.
- (100) S/he supports people consistently; s/he doesn't change allegiances with projects.
- (101) S/he analyzes a situation/problem from a variety of perspectives and considers all options before selecting a solution.
- (102) S/he obtains the needed resources to do the job; s/he convinces people of the need for change so that others will resource the idea.
- (103) S/he sometimes puts important items on the back burner for a bit too long.
- (104) S/he has a keen ability to see the process or the "overall picture": s/he is able to understand inter-relationships and effect an action linked through multiple disciplines.
- (105) In meetings, s/he doesn't tend to build on other peoples' observations; instead, s/he disagrees with them.
- (106) S/he tries to support and help others in the organization meet their goals.
- (107) S/he is able to often gain the cooperation of others through various means.
- (108) S/he gets frustrated when s/he sees things that have been done at work that are not correct.
- (109) S/he is not always that clear in conveying messages to others; at times, the subject matter may be just too complicated to get the point across.
- (110) S/he has good time-management skills.

- (111) When talking about something s/he is interested in, s/he tends to "run ahead" with ideas, assuming points are linked for the listener.
- (112) S/he likes to get deeply involved in the more specific details of projects.
- (113) S/he is able to reduce an overall process to it's smaller parts and then systematically, take action on each of the parts.
- (114) When s/he hands off a job to someone else, s/he goes out of his/her way to include all details that the new person will need.
- (115) S/he always keep his/her appointments.
- (116) When s/he makes a promise to someone in the organization, s/he always keeps it.
- (117) S/he takes action without first seeking approval; s/he'll get forgiveness later.
- (118) S/he tries to have a hand in all aspects of a project; s/he prefers not to delegate responsibilities.
- (119) S/he is considerate of other peoples' well being in the company.
- (120) S/he takes a positive and optimistic stance in working toward the resolution of problems.
- (121) S/he focuses on the issue at hand; s/he doesn't worry about future issues until they arise.
- (122) S/he is good at getting people and groups to clarify their points.
- (123) S/he will always reject others' attempts to control his/her behavior.
- (124) S/he is very good at planning and organizing his/her activities.
- (125) S/he has a vision of how s/he would ideally like to see things accomplished at work.
- (126) After s/he has spent time pondering and considering an idea, s/he won't leave it alone until some action begins.
- (127) His/her base of operation is his/her office; s/he conducts business from there.
- (128) S/he is not afraid to tell others, in a direct and forceful manner, what should be done.
- (129) S/he supports people to get the best out of them.
- (130) S/he expects others to comply with company guidelines, no exception.
- (131) S/he assumes that all problems can be sorted out in the future.
- (132) S/he coaches others about their weaknesses.
- (133) S/he recognizes and can anticipate potential problems before they occur.
- (134) S/he usually thinks of other peoples' needs and priorities before making decisions.
- (135) S/he celebrates his/her own and other peoples' accomplishments at work.
- (136) S/he will confront others for bending or going around company guidelines and rules.
- (137) S/he develops a comprehensive "game plan" complete with time frames and then sticks to it.
- (138) S/he doesn't recognize hierarchies in the organization; s/he bypasses management levels in working toward his/her goals.
- (139) S/he easily conforms to company expectations.
- (140) S/he remains focused on tasks; s/he is not easily distracted.
- (141) S/he is always able to find solutions to old and new problems by him/herself.
- (142) S/he doesn't seek out attention from others.
- (143) S/he tends to challenge existing ways of doing things.
- (144) S/he never takes "no" for an answer.
- (145) S/he will always try to obtain consensus from others when proposing a given course of action.
- (146) If told to, s/he will do a job even if s/he believes it's the wrong move for the company.
- (147) S/he doesn't keep his/her superiors informed of all activities.

- (148) When someone says that a new idea just won't work, s/he always challenges that belief.
- (149) S/he prefers to avoid conflict and, instead, works to smooth out disagreements and reach consensus.
- (150) S/he initiates status updates: s/he follows up in meetings or on the phone.
- (151) S/he usually delivers persuasive presentations.
- (152) S/he is good at playing a mediating role.
- (153) S/he holds others accountable for delivering what they promise.
- (154) S/he doesn't typically take the time and effort to document all his/her plans and activities.
- (155) S/he plans his/her actions well in advance.
- (156) S/he recognizes the achievements and accomplishments of others both publicly and privately.
- (157) S/he sells ideas to senior managers through presentations, reports, or voice messages.
- (158) S/he takes all the time that is needed to discuss important issues.
- (159) S/he tends to speak his/her mind, regardless of the audience.
- (160) S/he always comes to meetings well prepared.
- (161) S/he can be critical of others if their recommendations are flawed in some way.
- (162) S/he'll go after new ideas, before following through on previous ones.
- (163) S/he addresses every task with urgency.
- (164) S/he likes to play a "devils advocate" role at times; s/he encourages people to examine both sides carefully before making decisions.
- (165) When confronted with a series of tasks, s/he does the most important one first, does it only once, and doesn't over analyze or agonize over his/her actions.
- (166) S/he rebounds from disappointments easily and quickly and gets back to work.
- (167) When a request for action comes down from above, s/he is very quick to respond.
- (168) S/he is good at identifying winning solutions and then aligning him/herself with them.
- (169) S/he monopolizes discussions.
- (170) S/he doesn't go out of his/her way to look for new opportunities or change.
- (171) S/he is able to motivate individuals *required* to participate in projects.
- (172) S/he has worked, over time, to develop credibility with peers, subordinates, and superiors.
- (173) S/he defends the position of his/her department.
- (174) S/he is comfortable taking risks at work and moving out into unknown business areas.
- (175) S/he is able to generate easily a number of new ideas each day.
- (176) S/he takes tight control of projects, and very closely monitors their progress.
- (177) S/he has written letters and memos that attack others personally.
- (178) S/he is able to get the time of executives in the company in order to communicate his/her ideas.
- (179) S/he thinks it is sometimes best not to speak your mind.
- (180) S/he enjoys getting recognition from others in the company for his/her accomplishments.
- (181) S/he is able to thrive when working under conditions of unusually high pressure.
- (182) S/he sometimes has difficulty really "seeing" other peoples' points of view.
- (183) S/he embraces and truly enjoys change in the workplace.
- (184) S/he comes and goes as s/he pleases (i.e., meetings).
- (185) S/he turns in a solid and consistent performance every day s/he comes in to the office.
- (186) S/he pushes his/her ideas to others every chance s/he gets.

- (187) S/he is interested in other peoples' ideas and works to support and encourage them.
- (188) S/he tends to accept ideas and situations at face value.
- (189) S/he solicits and incorporates input from others.
- (190) S/he doesn't tend to back down in the face of negative political pressure at work.
- (191) S/he is a methodical, orderly worker, carefully considering and taking action on one issue, and then moving on to the next.
- (192) S/he leads others into confrontational situations.
- (193) S/he is not discouraged or side-tracked by other peoples' resistance to his/her ideas.
- (194) S/he is happy to sit and talk with people at work at any time.
- (195) S/he has risked disappointing others in order to get his/her own ideas across.
- (196) S/he rarely has any free time at work; s/he always finds him/herself doing something.
- (197) S/he prefers to delay decision making at times, so that s/he can think through the issues more carefully.
- (198) S/he is stubborn and resistant, even in the face of legitimate criticism.
- (199) S/he is not afraid to confront an opponent in public.
- (200) When s/he communicates with others, s/he does so in a clear manner and gets right to the point.
- (201) S/he has taken on challenges and responsibilities unrelated to his/her area of job responsibility.
- (202) S/he is easily consumed by challenges, sometimes to the point where s/he will neglect some of his/her normal responsibilities.
- (203) S/he is usually very patient in his/her dealings with others.
- (204) S/he has persisted in pursuing an idea even when s/he was explicitly directed to stop.
- (205) S/he has too little time to accomplish his/her work.
- (206) S/he is good at following the direction of others.
- (207) S/he will sometimes bend the truth in order to achieve his/her goals.
- (208) S/he is able to use time and other resources to his/her best advantage.
- (209) S/he prefers to work within his/her own department/office.
- (210) S/he tracks projects/activities on more than one level, blending ideas and actions from various projects together.
- (211) S/he tends to "wing it"; s/he improvises on the spot.
- (212) S/he is good at finding faults in new ideas and explaining why they likely will not work.
- (213) S/he prefers to work in a fairly stable and unchanging work environment.
- (214) In his/her daily activities at work, s/he is not restricted by norms or conventions in the company.
- (215) S/he ignores people who are not key players in his/her area of business and work.
- (216) S/he is a good team player; s/he works easily with peers with few conflicts.
- (217) S/he is able to draw others to his/her ideas.
- (218) S/he is able to link--to connect--what may appear, at first, to be entirely unrelated ideas, items, situations.
- (219) S/he let's upper management know if the departmental workload becomes excessive.
- (220) S/he will resist taking on a leadership role in a team.
- (221) S/he seeks out diversity in people, places, things.
- (222) S/he is able to adapt quickly to changing situations.
- (223) S/he has blamed other people and their demands for being overworked.
- (224) S/he usually doesn't take the time to document things.
- (225) S/he tends to remain focused on the end product and persists until s/he achieves

- his/her objectives, regardless of what happens.
- (226) S/he embraces changes in procedures, processes and practices willingly.
- (227) S/he is able to obtain the very best from the resources s/he obtains.
- (228) S/he is able to admit to having made mistakes when s/he makes them.
- (229) If s/he doesn't like an idea, s/he will try to secure the support of upper management so that it's delayed, or not implemented.
- (230) S/he knows when to push hard for an idea and when to back off.
- (231) S/he knows how to use his/her political connections in the company to make things happen.
- (232) If someone has made a mistake, s/he is not afraid to pass on criticism to that person in a public forum.
- (233) S/he is able to easily shake off personal criticism.
- (234) S/he readily accepts constructive criticism.
- (235) S/he tries to get consensus on issues before taking action.
- (236) S/he tends not to obey established rules, and instead, creates rules for him/herself and others.
- (237) S/he takes action immediately on important projects or initiatives; s/he never "drags it out" if the item is critical.
- (238) If things get too hot, s/he prefers not to participate.
- (239) S/he is not averse to pointing out other peoples' faults and shortcomings behind their back.
- (240) S/he is very careful in the way s/he chooses his/her words in communicating with others.
- (241) S/he prefers to let others worry about the "big picture".
- (242) S/he has a good understanding of organizational psychology.
- (243) S/he gets much of his/her work done in the back room. S/he convinces others of his/her ideas before holding large-group discussions.
- (244) S/he sees the company from the perspective of his/her own department.
- (245) S/he frequently consults with inside and outside specialists if s/he needs help.
- (246) S/he will break confidences with others, if it will increase the likelihood that s/he will meet his/her own goals.
- (247) S/he is almost always willing to compromise somewhat.
- (248) S/he tracks and manages the financial aspects of his/her projects at work; s/he rarely lets others do it.
- (249) S/he makes sure that every discussion s/he has with someone has a definitive outcome.
- (250) S/he prefers to be asked, rather than to volunteer, for new assignments.
- (251) S/he interacts with others in the office very differently from how s/he interacts outside of the office.
- (252) S/he has an excellent memory for details and conversations.
- (253) When faced with a number of alternatives, s/he seeks out direction from others.
- (254) S/he doesn't always credit the person who originally comes up with a new idea; instead, s/he will, at times, take credit for the idea him/herself.
- (255) S/he tends to write very short and cryptic memos/notes.
- (256) S/he sometimes has difficulty working under pressure.
- (257) When s/he is having a discussion with another person, s/he is always able to remain completely focused on his/her own ideas.
- (258) S/he doesn't volunteer for "visible" jobs, preferring to remain more in the background.
- (259) S/he orchestrates situations (e.g., meetings, one-on-one conversations) so that his/her wishes are approved.



- (260) If s/he comes up with a new idea, s/he gets the team to carry it forward.
- (261) S/he becomes very impatient with trivial details that interrupt his/her plans.
- (262) S/he promotes ideas that have the highest visibility and likelihood of success.
- (263) S/he relates best to people at his/her own management level in the company.
- (264) S/he is often able to very accurately anticipate the reactions of others in the organization to his/her plans.
- (265) S/he always rigorously reviews plans to ensure their accuracy prior to them being presented.
- (266) S/he enjoys being with people who have similar attitudes to his/her own.
- (267) S/he confronts situations head on; s/he never "ostriches".
- (268) S/he is usually willing to take on extra tasks, if asked to do so.
- (269) S/he doesn't usually attend a lot of large-group meetings.
- (270) S/he can react jealously to other peoples' accomplishments.
- (271) S/he communicates only what s/he absolutely has to about a new project; s/he leaves areas of challenge or doubt in the background.
- (272) S/he stays in one job for a long time, so that s/he becomes an expert in that one area.
- (273) S/he doesn't compare her/himself with others.
- (274) S/he is interested in the technical side of projects.
- (275) S/he doesn't follow many routines in his/her work life; s/he likes a lot of change.
- (276) S/he tends to listen more than talk when s/he is around other people.
- (277) If some company rule or procedure gets in his/her way, s/he'll go around it.
- (278) S/he communicates very clearly and succinctly.
- (279) S/he has difficulty engaging her/himself--getting involved and enthusiastic--in projects that s/he has not "bought into".
- (280) S/he enjoys routine, and uses routine to organize his/her work schedule.
- (281) S/he tends to work pretty irregular hours.
- (282) S/he is able to say "no" to others, when s/he feels that s/he has enough work to do already.
- (283) S/he focuses on the long-range goal, sometimes at the expense of managing short-term needs.
- (284) S/he favors concrete rewards, such as pay and a nice office, over less concrete awards (e.g., praise, opportunities for participation in other projects).
- (285) S/he reads a diverse range of business literature.
- (286) S/he enjoys working with new technology, tinkering with new gadgets, new software, etc.
- (287) S/he tends to make personal sacrifices in his/her work, when s/he is dedicated to a task or project.
- (288) S/he keeps his/her office very neat and tidy.
- (289) S/he tends to share moments of doubt about projects with only a select few.
- (290) S/he is more concerned with getting all the details right on a project, than with meeting a deadline.
- (291) S/he tends to work well in team settings: s/he gets along with others in a group *and* can delegate.
- (292) S/he prefers working on his/her own.
- (293) S/he has very clearly defined goals both for him/herself and for the projects in which s/he is involved.
- (294) S/he typically does what is correct and accepted in the company.
- (295) S/he doesn't concern him/herself with the people s/he offends or annoys in the pursuit of his/her objectives.
- (296) S/he tends to present options and let someone else make the final decision.

- (297) S/he watches other successful managers and tries to adopt the methods they use that work.
- (298) His/her focus is more on the specifics of the task at hand, rather than the surrounding environment.
- (299) S/he spends a fair bit of time gathering information about his/her work environment (e.g., s/he asks others both inside and outside of his/her work unit how they are doing).
- (300) S/he works best in a highly structured work environment.
- (301) If s/he is asked to become involved in a project, s/he rarely ever says no.
- (302) S/he studies carefully all issues and then passes on decision making to someone else.
- (303) S/he hates waiting for things to be completed; s/he tends to get impatient with people if they take too long.
- (304) When s/he communicates with others, it is usually through mail (or voice mail), rather than face-to-face.
- (305) S/he always meets his/her deadlines at work.
- (306) S/he accepts and follows company guidelines/rules even if they appear to be poor ones.
- (307) S/he is persistent in voicing his/her opinion over and over again, even if his/her ideas are rejected.
- (308) S/he manages upward, sometimes at the expense of people below him/her.
- (309) S/he is almost always willing to deal with difficult decisions, such as redundant employees.
- (310) S/he doesn't shy away from confrontations.
- (311) S/he questions and challenges all processes and procedures.
- (312) S/he always strives to meet his/her performance objectives.
- (313) S/he evaluates risks just once, and then goes on to act.
- (314) S/he is an extremely reliable team player.
- (315) S/he always makes time for people.
- (316) S/he does his/her best work when s/he is given specific tasks and then guided through their completion.
- (317) In meetings, s/he tends to seek out both pros *and* cons.
- (318) S/he carefully analyzes situations; s/he works to understand all details, maybe more than is even necessary.
- (319) S/he focuses on his/her own needs, not the needs and vision of the corporation.
- (320) When a project s/he is working on runs into an impasse, s/he looks to others to solve the problem.
- (321) When engaged in some form of problem-solving, s/he always considers and lists items that will need follow up.
- (322) S/he doesn't speak up at meetings.
- (323) S/he is able to inspire and motivate others.
- (324) S/he follows a fairly precise schedule at work (e.g., coffee at 9:00, lunch at 12:00)
- (325) S/he has made quick decisions, that later turn out to be poor ones.
- (326) S/he enjoys working closely with others in a parallel manner.
- (327) S/he has taken a bad plan for a good idea and changed it to make it work.
- (328) S/he doesn't tend to spend time socializing at work; s/he is there to focus on the job, not other people.
- (329) When s/he gives advice to others, s/he gives them the *whole* picture.
- (330) S/he maintains an immaculate work area and an empty "in" basket.
- (331) S/he is always willing to "weed out" team members who are not immediately productive.
- (332) S/he follows direction easily and accurately.
- (333) When s/he is at the office, s/he has an "open-door" policy.
- (334) S/he refers to policies and procedures to define and support his/her work behavior.
- (335) S/he always joins in in company social functions.

- (336) S/he defines success, in part, by the quantity of work generated.
- (337) When someone asks him/her for information, s/he gives a quick response, and then follows up.
- (338) S/he doesn't ask an awful lot of questions at work.
- (339) S/he is very careful to always keep his/her time commitments.
- (340) S/he enjoys and seeks out repetitive tasks.
- (341) When s/he thinks that someone is incompetent, s/he tells them.
- (342) S/he dislikes and avoids customer contact.
- (343) S/he shares the concerns of upper management, with those in entry-level management jobs.
- (344) S/he takes his/her time when working on assignments.
- (345) When someone complains about a problem, s/he asks *them* what, specifically, *they* would do.
- (346) S/he waits for others to contact him/her regarding project updates, missed deliverables, etc.
- (347) When working on a project, s/he delegates items to people s/he knows will take a positive and inspired approach.
- (348) S/he keeps very good records, documenting all events and activities.
- (349) S/he can easily recognize and appreciate talent in others; s/he always tries to use other peoples' talents.
- (350) S/he tends to follow the direction of superiors without question.
- (351) S/he compromises on issues in order to keep projects going.
- (352) S/he is not very comfortable meeting new people.
- (353) S/he gets impatient with others when they don't work to his/her own high standards.
- (354) S/he is not very comfortable speaking in front of others.
- (355) S/he is very direct in expressing what s/he wants; she doesn't "beat around the bush".
- (356) S/he can experience difficulty arranging his/her work in order of priority.
- (357) S/he is always willing to share information with others.
- (358) S/he avoids conflict and confrontation in his/her day-to-day work.
- (359) S/he is fairly good at managing upwards.
- (360) S/he will not take risks with company time, people, and money.
- (361) S/he knows a lot of people in the company and is able to ask for their input and commitment when it is needed.
- (362) S/he is always looking for ways to do things just a little bit better and a little bit faster.
- (363) S/he has a lot of patience for completing the more tedious tasks.



DESIRABLE					UNDESIRABLE				
Extreme	Strong	Moderate	Mild	Neutral	Mild	Moderate	Strong	Extreme	
1	2	3	4	5	6	7	8	9	
(100)	1	2	3	4	5	6	7	8	9
(101)	1	2	3	4	5	6	7	8	9
(102)	1	2	3	4	5	6	7	8	9
(103)	1	2	3	4	5	6	7	8	9
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(198)	1	2	3	4	5	6	7	8	9

DESIRABLE										UNDESIRABLE									
Extreme		Strong		Moderate		Mild		Neutral		Mild		Moderate		Strong		Extreme			
1		2		3		4		5		6		7		8		9			
(199)	1	2	3	4	5	6	7	8	9	(232)	1	2	3	4	5	6	7	8	9
(200)	1	2	3	4	5	6	7	8	9	(233)	1	2	3	4	5	6	7	8	9
(201)	1	2	3	4	5	6	7	8	9	(234)	1	2	3	4	5	6	7	8	9
(202)	1	2	3	4	5	6	7	8	9	(235)	1	2	3	4	5	6	7	8	9
(203)	1	2	3	4	5	6	7	8	9	(236)	1	2	3	4	5	6	7	8	9
(204)	1	2	3	4	5	6	7	8	9	(237)	1	2	3	4	5	6	7	8	9
(205)	1	2	3	4	5	6	7	8	9	(238)	1	2	3	4	5	6	7	8	9
(206)	1	2	3	4	5	6	7	8	9	(239)	1	2	3	4	5	6	7	8	9
(207)	1	2	3	4	5	6	7	8	9	(240)	1	2	3	4	5	6	7	8	9
(208)	1	2	3	4	5	6	7	8	9	(241)	1	2	3	4	5	6	7	8	9
(209)	1	2	3	4	5	6	7	8	9	(242)	1	2	3	4	5	6	7	8	9
(210)	1	2	3	4	5	6	7	8	9	(243)	1	2	3	4	5	6	7	8	9
(211)	1	2	3	4	5	6	7	8	9	(244)	1	2	3	4	5	6	7	8	9
(212)	1	2	3	4	5	6	7	8	9	(245)	1	2	3	4	5	6	7	8	9
(213)	1	2	3	4	5	6	7	8	9	(246)	1	2	3	4	5	6	7	8	9
(214)	1	2	3	4	5	6	7	8	9	(247)	1	2	3	4	5	6	7	8	9
(215)	1	2	3	4	5	6	7	8	9	(248)	1	2	3	4	5	6	7	8	9
(216)	1	2	3	4	5	6	7	8	9	(249)	1	2	3	4	5	6	7	8	9
(217)	1	2	3	4	5	6	7	8	9	(250)	1	2	3	4	5	6	7	8	9
(218)	1	2	3	4	5	6	7	8	9	(251)	1	2	3	4	5	6	7	8	9
(219)	1	2	3	4	5	6	7	8	9	(252)	1	2	3	4	5	6	7	8	9
(220)	1	2	3	4	5	6	7	8	9	(253)	1	2	3	4	5	6	7	8	9
(221)	1	2	3	4	5	6	7	8	9	(254)	1	2	3	4	5	6	7	8	9
(222)	1	2	3	4	5	6	7	8	9	(255)	1	2	3	4	5	6	7	8	9
(223)	1	2	3	4	5	6	7	8	9	(256)	1	2	3	4	5	6	7	8	9
(224)	1	2	3	4	5	6	7	8	9	(257)	1	2	3	4	5	6	7	8	9
(225)	1	2	3	4	5	6	7	8	9	(258)	1	2	3	4	5	6	7	8	9
(226)	1	2	3	4	5	6	7	8	9	(259)	1	2	3	4	5	6	7	8	9
(227)	1	2	3	4	5	6	7	8	9	(260)	1	2	3	4	5	6	7	8	9
(228)	1	2	3	4	5	6	7	8	9	(261)	1	2	3	4	5	6	7	8	9
(229)	1	2	3	4	5	6	7	8	9	(262)	1	2	3	4	5	6	7	8	9
(230)	1	2	3	4	5	6	7	8	9	(263)	1	2	3	4	5	6	7	8	9
(231)	1	2	3	4	5	6	7	8	9	(264)	1	2	3	4	5	6	7	8	9
										(265)	1	2	3	4	5	6	7	8	9
										(266)	1	2	3	4	5	6	7	8	9
										(267)	1	2	3	4	5	6	7	8	9
										(268)	1	2	3	4	5	6	7	8	9
										(269)	1	2	3	4	5	6	7	8	9
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										(292)	1	2	3	4	5	6	7	8	9
										(293)	1	2	3	4	5	6	7	8	9
										(294)	1	2	3	4	5	6	7	8	9
										(295)	1	2	3	4	5	6	7	8	9
										(296)	1	2	3	4	5	6	7	8	9
										(297)	1	2	3	4	5	6	7	8	9



APPENDIX E

BOOKLET USED TO OBTAIN SELF REPORT DATA FOR THE FIRST FACTOR  
ANALYSIS

MANAGERIAL ACTIVITY PROJECT

CONDUCTED BY MR. ROSS WOOLLEY  
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UNIVERSITY OF BRITISH COLUMBIA

APRIL 1993



Thanks very much for taking part in this research project. This study is part of a larger effort to develop testing and appraisal procedures to measure an aspect of management performance, leadership style. Your input will be combined with the work of roughly 400 managers at BCTel to develop new methods of selecting managers.

We recognize that this booklet will take approximately 45 to 60 minutes of your time to complete. In return for your participation, we will provide you with a detailed feedback report in which your results--your standing on a number of management dimensions--will be profiled relative to other managers in your own and other organizations. You will receive this feedback package roughly one month after we receive your completed questionnaire.

Please note that you should complete this form anonymously. Identify yourself by choosing a 6-digit code number of your choice, and recording that code number in the space provided at the top of the front page of the answer sheet; the only other identifying information we need is the name of your company (a number of different organizations are participating in the project), your management level in the company, and your gender; please record this information in the space provided on the front page as well. When we return the feedback packages, you will, of course, need to remember your code number in order to receive your correct package so choose a number that's easy to remember!

Contained in this booklet are a series of statements. Each statement refers to a type of activity a manager may perform. In each of the statements below, you are asked to consider **your** activity over **the past 12 months**. In responding to each of the statements, use the answer sheet appended to this test package. For each statement, circle the number corresponding to your choice on the answer sheet.

You will note, below, that each of the five numbers on the response scale is anchored by a brief descriptor. For each number there is a descriptive anchor relating to the **frequency** as well as the **likelihood** of your participation. When possible, please respond by indicating the **frequency** of your involvement. If, however, you have not had the opportunity to engage in a given activity contained in this booklet, then we ask that you consider the **likelihood** that you would have engaged in this behavior, given the opportunity. It is very important that you respond to **every** item if we are to generate accurate feedback for you.

Some of the items may appear to overlap or seem redundant. This instrument is in its early stages of development and we will be using your responses to each item to pare it down to a more manageable and concise form. At this stage of the process, our purpose is to be as comprehensive as possible.

**You'll be asked to respond on the following scale:**

---

<b>Never true (or extremely unlikely to be true) or descriptive of my behavior</b>	<b>Rarely true (or unlikely to be true) or descriptive of my behavior</b>	<b>Occasionally true (or somewhat likely to be true) or descriptive of my behavior</b>	<b>Often true (or likely to be true) or descriptive of my behavior</b>	<b>Very frequently true (or extremely likely to be true) or descriptive of my behavior</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

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**Here's an example item:** "I'm able to sell ideas to subordinates one-on-one".

Let's say that you have often done the above.....then you would respond by circling the number "4". If, on the other hand, you have never before been in a position to sell an idea to a subordinate (perhaps you have never had someone report to you), then you would consider how **likely** it is that you would engage in this behavior. In this case, if you thought it likely that you would sell ideas to subordinates one-on-one, you would still circle the number "4".

Naturally, you have the right to withdraw at any time, by refusing to complete the questionnaire. If you do complete it, we will assume consent to participate has been given.

- (1) I refer all difficult or "non standard" issues on to a higher level in management.
- (2) I relate daily to individuals at all levels in the department (e.g., talk with clerks, check on progress of team members).
- (3) I use humor to put people at ease.
- (4) I know and follow the corporate rules very closely.
- (5) I disregard rules and procedures.
- (6) I listen attentively to people's ideas and feelings.
- (7) When confronted with a new idea, I tend to think through the reasons why it can't be done (e.g., lack of people, no money, against company policy, etc.).
- (8) I present a professional image to others through clothing choice.
- (9) I focus only on results without regard for important sideline issues.
- (10) I have no problem completing the more tedious and repetitious tasks at work.
- (11) I only speak in meetings when I have a thought or idea that I strongly believe in; I don't make comments simply to attract attention.
- (12) I'll take on boring tasks without complaint.
- (13) I make sure I rub shoulders with powerful individuals in other departments and business units in the company.
- (14) I don't usually persist in arguing a point.
- (15) I am typically unwilling to listen to others.
- (16) I'm able to sell ideas to subordinates one-on-one.
- (17) I follow instructions very accurately.
- (18) I publicly announce my intentions and objectives (e.g., we will get this contract by years end).
- (19) I can display anger and frustration at the "work-to-rule" attitudes of others.
- (20) I tend to defer or pass on responsibility to other departments outside of my own control.
- (21) I tend not to bow/defer to the voice of authority.
- (22) I do not pay attention to administrative details.
- (23) I don't typically expend a lot of energy in accomplishing my job.
- (24) I tend to use effectively my political contacts in the company.
- (25) I'm always punctual, arriving at meetings and other work obligations right on time.
- (26) I tend to do everything very quickly (walking, talking, writing, driving, etc.).
- (27) I pay close attention to the details of what I am doing.
- (28) I am generally aware of news of current events both nationally and internationally, especially in terms of how that news might impact the business world.
- (29) I am informed and aware of outside market influences on the company.
- (30) I usually try to fit in fairly long coffee and lunch breaks when I get the chance.
- (31) I typically disregard the financial implications of risk.
- (32) I tend to start early and work late when I'm emotionally involved in a particular project.
- (33) I typically don't volunteer for extra work projects.
- (34) I am very punctual.
- (35) I tend to dominate meetings with my opinions and visions when I wish to convince others to accept my point of view.

- (36) I am unwilling to consider recovery strategies if things don't go as initially planned.
- (37) I spend most of my day behind my desk.
- (38) I'm able to sell ideas to subordinates in meetings.
- (39) I ensure that my successes in the company are known.
- (40) I don't criticize others in their work.
- (41) I socialize primarily with people in the company and key suppliers.
- (42) I network with company people in other departments.
- (43) My own department is my priority; I make decisions that maximize payoff for my department.
- (44) When attending a meeting, I often disregard the topic of the meeting, and, instead, talk about what interests me.
- (45) I enjoy challenging established methods at work; I rather enjoy rocking the boat.
- (46) I always try to stay within budget; even if extra work is anticipated, I try to get by with the current staff.
- (47) I volunteer for task forces and other related activities that allow me to be a change agent.
- (48) I show up late for meetings and appointments.
- (49) I do my best to accommodate to other peoples' wishes in order to keep them happy.
- (50) I develop and mentor others in the company.
- (51) I am involved in personal development both at work and outside of work (e.g., continuing education, cooking classes, etc.).
- (52) I am sometimes slow to take action in solving problems; I like to take my time and carefully consider the options first.
- (53) I will often argue with others, if I disagree with their ideas on an intellectual level.
- (54) I'm able to sell ideas to superiors in meetings.
- (55) I tend to work fairly slowly, but consistently.
- (56) When I speak about topics at work, I do so in a very enthusiastic manner.
- (57) I tend to disrupt meetings.
- (58) I usually start work at around 8 and leave pretty close to 4.
- (59) I make very distinct eye contact with others when I talk with them.
- (60) I listen carefully when others debate a point, but I don't usually participate.
- (61) When I'm at a meeting or in a more casual setting at work, I tend to be the center of attention.
- (62) When I'm on a coffee break, I don't like to talk about work issues.
- (63) I communicate my ideas using a loud voice.
- (64) I am constantly organizing and re-organizing my daily, weekly, and monthly schedule to maximize efficiency.
- (65) I usually don't work overtime.
- (66) I am involved in community activities.
- (67) I'm candid with people; I tell them exactly what's on my mind and what I think of them.
- (68) I find the time to take care of personal details in my work (i.e., writing letters of thanks).
- (69) I am very serious when at work, maintaining my focus on the task at hand.
- (70) I'm not afraid to speak up when with large groups of people.
- (71) I have difficulty admitting to my mistakes.
- (72) I ignore authority.

- (73) When I communicate, I tend to do so with my body (e.g., hands, arms) as well as my voice.
- (74) I approach most issues in a very systematic, analytical, and disciplined manner.
- (75) I tend to greet people at work in a very enthusiastic and friendly manner.
- (76) I show others when I'm angry.
- (77) I prefer to work independently, rather than in a team setting.
- (78) I work to motivate teamwork--cooperation and collaboration among team members.
- (79) I am successful when I attempt to "rally the forces" in support of an idea.
- (80) I concentrate on doing what needs to be done to complete a task, and then moving on to the next issue.
- (81) If I think that somebody has made a mistake or is not measuring up, I will make negative comments about that person to others.
- (82) I'm able to sell ideas to superiors one-on-one.
- (83) I respond to problems immediately.
- (84) When I make a decision, I like to push ahead and take action--implement.
- (85) I talk down to those who are not "up to speed" or operating at a highly competent level.
- (86) I accept the rules and guidelines at work; I don't question why we do things the way we do.
- (87) I try to keep an open mind to new ideas.
- (88) I work to communicate with others frequently by practicing "management by walking around".
- (89) I like to focus on specific aspects of a project; I prefer looking at the smaller, rather than the larger, picture.
- (90) I empower subordinates to take action on their own.
- (91) When I'm annoyed, I show it through my body language.
- (92) I am usually polite and sensitive to others' feelings.
- (93) I use a wide variety of skills to analyze a situation when working toward making a decision.
- (94) I enjoy the implementation stage, more than the stages of planning and idea generating.
- (95) I'm able and willing to do repetitive tasks.
- (96) I focus on the pragmatics of the situation at hand; I work to find a solution without allowing more peripheral issues or outside forces to complicate the issue.
- (97) I sometimes run into snags at the implementation stage of projects in which I am involved.
- (98) I hold brainstorming sessions to determine the "ideal world".
- (99) I frequently act without a well-thought-through action plan.
- (100) I support people consistently; I don't change allegiances with projects.
- (101) I analyze a situation/problem from a variety of perspectives and consider all options before selecting a solution.
- (102) I obtain the needed resources to do the job; I convince people of the need for change so that others will resource the idea.
- (103) I sometimes put important items on the back burner for a bit too long.
- (104) I have a keen ability to see the process or the "overall picture": I'm able to understand inter-relationships and effect an action linked through multiple disciplines.
- (105) In meetings, I don't tend to build on other peoples' observations; instead, I disagree with them.
- (106) I try to support and help others in the organization meet their goals.

- (107) I am able to often gain the cooperation of others through various means.
- (108) I get frustrated when I see things that have been done at work that are not correct.
- (109) I'm not always that clear in conveying messages to others; at times, the subject matter may be just too complicated to get the point across.
- (110) I have good time management skills.
- (111) When talking about something I'm interested in, I tend to "run ahead" with my ideas, assuming my points are linked for the listener.
- (112) I like to get deeply involved in the more specific details of projects.
- (113) I am able to reduce an overall process to it's smaller parts and then systematically, take action on each of the parts.
- (114) When I hand off a job to someone else, I go out of my way to include all details that the new person will need.
- (115) I always keep my appointments.
- (116) When I make a promise to someone in the organization, I always keep it.
- (117) I take action without first seeking approval; I'll get forgiveness later.
- (118) I try to have a hand in all aspects of a project; I prefer not to delegate responsibilities.
- (119) I am considerate of other peoples' well being in the company.
- (120) I take a positive and optimistic stance in working toward the resolution of problems.
- (121) I focus on the issue at hand; I don't worry about future issues until they arise.
- (122) I am good at getting people and groups to clarify their points.
- (123) I will always reject others' attempts to control my behavior.
- (124) I'm very good at planning and organizing my activities.
- (125) I have a vision of how I would ideally like to see things accomplished at work.
- (126) After I have spent time pondering and considering an idea, I won't leave it alone until some action begins.
- (127) My base of operation is my office; I conduct my business from there.
- (128) I'm not afraid to tell others, in a direct and forceful manner, what should be done.
- (129) I support people to get the best out of them.
- (130) I expect others to comply with company guidelines, no exception.
- (131) I assume that all problems can be sorted out in the future.
- (132) I coach others about their weaknesses.
- (133) I recognize and can anticipate potential problems before they occur.
- (134) I usually think of other peoples' needs and priorities before making decisions.
- (135) I celebrate my own and other peoples' accomplishments at work.
- (136) I will confront others for bending or going around company guidelines and rules.
- (137) I develop a comprehensive "game plan" complete with time frames and then stick to it.
- (138) I don't recognize hierarchies in the organization; I bypass management levels in working toward my goals.
- (139) I easily conform to company expectations.
- (140) I remain focused on tasks; I'm not easily distracted.
- (141) I am always able to find solutions to old and new problems by myself.
- (142) I don't seek out attention from others.
- (143) I tend to challenge existing ways of doing things.
- (144) I never take "no" for an answer.

- (145) I will always try to obtain consensus from others when proposing a given course of action.
- (146) If told to, I'll do a job even if I believe it's the wrong move for the company.
- (147) I don't keep my superiors informed of all my activities.
- (148) When someone says that a new idea just won't work, I always challenge that belief.
- (149) I prefer to avoid conflict and, instead, work to smooth out disagreements and reach consensus.
- (150) I initiate status updates: I follow up in meetings or on the phone.
- (151) I usually deliver persuasive presentations.
- (152) I am good at playing a mediating role.
- (153) I hold others accountable for delivering what they promise.
- (154) I don't typically take the time and effort to document all my plans and activities.
- (155) I plan my actions well in advance.
- (156) I recognize the achievements and accomplishments of others both publicly and privately.
- (157) I sell ideas to senior managers through presentations, reports, or voice messages.
- (158) I take all the time that is needed to discuss important issues.
- (159) I tend to speak my mind, regardless of the audience.
- (160) I always come to meetings well prepared.
- (161) I can be critical of others if their recommendations are flawed in some way.
- (162) I'll go after new ideas, before following through on previous ones.
- (163) I address every task with urgency.
- (164) I like to play a "devils advocate" role at times; I encourage people to examine both sides carefully before making decisions.
- (165) When confronted with a series of tasks, I do the most important one first, do it only once, and don't over analyze or agonize over my actions.
- (166) I rebound from disappointments easily and quickly and get back to work.
- (167) When a request for action comes down from above, I'm very quick to respond.
- (168) I'm good at identifying winning solutions and then aligned myself with them.
- (169) I monopolize discussions.
- (170) I don't go out of my way to look for new opportunities or change.
- (171) I'm able to motivate individuals *required* to participate in projects.
- (172) I have worked, over time, to develop credibility with peers, subordinates, and superiors.
- (173) I defend the position of my department.
- (174) I'm comfortable taking risks at work and moving out into unknown business areas.
- (175) I'm able to generate easily a number of new ideas each day.
- (176) I take tight control of projects, and very closely monitor their progress.
- (177) I have written letters and memos that attack others personally.
- (178) I am able to get the time of executives in the company in order to communicate my ideas.
- (179) I think it is sometimes best not to speak your mind.
- (180) I enjoy getting recognition from others in the company for my accomplishments.
- (181) I am able to thrive when working under conditions of unusually high pressure.

- (182) I sometimes have difficulty really "seeing" other peoples' points of view.
- (183) I embrace and truly enjoy change in the workplace.
- (184) I came and go as I please (i.e., meetings).
- (185) I turn in a solid and consistent performance every day I come in to the office.
- (186) I push my ideas to others every chance I get.
- (187) I am interested in other peoples' ideas and work to support and encourage them.
- (188) I tend to accept ideas and situations at face value.
- (189) I solicit and incorporate input from others.
- (190) I don't tend to back down in the face of negative political pressure at work.
- (191) I am a methodical, orderly worker, carefully considering and taking action on one issue, and then moving on to the next.
- (192) I lead others into confrontational situations.
- (193) I am not discouraged or side-tracked by other peoples' resistance to my ideas.
- (194) I'm happy to sit and talk with people at work at any time.
- (195) I have risked disappointing others in order to get my own ideas across.
- (196) I rarely have any free time at work; I always find myself doing something.
- (197) I prefer to delay decision making at times, so that I can think through the issues more carefully.
- (198) I am stubborn and resistant, even in the face of legitimate criticism.
- (199) I'm not afraid to confront an opponent in public.
- (200) When I communicate with others, I do so in a clear manner and get right to the point.
- (201) I have taken on challenges and responsibilities unrelated to my area of job responsibility.
- (202) I am easily consumed by challenges, sometimes to the point where I will neglect some of my normal responsibilities.
- (203) I am usually very patient in my dealings with others.
- (204) I have persisted in pursuing an idea even when I was explicitly directed to stop.
- (205) I have too little time to accomplish my work.
- (206) I'm good at following the direction of others.
- (207) I will sometimes bend the truth in order to achieve my goals.
- (208) I am able to use time and other resources to my best advantage.
- (209) I prefer to work within my own department/office.
- (210) I track projects/activities on more than one level, blending ideas and actions from various projects together.
- (211) I tend to "wing it"; I improvise on the spot.
- (212) I am good at finding faults in new ideas and explaining why they likely will not work.
- (213) I prefer to work in a fairly stable and unchanging work environment.
- (214) In my daily activities at work, I am not restricted by norms or conventions in the company.
- (215) I ignore people who are not key players in my area of business and work.
- (216) I'm a good team player; I work easily with peers with few conflicts.
- (217) I am able to draw others to my ideas.
- (218) I am able to link--to connect--what may appear, at first, to be entirely unrelated ideas, items, situations.



- (219) It's important to let upper management know if the departmental workload becomes excessive.
- (220) I will resist taking on a leadership role in a team.
- (221) I seek out diversity in people, places, things.
- (222) I am able to adapt quickly to changing situations.
- (223) I have blamed other people and their demands on me for being overworked.
- (224) I usually don't take the time to document things.
- (225) I tend to remain focused on the end product and persist until I achieve my objective, regardless of what happens.
- (226) I embrace changes in procedures, processes and practices willingly.
- (227) I am able to obtain the very best from the resources I obtain.
- (228) I am able to admit to having made mistakes when I make them.
- (229) If I don't like an idea, I'll try to secure the support of upper management so that it's delayed, or not implemented.
- (230) I know when to push hard for an idea and when to back off.
- (231) I know how to use my political connections in the company to make things happen.
- (232) If someone has made a mistake, I'm not afraid to pass on criticism to that person in a public forum.
- (233) I am able to easily shake off personal criticism.
- (234) I readily accept constructive criticism.
- (235) I try to get consensus on issues before taking action.
- (236) I tend not to obey established rules, and instead, create rules for myself and others.
- (237) I take action immediately on important projects or initiatives; I never "drag it out" if the item is critical.
- (238) If things get too hot, I prefer not to participate.
- (239) I'm not averse to pointing out other peoples' faults and shortcomings behind their back.
- (240) I am very careful in the way I choose my words in communicating with others.
- (241) I prefer to let others worry about the "big picture".
- (242) I have a good understanding of organizational psychology.
- (243) I get much of my work done in the back room. I convince others of my ideas before holding large-group discussions.
- (244) I see the company from the perspective of my own department.
- (245) I frequently consult with inside and outside specialists if I need help.
- (246) I will break confidences with others, if it will increase the likelihood that I will meet my own goals.
- (247) I'm almost always willing to compromise somewhat.
- (248) I track and manage the financial aspect of my projects at work; I rarely let others do it.
- (249) I make sure that every discussion I have with someone has a definitive outcome.
- (250) I prefer to be asked, rather than to volunteer, for new assignments.
- (251) I interact with others in the office very differently from how I interact outside of the office.
- (252) I have an excellent memory for details and conversations.
- (253) When faced with a number of alternatives, I seek out direction from others.
- (254) I don't always credit the person who originally comes up with a new idea; instead, I will, at times, take credit for the idea myself.

- (255) I tend to write very short and cryptic memos/notes.
- (256) I sometimes have difficulty working under pressure.
- (257) When I am having a discussion with another person, I am always able to remain completely focused on my own ideas.
- (258) I don't volunteer for "visible" jobs, preferring to remain more in the background.
- (259) I orchestrate situations (e.g., meetings, one-on-one conversations) so that my wishes are approved.
- (260) If I come up with a new idea, I get the team to carry it forward.
- (261) I become very impatient with trivial details that interrupt my plans.
- (262) I promote ideas that have the highest visibility and likelihood of success.
- (263) I relate best to people at my own management level in the company.
- (264) I am often able to very accurately anticipate the reactions of others in the organization to my plans.
- (265) I always rigorously review plans to ensure their accuracy prior to them being presented.
- (266) I enjoy being with people who have similar attitudes to mine.
- (267) I confront situations head on; I never "ostrich".
- (268) I'm usually willing to take on extra tasks, if asked to do so.
- (269) I don't usually attend a lot of large-group meetings.
- (270) I can react jealously to other peoples' accomplishments.
- (271) I communicate only what I absolutely have to about a new project; I leave areas of challenge or doubt in the background.
- (272) I stay in one job for a long time, so that I become an expert in that one area.
- (273) I don't compare myself with others.
- (274) I am interested in the technical side of projects.
- (275) I don't follow many routines in my work life; I like a lot of change.
- (276) I tend to listen more than talk when I'm around other people.
- (277) If some company rule or procedure gets in my way, I go around it.
- (278) I communicate very clearly and succinctly.
- (279) I have difficulty engaging myself--getting involved and enthusiastic--in projects that I have not "bought into".
- (280) I enjoy routine, and use routine to organize my work schedule.
- (281) I tend to work pretty irregular hours.
- (282) I'm able to say "no" to others, when I feel that I have enough work to do already.
- (283) I focus on the long-range goal, sometimes at the expense of managing short-term needs.
- (284) I favor concrete rewards, such as pay and a nice office, over less concrete awards (e.g., praise, opportunities for participation in other projects).
- (285) I read a diverse range of business literature.
- (286) I enjoy working with new technology, tinkering with new gadgets, new software, etc.
- (287) I tend to make personal sacrifices in my work, when I am dedicated to a task or project.
- (288) I keep my office very neat and tidy.
- (289) I tend to share moments of doubts about projects with only a select few.
- (290) I'm more concerned with getting all the details right on a project, than with meeting a deadline.
- (291) I tend to work well in team settings: I get along with others in a group *and* can delegate.
- (292) I prefer working on my own.

- (293) I have very clearly defined goals both for myself and for the projects in which I'm involved.
- (294) I typically do what is correct and accepted in the company.
- (295) I don't concern myself with the people I offend or annoy in the pursuit of my objectives.
- (296) I tend to present options and let someone else make the final decision.
- (297) I watch other successful managers and try to adopt the methods they use that work.
- (298) My focus is more on the specifics of the task at hand, rather than the environment around me.
- (299) I spent a fair bit of time gathering information about my work environment (e.g., I ask others both inside and outside of my work unit how they are doing).
- (300) I work best in a highly structured work environment.
- (301) If I'm asked to become involved in a project, I rarely ever say no.
- (302) I study carefully all issues and then pass on decision making to someone else.
- (303) I hate waiting for things to be completed; I tend to get impatient with people if they take too long.
- (304) When I communicate with others, it is usually through mail (or voice mail), rather than face-to-face.
- (305) I always meet my deadlines at work.
- (306) I accept and follow company guidelines/rules even if they appear to be poor ones.
- (307) I'm persistent in voicing my opinion over and over again, even if my ideas are rejected.
- (308) I manage upward, sometimes at the expense of people below me.
- (309) I am almost always willing to deal with difficult decisions, such as redundant employees.
- (310) I don't shy away from confrontations.
- (311) I question and challenge all processes and procedures.
- (312) I always strive to meet my performance objectives.
- (313) I evaluate risks just once, and then go on to act.
- (314) I am an extremely reliable team player.
- (315) I always make time for people.
- (316) I do my best work when I am given specific tasks and then guided through their completion.
- (317) In meetings, I tend to seek out both pros *and* cons.
- (318) I carefully analyze situations; I work to understand all details, maybe more than is even necessary.
- (319) I focus on my own needs, not the needs and vision of the corporation.
- (320) When a project I'm working on runs into an impasse, I look to others to solve the problem.
- (321) When engaged in some form of problem-solving, I always consider and list items that will need follow up.
- (322) I don't speak up at meetings.
- (323) I am able to inspire and motivate others.
- (324) I follow a fairly precise schedule at work (e.g., coffee at 9:00, lunch at 12:00)
- (325) I have made quick decisions, that later turn out to be poor ones.
- (326) I enjoy working closely with others in a parallel manner.
- (327) I have taken a bad plan for a good idea and changed it to make it work.
- (328) I don't tend to spend time socializing at work; I'm there to focus on the job, not other people.

- (329) When I give advice to others, I give them the *whole* picture.
- (330) I maintain an immaculate work area and an empty "in" basket.
- (331) I am always willing to "weed out" team members who are not immediately productive.
- (332) I follow direction easily and accurately.
- (333) When I'm at the office, I have an "open-door" policy.
- (334) I refer to policies and procedures to define and support my work behavior.
- (335) I always join in in company social functions.
- (336) I define success, in part, by the quantity of work generated.
- (337) When someone asks me for information, I give a quick response, and then follow up.
- (338) I don't ask an awful lot of questions at work.
- (339) I am very careful to always keep my time commitments.
- (340) I enjoy and seek out repetitive tasks.
- (341) When I think that someone is incompetent, I tell them.
- (342) I dislike and avoid customer contact.
- (343) I share the concerns of upper management, with those in entry-level management jobs.
- (344) I take my time when working on assignments.
- (345) When someone complains about a problem, I ask *them* what, specifically, *they* would do.
- (346) I wait for others to contact me regarding project updates, missed deliverables, etc.
- (347) When working on a project, I delegate items to people I know will take a positive and inspired approach.
- (348) I keep very good records, documenting all events and activities.
- (349) I can easily recognize and appreciate talent in others; I always try to use other peoples' talents.
- (350) I tend to follow the direction of superiors without question.
- (351) I compromise on issues in order to keep projects going.
- (352) I'm not very comfortable meeting new people.
- (353) I get impatient with others when they don't work to my own high standards.
- (354) I'm not very comfortable speaking in front of others.
- (355) I am very direct in expressing what I want; I don't "beat around the bush".
- (356) I can experience difficulty arranging my work in order of priority.
- (357) I am always willing to share information with others.
- (358) I avoid conflict and confrontation in my day-to-day work.
- (359) I am fairly good at managing upwards.
- (360) I will not take risks with company time, people, and money.
- (361) I know a lot of people in the company and I'm able to ask for their input and commitment when it is needed.
- (362) I'm always looking for ways to do things just a little bit better and a little bit faster.
- (363) I have a lot of patience for completing the more tedious tasks.

Never true (or extremely unlikely to be true) or descriptive of my behavior 1						Rarely true (or unlikely to be true) or descriptive of my behavior 2						Occasionally true (or somewhat likely to be true) or descriptive of my behavior 3						Often true (or likely to be true) or descriptive of my behavior 4						Very frequently true (or extremely likely to be true) or descriptive of my behavior 5					
(1)	1	2	3	4	5	(37)	1	2	3	4	5	(73)	1	2	3	4	5	(109)	1	2	3	4	5	(145)	1	2	3	4	5
(2)	1	2	3	4	5	(38)	1	2	3	4	5	(74)	1	2	3	4	5	(110)	1	2	3	4	5	(146)	1	2	3	4	5
(3)	1	2	3	4	5	(39)	1	2	3	4	5	(75)	1	2	3	4	5	(111)	1	2	3	4	5	(147)	1	2	3	4	5
(4)	1	2	3	4	5	(40)	1	2	3	4	5	(76)	1	2	3	4	5	(112)	1	2	3	4	5	(148)	1	2	3	4	5
(5)	1	2	3	4	5	(41)	1	2	3	4	5	(77)	1	2	3	4	5	(113)	1	2	3	4	5	(149)	1	2	3	4	5
(6)	1	2	3	4	5	(42)	1	2	3	4	5	(78)	1	2	3	4	5	(114)	1	2	3	4	5	(150)	1	2	3	4	5
(7)	1	2	3	4	5	(43)	1	2	3	4	5	(79)	1	2	3	4	5	(115)	1	2	3	4	5	(151)	1	2	3	4	5
(8)	1	2	3	4	5	(44)	1	2	3	4	5	(80)	1	2	3	4	5	(116)	1	2	3	4	5	(152)	1	2	3	4	5
(9)	1	2	3	4	5	(45)	1	2	3	4	5	(81)	1	2	3	4	5	(117)	1	2	3	4	5	(153)	1	2	3	4	5
(10)	1	2	3	4	5	(46)	1	2	3	4	5	(82)	1	2	3	4	5	(118)	1	2	3	4	5	(154)	1	2	3	4	5
(11)	1	2	3	4	5	(47)	1	2	3	4	5	(83)	1	2	3	4	5	(119)	1	2	3	4	5	(155)	1	2	3	4	5
(12)	1	2	3	4	5	(48)	1	2	3	4	5	(84)	1	2	3	4	5	(120)	1	2	3	4	5	(156)	1	2	3	4	5
(13)	1	2	3	4	5	(49)	1	2	3	4	5	(85)	1	2	3	4	5	(121)	1	2	3	4	5	(157)	1	2	3	4	5
(14)	1	2	3	4	5	(50)	1	2	3	4	5	(86)	1	2	3	4	5	(122)	1	2	3	4	5	(158)	1	2	3	4	5
(15)	1	2	3	4	5	(51)	1	2	3	4	5	(87)	1	2	3	4	5	(123)	1	2	3	4	5	(159)	1	2	3	4	5
(16)	1	2	3	4	5	(52)	1	2	3	4	5	(88)	1	2	3	4	5	(124)	1	2	3	4	5	(160)	1	2	3	4	5
(17)	1	2	3	4	5	(53)	1	2	3	4	5	(89)	1	2	3	4	5	(125)	1	2	3	4	5	(161)	1	2	3	4	5
(18)	1	2	3	4	5	(54)	1	2	3	4	5	(90)	1	2	3	4	5	(126)	1	2	3	4	5	(162)	1	2	3	4	5
(19)	1	2	3	4	5	(55)	1	2	3	4	5	(91)	1	2	3	4	5	(127)	1	2	3	4	5	(163)	1	2	3	4	5
(20)	1	2	3	4	5	(56)	1	2	3	4	5	(92)	1	2	3	4	5	(128)	1	2	3	4	5	(164)	1	2	3	4	5
(21)	1	2	3	4	5	(57)	1	2	3	4	5	(93)	1	2	3	4	5	(129)	1	2	3	4	5	(165)	1	2	3	4	5
(22)	1	2	3	4	5	(58)	1	2	3	4	5	(94)	1	2	3	4	5	(130)	1	2	3	4	5	(166)	1	2	3	4	5
(23)	1	2	3	4	5	(59)	1	2	3	4	5	(95)	1	2	3	4	5	(131)	1	2	3	4	5	(167)	1	2	3	4	5
(24)	1	2	3	4	5	(60)	1	2	3	4	5	(96)	1	2	3	4	5	(132)	1	2	3	4	5	(168)	1	2	3	4	5
(25)	1	2	3	4	5	(61)	1	2	3	4	5	(97)	1	2	3	4	5	(133)	1	2	3	4	5	(169)	1	2	3	4	5
(26)	1	2	3	4	5	(62)	1	2	3	4	5	(98)	1	2	3	4	5	(134)	1	2	3	4	5	(170)	1	2	3	4	5
(27)	1	2	3	4	5	(63)	1	2	3	4	5	(99)	1	2	3	4	5	(135)	1	2	3	4	5	(171)	1	2	3	4	5
(28)	1	2	3	4	5	(64)	1	2	3	4	5	(100)	1	2	3	4	5	(136)	1	2	3	4	5	(172)	1	2	3	4	5
(29)	1	2	3	4	5	(65)	1	2	3	4	5	(101)	1	2	3	4	5	(137)	1	2	3	4	5	(173)	1	2	3	4	5
(30)	1	2	3	4	5	(66)	1	2	3	4	5	(102)	1	2	3	4	5	(138)	1	2	3	4	5	(174)	1	2	3	4	5
(31)	1	2	3	4	5	(67)	1	2	3	4	5	(103)	1	2	3	4	5	(139)	1	2	3	4	5	(175)	1	2	3	4	5
(32)	1	2	3	4	5	(68)	1	2	3	4	5	(104)	1	2	3	4	5	(140)	1	2	3	4	5	(176)	1	2	3	4	5
(33)	1	2	3	4	5	(69)	1	2	3	4	5	(105)	1	2	3	4	5	(141)	1	2	3	4	5	(177)	1	2	3	4	5
(34)	1	2	3	4	5	(70)	1	2	3	4	5	(106)	1	2	3	4	5	(142)	1	2	3	4	5	(178)	1	2	3	4	5
(35)	1	2	3	4	5	(71)	1	2	3	4	5	(107)	1	2	3	4	5	(143)	1	2	3	4	5	(179)	1	2	3	4	5
(36)	1	2	3	4	5	(72)	1	2	3	4	5	(108)	1	2	3	4	5	(144)	1	2	3	4	5	(180)	1	2	3	4	5

Never true (or extremely unlikely to be true) or descriptive of my behavior 1	Rarely true (or unlikely to be true) or descriptive of my behavior 2	Occasionally true (or somewhat likely to be true) or descriptive of my behavior 3	Often true (or likely to be true) or descriptive of my behavior 4	Very frequently true (or extremely likely to be true) or descriptive of my behavior 5
(181) 1 2 3 4 5	(219) 1 2 3 4 5	(257) 1 2 3 4 5	(295) 1 2 3 4 5	(333) 1 2 3 4 5
(182) 1 2 3 4 5	(220) 1 2 3 4 5	(258) 1 2 3 4 5	(296) 1 2 3 4 5	(334) 1 2 3 4 5
(183) 1 2 3 4 5	(221) 1 2 3 4 5	(259) 1 2 3 4 5	(297) 1 2 3 4 5	(335) 1 2 3 4 5
(184) 1 2 3 4 5	(222) 1 2 3 4 5	(260) 1 2 3 4 5	(298) 1 2 3 4 5	(336) 1 2 3 4 5
(185) 1 2 3 4 5	(223) 1 2 3 4 5	(261) 1 2 3 4 5	(299) 1 2 3 4 5	(337) 1 2 3 4 5
(186) 1 2 3 4 5	(224) 1 2 3 4 5	(262) 1 2 3 4 5	(300) 1 2 3 4 5	(338) 1 2 3 4 5
(187) 1 2 3 4 5	(225) 1 2 3 4 5	(263) 1 2 3 4 5	(301) 1 2 3 4 5	(339) 1 2 3 4 5
(188) 1 2 3 4 5	(226) 1 2 3 4 5	(264) 1 2 3 4 5	(302) 1 2 3 4 5	(340) 1 2 3 4 5
(189) 1 2 3 4 5	(227) 1 2 3 4 5	(265) 1 2 3 4 5	(303) 1 2 3 4 5	(341) 1 2 3 4 5
(190) 1 2 3 4 5	(228) 1 2 3 4 5	(266) 1 2 3 4 5	(304) 1 2 3 4 5	(342) 1 2 3 4 5
(191) 1 2 3 4 5	(229) 1 2 3 4 5	(267) 1 2 3 4 5	(305) 1 2 3 4 5	(343) 1 2 3 4 5
(192) 1 2 3 4 5	(230) 1 2 3 4 5	(268) 1 2 3 4 5	(306) 1 2 3 4 5	(344) 1 2 3 4 5
(193) 1 2 3 4 5	(231) 1 2 3 4 5	(269) 1 2 3 4 5	(307) 1 2 3 4 5	(345) 1 2 3 4 5
(194) 1 2 3 4 5	(232) 1 2 3 4 5	(270) 1 2 3 4 5	(308) 1 2 3 4 5	(346) 1 2 3 4 5
(195) 1 2 3 4 5	(233) 1 2 3 4 5	(271) 1 2 3 4 5	(309) 1 2 3 4 5	(347) 1 2 3 4 5
(196) 1 2 3 4 5	(234) 1 2 3 4 5	(272) 1 2 3 4 5	(310) 1 2 3 4 5	(348) 1 2 3 4 5
(197) 1 2 3 4 5	(235) 1 2 3 4 5	(273) 1 2 3 4 5	(311) 1 2 3 4 5	(349) 1 2 3 4 5
(198) 1 2 3 4 5	(236) 1 2 3 4 5	(274) 1 2 3 4 5	(312) 1 2 3 4 5	(350) 1 2 3 4 5
(199) 1 2 3 4 5	(237) 1 2 3 4 5	(275) 1 2 3 4 5	(313) 1 2 3 4 5	(351) 1 2 3 4 5
(200) 1 2 3 4 5	(238) 1 2 3 4 5	(276) 1 2 3 4 5	(314) 1 2 3 4 5	(352) 1 2 3 4 5
(201) 1 2 3 4 5	(239) 1 2 3 4 5	(277) 1 2 3 4 5	(315) 1 2 3 4 5	(353) 1 2 3 4 5
(202) 1 2 3 4 5	(240) 1 2 3 4 5	(278) 1 2 3 4 5	(316) 1 2 3 4 5	(354) 1 2 3 4 5
(203) 1 2 3 4 5	(241) 1 2 3 4 5	(279) 1 2 3 4 5	(317) 1 2 3 4 5	(355) 1 2 3 4 5
(204) 1 2 3 4 5	(242) 1 2 3 4 5	(280) 1 2 3 4 5	(318) 1 2 3 4 5	(356) 1 2 3 4 5
(205) 1 2 3 4 5	(243) 1 2 3 4 5	(281) 1 2 3 4 5	(319) 1 2 3 4 5	(357) 1 2 3 4 5
(206) 1 2 3 4 5	(244) 1 2 3 4 5	(282) 1 2 3 4 5	(320) 1 2 3 4 5	(358) 1 2 3 4 5
(207) 1 2 3 4 5	(245) 1 2 3 4 5	(283) 1 2 3 4 5	(321) 1 2 3 4 5	(359) 1 2 3 4 5
(208) 1 2 3 4 5	(246) 1 2 3 4 5	(284) 1 2 3 4 5	(322) 1 2 3 4 5	(360) 1 2 3 4 5
(209) 1 2 3 4 5	(247) 1 2 3 4 5	(285) 1 2 3 4 5	(323) 1 2 3 4 5	(361) 1 2 3 4 5
(210) 1 2 3 4 5	(248) 1 2 3 4 5	(286) 1 2 3 4 5	(324) 1 2 3 4 5	(362) 1 2 3 4 5
(211) 1 2 3 4 5	(249) 1 2 3 4 5	(287) 1 2 3 4 5	(325) 1 2 3 4 5	(363) 1 2 3 4 5
(212) 1 2 3 4 5	(250) 1 2 3 4 5	(288) 1 2 3 4 5	(326) 1 2 3 4 5	
(213) 1 2 3 4 5	(251) 1 2 3 4 5	(289) 1 2 3 4 5	(327) 1 2 3 4 5	
(214) 1 2 3 4 5	(252) 1 2 3 4 5	(290) 1 2 3 4 5	(328) 1 2 3 4 5	
(215) 1 2 3 4 5	(253) 1 2 3 4 5	(291) 1 2 3 4 5	(329) 1 2 3 4 5	
(216) 1 2 3 4 5	(254) 1 2 3 4 5	(292) 1 2 3 4 5	(330) 1 2 3 4 5	
(217) 1 2 3 4 5	(255) 1 2 3 4 5	(293) 1 2 3 4 5	(331) 1 2 3 4 5	
(218) 1 2 3 4 5	(256) 1 2 3 4 5	(294) 1 2 3 4 5	(332) 1 2 3 4 5	

**APPENDIX F**

**COMPANY AND PARTICIPANT FEEDBACK REPORTS**

**CORPORATE ENTREPRENEURSHIP  
PROJECT: COMPANY FEEDBACK**

**ASSESSMENT PREPARED FOR:**

**Company A**

**Date of Report: December 15, 1993**

**Prepared by:**

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## INFORMATION FOR PARTICIPATING COMPANIES IN THE MANAGERIAL ACTIVITY PROJECT

We'd like to take this chance to thank you as a corporation for your participation in this study. Organizational research requires the input of many participants. This study has been no exception. Over the past few months, 435 managers from the following seven companies have taken part in this study: BC Hydro, Manitoba Telephone System, the University of British Columbia, BC Transit, H.A. Simons, the Insurance Corporation of B.C., and the Ministry of Transportation and Highways. The collection of information began in May with BC Hydro and continued until early September with H. A. Simons, UBC, BC Transit, and the Ministry of Highways.

The participation of Company A has helped us move one step further toward the development of an assessment tool--a much refined (and shortened!) version of the questionnaire you completed, that could be used for management assessment. We envision it being used for "top-down" assessment (traditional supervisory ratings of subordinate performance) or "bottom-up" assessment (ratings of managers by subordinates). Ratings obtained through such an assessment could be used to supplement current appraisal and performance management practices, or serve organizational development needs.

This report is a summary of corporate results from the questionnaire your managers completed. We have conducted a number of different analyses that we hope will be of interest to your organization. Your managers, as a group, are profiled. Subgroups of managers are compared (men vs. women) and managers in your company, as a whole, are compared with managers from the other six participating companies.

Before turning to the results, we thought you might appreciate learning more about the history of the project and the study objectives. The original questionnaire was made up of 363 items. It was lengthy and we appreciate that many of your managers took longer to complete it than our original estimate of one hour! Reports ranged anywhere from a low of 45 minutes to a high of about 2 hours.

The items contained in the questionnaire were written by 26 managers from BCTel. Their task was to write down statements describing what *corporate entrepreneurs* (or champions) do. They were also asked to describe things that people do who are the exact opposite of the champion. The questionnaire your managers completed was designed to measure *corporate entrepreneurship*...the extent to which people behave at work in ways that are characteristic of a corporate entrepreneur.

The corporate entrepreneur has been defined in the research literature as an individual who *informally* emerges to take a new idea for an innovation (an idea s/he may or may not have generated) and introduces, pushes, promotes, and sells the idea to others in the organization. Such individuals operate as entrepreneurs in the corporate environment. They generate or adapt new ideas and promote their implementation. Corporate entrepreneurs have been described as innovative, driven to achieve, and committed to their ideas. They are often well connected in the organization (good networkers) and possess the interpersonal skill and political savvy to convince others of the importance of their ideas.

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Corporate entrepreneurs have been studied and described by Rosabeth Moss Kanter, for example, in her books "The Change Masters", and "When Giants Learn to Dance". Or, Peter Drucker's name may be more familiar to you and his book "Innovation and Entrepreneurship". Finally, the popular "guru" of management science, Tom Peters, has written about the importance of corporate entrepreneurs in his books "Thriving on Chaos: Handbook for a Management Revolution", and his earlier book with Waterman entitled "In Search of Excellence". All these references are excellent and very readable sources if you'd like to learn more about corporate entrepreneurship and its role in today's business environment.

The present research was motivated by our desire to better understand corporate entrepreneurship from a *behavioral* perspective--what is it that corporate entrepreneurs do?--and to develop instruments that could be used to identify corporate entrepreneurs. Company A's participation has enabled us to identify *dimensions* of corporate entrepreneurship. These dimensions were used to structure the contents of the individual feedback packages returned to the participants previously. These dimensions will also be used to structure the company feedback. Thus, you'll see your organization's standing on what we've called "Openness to Change" and "Rule Challenging", to use two examples. Our analyses have enabled us to understand corporate entrepreneurship as made up of a number of independent dimensions, each measured by roughly 10 to 15 key items or questions from the questionnaire.

#### GENERAL GUIDELINES FOR THE INTERPRETATION OF COMPANY RESULTS

As noted above, we're in the process of developing an instrument. Thus, the corporate results presented in this report must be interpreted with caution. All measurement contains error; this means that the scores recorded for your organization are *estimates*. These estimates contain a degree of error, so interpret them with appropriate caution. It's also important to bear in mind a caution we communicated to the individual participants...that there's no ideal management profile. **It's not necessarily good or bad for your organization to be profiled as low or high on the dimensions measuring corporate entrepreneurship. Much depends on the culture of your company--the kinds of behaviors that are rewarded and seen as desirable.**

Another note of caution. In cases where we "break down" results by gender or management level, the number of individuals on which scores are based may, in some cases be quite small. You'll notice this, particularly with respect to scores based on middle- and upper-level females. Notice the number of persons such scores are based on, and, if quite small (< 5) consider them suggestive only, and likely to change if based on a larger number of employees.

This company feedback report is divided into two sections. In Section I we profile your managers on the dimensions of corporate entrepreneurship. Information is presented in both graphic and tabular form. We describe your organization's standing in an *absolute* sense, by reporting average "raw" scores achieved by your managers: the average level of championship shown on the various dimensions of corporate entrepreneurship by managers in your company.

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In Section II, we report your organization's standing *relative* to a combined pool of managers from the other six companies in the study. We've reported this information in two forms. First, we report average T-Scores (*standard scores* having a mean [or average] of 50 and a standard deviation of 10) for managers at Company A, broken down by gender and management level. You should understand T-scores as follows. The vast majority of T-scores (95%) fall within the range of 30 to 70 and roughly 68% of T-scores fall between 40 and 60. A T-score would be characterized as LOW if it fell below 40, and VERY LOW if below 30. Scores in the 40-60 range are regarded as AVERAGE. Those scores above 60 are seen as HIGH, with those above 70 regarded as VERY HIGH. Of course, what is meant here by LOW and HIGH, etc., is LOW and HIGH in comparison with *the other managers who completed the questionnaire*. You should keep in mind that T-scores reflect how your managers compare with the other managers in the study.

Secondly, we report average raw scores for managers in your organization and a combined sample of managers from the other six companies, broken down by gender and management level. This information should allow you to make more finely-grained comparisons, examining, for example, how your middle-level male managers compare with a large sample of middle-level male managers from the other companies.

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### *Section I: A Profile of Your Organization*

#### *How to Interpret The Results*

In Tables 1 and 2 we report summary information on managers in your company on the various dimensions of corporate entrepreneurship. From Table 1, you'll notice that, in the third column, we report the "average raw score" for each of the 11 dimensions as well as the Overall Championship scale. We obtained these numbers by calculating a scale score (e.g., a score on Job Involvement, Rule Challenging, etc.) for each manager and then computing an average across all managers in your company for each scale. Thus, this figure provides you with our best estimate of your organization's standing on this dimension (based, of course, on the sample of managers who took part in the study). Naturally, there will be a degree of variability or scatter around this average; some individual managers will score much higher and others much lower than this average, but most will hover fairly close to the average raw score reported in column 3 of Table 1.

To obtain the percentage figures in the last column, we divided the average raw score by the maximum score possible on each scale. These percentages have been plotted to provide you with a picture of your organization's profile. The information provided in Table 1 provides interesting diagnostic information, in that highs and lows are apparent. It does not, however, give much information on the absolute level of championship present in your managers on the various scales. This information is contained in Table 2.

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In Table 2 we present each scale separately, with a description of the meaning of scores falling toward the high and low ends of the five-point scale. The placement of the arrow was determined by dividing the "average raw score" (column 3 in Table 1), by the number of items in the scale. Thus, the arrow indicates the average score of your managers on an overall 5-point scale for the particular dimension; so you can understand the placement of the arrow relative to the 5 anchor points used in the original questionnaire. We also indicate on each scale the range of scores achieved by managers in your organization (marked by a parallel horizontal line). Thus, you get an indication of the score variability (and, of course, the minimum and maximum scores) among your managers.

### *A Discussion of Your Organization's Results*

You'll notice from the % Profile in Table 1 and the scales outlined in Table 2 that Company A managers are highest on Persuasion and Political Savvy, Action Orientation, and Collaboration and Support. Scores in all three of these areas are above the mid-point (see Table 2), particularly the last two results; thus, we can characterize them as roughly above average. Company A managers described themselves as fairly persuasive in their dealings with others. They appear able to sell ideas to others...to promote projects and work to get a buy-in from others in the company. Managers from Company A also appear to be fairly decisive and action-oriented. The majority reported that they follow through on commitments, ensuring that projects and other priorities are delivered on time. Company A managers are particularly high on Collaboration and Support; this was the highest score achieved. Company A managers reported behaving in ways that encourage others to do their best. They may empower others and generally behave in ways that are supportive of people around them. Teamwork and collaboration appear to be strong components of Company A culture.

With the exception of Candid Persistence (and, to a lesser extent, Willingness to Confront), the remainder of scores hover fairly close to the midpoint of the 5-point scale. Company A managers do not, as a group, appear to be blunt and argumentative when dealing with others. Although an aspect of corporate entrepreneurship, high levels of Candid Persistence may not necessarily be a positive thing in many situations.

Over all dimensions, on average, Company A managers appear to be just slightly above average on championship (see the Overall Championship scale at the end of Table 2). Although not a strong part of the Company A culture, some managers in the company do appear to take new ideas and promote and sell them to others in the organization.

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Table 1

Overall Company Results Reported in Raw<sup>1</sup> Scores

Scale Name	# items	Avg Score	Max. Possible <sup>2</sup>	% of Max. Possible	% Profile							
					50	55	60	65	70	75	80	
Persuasion & Political Savvy	15	50.7	75	68								
Candid Persistence	15	39.1	75	52								
Spontaneity & Improvisation	15	45.8	75	61								
Job Involvement	15	44.3	75	59								
Rule Challeng'g	15	44.6	75	59								
Action Orient'n	15	55.2	75	74								
Self Promotion	12	35.1	60	59								
Collaboration & Support	15	56.9	75	76								
Openness to Change	15	47.3	75	63								
"Big Picture" Perspective	14	43.2	70	62								
Willingness to Confront	15	42.4	75	57								
Overall Championship	161	504.6	805	63								

<sup>1</sup> A raw score is simply the number of items responded to in a manner reflecting championship; the score is not converted, like a T-score.

<sup>2</sup> A 5-point response scale was used, ranging from 1= Never True; 2 = Rarely True; 3 = Occasionally True; 4 = Often True; 5 = Very Frequently True. Thus, for a 15-item scale, the maximum score possible = 75.

Table 2

A Detailed Description of the 11 Scales and a Profile of Your Managers on Each Scale<sup>3</sup>


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**Persuasion and Political Savvy:** A measure of salesmanship and persuasiveness. Taps into one's ability to develop and use effectively political connections in the company.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
<hr/>				

Quiet, reserved; un-assertive in group situations.

Socially persuasive; able to sell ideas; knows how to develop & use connections.

**Candid Persistence:** A measure of one's directness and persistence.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
<hr/>				

Good listening skills; attentive and patient in dealings with others.

Blunt and direct; persistent in arguing a point; outspoken.

**Spontaneity and Improvisation:** A measure of one's inclination to "wing it"; to make decisions without careful consideration and caution.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
<hr/>				

Planful and methodical; keeps careful records.

Intuitive, focused, and spontaneous; tends to "wing it".

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<sup>3</sup> See Appendix A for a listing of sample items from each of the scales.

Table 2 cont.

**Job Involvement:** A measure of job commitment, drive, and determination.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
<hr/>				
Doesn't typically work overtime; expends minimal energy at work.			Committed; hard-driving; hard working; goes after tasks with a sense of time urgency.	

**Rule Challenging:** A measure of one's inclination toward questioning rules and people in authority positions.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
<hr/>				
Accepting of authority & rules; follows policies and guidelines.			Questions authority; go obstacles; non-conforming.	

**Action Orientation:** A measure of decisiveness and thoroughness.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
<hr/>				
Slow to take action; may procrastinate by putting items on the "back burner".			Decisive; proactive; meets deadlines and commitments; deals with issues immediately.	

Table 2 cont.

**Self Promotion:** A measure of one's need for recognition and publicity in the company.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5



Doesn't seek out attention;  
prefers to stay in the back-  
ground.

Enjoys recognition;  
publicizes successes.

**Collaboration and Support:** A measure of one's inclination toward developing and fostering a team approach through empowerment and encouragement.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5



Prefers to work indep-  
endently; resists delegation.

Supports and encourages  
others; works to foster a  
positive team  
environment.

**Openness to Change:** A measure of one's willingness and preference for change and unpredictability in the work environment.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5



Prefers predictability &  
structure; resists risk &  
change.

Adapts quickly to change;  
enjoys change and new  
responsibilities.

Table 2 cont.

**"Big Picture" Perspective:** A measure of one's preference for systems and "big picture" thinking, rather than an orientation toward detail.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
<hr/>				
Pays close attention to detail; willing and able to do repetitive tasks; enjoys technical side of projects.			Focuses on larger issues, rather than specific details; dislikes routine.	

**Willingness to Confront:** A measure of one's willingness to engage in discussion and debate in working through a conflict.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
<hr/>				
Prefers to avoid conflict; accommodates to others.			Deals directly with conflict; confronts others on weaknesses.	

**Overall Championship:** A weighted average of the 11 individual scales.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
<hr/>				

The champion is an individual who takes a new idea (an idea s/he may or may not have generated) and introduces, pushes, promotes, and sells the idea to others in the organization.

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## *Section II: A Comparison of Your Organization with The Other Six Participating Companies*

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In this section, we compare managers at Company A with managers from the other six participating companies on the various dimensions of corporate entrepreneurship.

At the beginning of this study, we had anticipated that significant differences might arise between the seven participating companies. On the basis of the information reported in Tables 3, 4, and 5, however, it would appear, instead, that few differences exist. This was a surprising result for our research team.

Results in Tables 3 and 4 are reported as T-Scores (refer back to page 3 for a definition of T-scores). These scores were obtained by computing an overall average, across all managers in the study, for each of the entrepreneurship scales. Then, each of your managers' scores was compared with this overall average and a company average T-score calculated. Thus, the greater the distance your organization's average T-score from the overall average, the more the T-score will deviate from the average--50.

The majority of T-scores reported in Tables 3 and 4 fall in the average range. This means that, on balance, Company A managers are not particularly different from managers in the other organizations on the various dimensions of corporate entrepreneurship. This result is telling us that the % Profile presented in Table 1 is fairly similar across the seven participating companies. Although no comparison groups appear on Tables 3 and 4, each score does represent your organizations *relative* standing on each dimension, compared with the other managers in the study. Thus, a T-score of 39 on one of the dimensions would indicate that managers from your organization are LOW compared with the other managers. Notice that the sample sizes for upper-level men and women are small, so interpret any differences in involving these groups cautiously.

A few general trends emerge from Tables 3 and 4. Female managers, as a group (particularly lower-level female managers) appear to score lower than male managers on Overall Championship and most of the individual 11 dimensions. An exception is Collaboration and Support, where male and female average scores are very similar. Thus, as a group, when compared with the other female managers in this study, female managers at Company A report less activity related to developing new ideas and promoting their implementation to others in the company.

The Company A male managers, as a group, are very similar to the other (roughly 250) male managers in the study. Their T-scores in Table 4 hover very close to the midpoint of 50. When we break down the male results by management level, we see some differences across the three levels (note that the sample size for upper-level managers is small). Upper-level male managers tend to score higher on Persuasiveness and Political Skill and Openness to Change, and lower on Rule Challenging and Willingness to Confront. Operating at a higher level of management, these men appear to have developed their skills in presenting ideas to others in ways that are persuasive and convincing. They appear willing to change and adapt to new circumstances. They tend to conform to the rules and guidelines of the company and are less likely than lower- and middle-level male managers to enter into conflict with others through confrontation.

In Table 5, we report average raw scores for your organization alongside average raw scores for the total sample of managers in the study (minus the managers from your company), each broken down by gender and management level. This is very finely-grained information and might be of interest to some readers. The differences that do exist between Company A managers and all other managers in the study are few in number and small in magnitude.

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Table 3

T-Scores for Company A Managers, Broken Down by Gender and Within Gender,  
Management Level

	Men			Women			All Mngrs
	Lower (n=34)	Middle (n=34)	Upper (n=3)	Lower (n=14)	Middle (n=6)	Upper (n=0)	
<b>1. Persuasiveness and Political Skill</b>	47.8	51.7	57.5	46.5	45.7		49.3
<b>2. Candid Persistence</b>	51.7	51.6	52.0	42.0	50.0		50.1
<b>3. Spontaneity and Improvisation</b>	52.2	48.7	47.0	44.1	43.5		48.9
<b>4. Job Involvement</b>	50.9	50.5	50.9	42.7	43.9		49.0
<b>5. Rule Challenging</b>	50.1	51.2	41.6	44.1	51.5		49.4
<b>6. Action Oriented</b>	49.8	51.3	50.1	46.3	49.7		49.8
<b>7. Self Promoting</b>	50.4	52.6	50.1	46.5	47.3		50.4
<b>8. Collaboration and Support</b>	49.4	48.2	47.9	50.8	51.8		49.2
<b>9. Openness to Change</b>	50.8	49.4	60.3	43.9	43.6		49.0
<b>10. Big Picture Perspective</b>	51.3	46.9	50.0	52.0	44.4		49.3
<b>11. Willingness to Confront</b>	50.4	53.0	42.2	40.7	51.1		49.7
<b>Overall Championship</b>	50.9	50.6	50.1	41.5	45.4		<b>49.0</b>

Table 4

T-Scores for Company A Managers, Broken Down by Gender and Management Level

	Men (n=71)	Women (n=20)	Entry- Level (n=48)	Middle- Level (n=40)	Upper- Level (n=3)
<b>1. Persuasiveness and Political Skill</b>	50.1	46.5	47.2	51.2	57.5
<b>2. Candid Persistence</b>	51.7	44.4	48.9	51.4	52.0
<b>3. Spontaneity and Improvisation</b>	50.3	43.9	49.8	47.9	47.0
<b>4. Job Involvement</b>	50.7	43.1	48.5	49.5	50.9
<b>5. Rule Challenging</b>	50.3	46.3	48.3	51.3	41.6
<b>6. Action Oriented</b>	50.5	47.3	48.8	51.1	50.1
<b>7. Self Promoting</b>	51.4	46.7	49.3	51.8	50.1
<b>8. Collaboration and Support</b>	48.8	50.8	49.7	48.7	47.9
<b>9. Openness to Change</b>	50.5	43.8	48.8	48.5	60.3
<b>10. Big Picture Perspective</b>	49.2	49.7	51.5	46.5	50.0
<b>11. Willingness to Confront</b>	51.3	43.8	47.6	52.7	42.2
<b>Overall Championship</b>	<b>50.7</b>	<b>42.7</b>	<b>48.2</b>	<b>49.8</b>	<b>50.1</b>

Table 5

A Comparison of Raw Scores of Company A Managers and All Managers Combined, Broken Down by Gender and Management Level

	Company A						All Other Companies					
	Men			Women			Men			Women		
	Lower (n=34)	Middle (n=34)	Upper (n=3)	Lower (n=14)	Middle (n=6)	Upper (n=0)	Lower (n=81)	Middle (n=102)	Upper (n=40)	Lower (n=66)	Middle (n=48)	Upper (n=5)
1. Persuasiveness and Political Skill	50.0	51.9	54.7	49.0	50.3		49.6	51.6	52.8	50.1	52.6	55.8
2. Candid Persistence	39.9	39.8	40.0	35.2	39.0		38.0	40.0	41.3	37.7	38.5	40.4
3. Spontaneity and Improvisation	47.1	45.7	45.0	43.8	43.5		46.8	46.6	45.8	46.0	46.1	45.6
4. Job Involvement	45.0	44.9	45.0	42.1	42.5		44.9	44.9	44.4	44.7	44.5	45.6
5. Rule Challenging	44.9	45.2	42.0	42.9	45.3		44.7	45.6	45.3	44.4	43.8	47.4
6. Action Oriented	55.2	55.8	55.3	53.9	55.2		55.4	54.8	55.7	55.6	55.2	58.0
7. Self Promoting	35.1	36.1	35.0	33.5	33.8		34.6	35.2	35.6	34.3	35.2	35.4
8. Collaboration and Support	57.0	56.5	56.3	57.4	58.0		58.1	56.8	57.4	56.9	57.8	57.2
9. Openness to Change	47.9	47.4	51.0	45.6	45.5		47.5	47.6	47.3	47.6	48.2	50.6
10. Big Picture Perspective	44.5	41.6	43.7	44.9	40.0		45.6	44.0	39.8	44.4	42.6	42.2
11. Willingness to Confront	42.7	43.8	39.3	38.7	43.0		42.8	43.0	43.4	41.5	41.9	44.6
Overall Championship	509.2	508.6	507.3	486.9	496.2		507.8	510.1	508.6	503.2	506.2	522.8

Max. Score on Dimensions 1 to 6, 8-9, and 11 is 75; Max. Score on Dimension 7 = 60; Max. Score on Dimension 10 = 70; Max. Score on Overall Championship = 805.

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**CORPORATE ENTREPRENEURSHIP PROJECT:  
PARTICIPANT FEEDBACK**

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**ASSESSMENT PREPARED FOR:**

CODE #: \_\_\_\_\_

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## INFORMATION FOR PARTICIPANTS IN THE MANAGERIAL ACTIVITY PROJECT

We'd like to take this chance to, once again, thank you for your participation in this study. Organizational research requires the input of many participants. This study has been no exception. Over the past few months, 435 managers from the following seven companies have taken part in this study: BC Hydro, Manitoba Telephone System, the University of British Columbia, BC Transit, H.A. Simons, I.C.B.C., and the Ministry of Highways. The collection of information began in May with BC Hydro and continued until early September with H. A. Simons, UBC, BC Transit, and the Ministry of Highways. We wish to thank all managers, and in particular those who have waited so very patiently for their results. We apologize for the long delay; our only excuse is that research involving large numbers of participants (from a number of companies) takes time to coordinate and conduct.

This report is a summary of your results on the questionnaire you completed. Your results are compared with those of managers from your organization as well as the overall results of managers from the six other companies involved in this study. But before turning to your results, we thought you might appreciate learning more about the objectives of the survey. The form you completed was made up of 363 items. It was lengthy and we appreciate that many of you took longer to complete it than our original estimate of one hour! Reports ranged anywhere from a low of 45 minutes to a high of about 2 hours.

The items contained in the questionnaire were written by 30 managers from BCTel. Their task was to write down statements describing what it is that *corporate entrepreneurs* (or champions) do. As well, they were also asked to describe things that people do who are the exact opposite of the champion. The questionnaire you completed was designed to measure *corporate entrepreneurship*...the extent to which you behave at work in ways that are characteristic of a corporate entrepreneur.

The corporate entrepreneur has been defined in the research literature as an individual who *informally* emerges to take a new idea for an innovation (an idea s/he may or may not have generated) and introduces, pushes, promotes, and sells the idea to others in the organization. Such individuals operate as entrepreneurs in the corporate environment. They generate or adapt new ideas and promote their implementation. Corporate entrepreneurs have been described as innovative, driven to achieve, and committed to their ideas. They are often well connected in the organization (good networkers) and possess the interpersonal skill and political savvy to convince others of the importance of their ideas.

Corporate entrepreneurs have been studied and described by Rosabeth Moss Kanter, for example, in her books "The Change Masters", and "When Giants Learn to Dance". Or, Peter Drucker's name may be more familiar to you and his book "Innovation and Entrepreneurship". Finally, the popular "guru" of management science, Tom Peters, has written about the importance of corporate entrepreneurs in his books "Thriving on Chaos: Handbook for a Management Revolution", and his earlier book with Waterman entitled "In Search of Excellence". All these references are excellent and very readable sources if you'd like to learn more about corporate entrepreneurship and its role in today's business environment.

The present research was motivated by our desire to better understand corporate entrepreneurship from a *behavioral* perspective--what is it that corporate entrepreneurs do?--and to develop instruments that could be used to identify corporate entrepreneurs. Your participation has enabled us to identify *dimensions* of corporate entrepreneurship. These dimensions have been used to structure the contents of your feedback package. Thus, you'll see your standing on what we've called "Openness to Change" and "Rule Challenging", to use two examples. Our analyses have enabled us to understand corporate entrepreneurship as made up of a number of independent dimensions, each measured by roughly 10 to 15 key items or questions from the questionnaire.

Your participation has also helped us move one step further toward the development of an assessment tool--a much refined (and shortened!) version of the questionnaire you completed, that could be used for "top-down" (or "bottom-up") assessment. Ratings obtained through such an assessment could augment or supplement current appraisal and performance management practices, or serve organizational development needs.

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#### GUIDELINES FOR THE INTERPRETATION OF YOUR SCORES

As noted above, we're in the process of developing an instrument. Thus, the results reported below must be interpreted with caution. All measurement contains error; this means that the scores recorded for you are *estimates* of your "true" level on the various dimensions. These estimates contain a degree of error; thus your results should be interpreted with appropriate caution. It's also important to bear in mind that there's no ideal management profile. It's not necessarily good or bad to obtain high or low scores on the dimensions measuring corporate entrepreneurship. Much depends on the culture of the organization in which you work--the kinds of things that are rewarded and seen as acceptable or desirable.

Two sets of scores are reported in the table below, corresponding to two frames of reference. In the first, your standing on each dimension is reported relative to *other managers in Western Canada* (the sample of roughly 400 managers (minus the managers from your organization)). In the second column, you'll see your standing relative to *other managers in your organization*.

Your results have been presented in the form of "T-scores". T-scores are *standard scores* having a mean (or average) of 50 and a standard deviation of 10. The vast majority of T-scores (95%) fall within the range of 30 to 70. Roughly 68% of T-scores fall between 40 and 60. A T-score would be characterized as LOW if it fell below 40, and VERY LOW if below 30. Scores in the 40-60 range are regarded as AVERAGE. Those scores above 60 are seen as HIGH, with those above 70 regarded as VERY HIGH. Of course, what is meant here by LOW and HIGH, etc., is LOW and HIGH in comparison with *other managers who have completed the questionnaire*.



**PARTICIPANT FEEDBACK REPORT FOR MANAGERS INVOLVED IN THE  
MANAGEMENT ACTIVITY PROJECT**

**SCORES ON THE DIMENSIONS OF CORPORATE ENTREPRENEURSHIP**

**NORM GROUPS: FIRST COLUMN: 435 MANAGERS**

**SECOND COLUMN: COMPANY A MANAGERS**

<b>CODE#</b>	<b>DIMENSION</b>	<b>ALL MNGRS</b>	<b>COMPANY A MNGRS</b>
123456	PERSUASIVENESS & POLITICAL SAVVY	58.22	59.64
	CANDID PERSISTENCE	64.58	63.73
	SPONTANEITY & IMPROVISATION	37.48	37.61
	JOB INVOLVEMENT	48.13	49.11
	RULE CHALLENGING	53.51	54.04
	ACTION ORIENTATION	49.25	49.43
	SELF PROMOTION	73.90	74.45
	COLLABORATION & SUPPORT	47.12	47.85
	OPENNESS TO CHANGE	45.16	46.32
	BIG PICTURE PERSPECTIVE	33.55	34.77
	WILLINGNESS TO CONFRONT	41.41	42.46
	OVERALL CHAMPIONSHIP	49.55	50.57

**ALL SCORES ARE REPORTED AS T-SCORES**

**REFER BACK TO THE PREVIOUS PAGE FOR INFORMATION ON THE MEANING OF T-SCORES TO AID THE INTERPRETATION OF YOUR RESULTS**

**THE SCORE MARKED OVERALL IS AN AVERAGED SUM OF YOUR SCORES ON THE 11 INDIVIDUAL DIMENSION SCORES**

## DIMENSIONS OF CORPORATE ENTREPRENEURSHIP

Dimension Measured	Meaning of Dimension (Description of a HIGH TO VERY HIGH Scorer)
(PS) Persuasiveness and Political Savvy	Socially persuasive; able to sell ideas; knows how to develop and use political connections Example item: "I know how to use my political connections in the company to make things happen."
(CP) Candid Persistence	Blunt and direct; persistent in arguing a point; outspoken. Example item: "I tend to dominate meetings with my opinions and visions when I wish to convince others to accept my ideas."
(SI) Spontaneity and Improvisation	Intuitive, focused, spontaneous; tends to "wing it"; operates without a well-thought-through plan. Example item: "I don't typically take the time and effort to document all my plans and activities."
(JI) Job Involvement	Committed; hard-driving; hard-working; goes after tasks with a sense of time urgency. Example item: "I tend to start early and work late when I'm emotionally involved in a particular project."
(RC) Rule Challenging	Questions authority; goes around procedural obstacles; non-conforming. Example item: "If some company rule or procedure gets in my way, I go around it."
(AO) Action Orientation	Decisive; proactive; meets deadlines and commitments; deals with issues immediately. Example item: "When I make a promise to someone in the organization, I always keep it."
(SP) Self Promotion	Enjoys recognition; publicizes successes. Example item: "I enjoy getting recognition from others in the company for my accomplishments."
(CS) Collaboration and Support	Supports and encourages others; works to foster a positive team environment. Example item: "I work to motivate teamwork—cooperation and collaboration among team members."
(OC) Openness to Change	Adapts quickly to change; enjoys change and new responsibilities. Example item: "I embrace and truly enjoy change in the workplace."
(BP) Big Picture Perspective	Focuses on larger issues, rather than specific details; dislikes routine. Example item: "I like to get deeply involved in the more specific details of projects." (reverse keyed)
(WC) Willingness to Confront	Deals directly with conflict; confronts others on weaknesses. Example item: "I'm not afraid to tell others, in a direct and forceful manner, what should be done."
(CH) Overall Championship	An averaged sum of the 11 scales described above. Demonstrates a variety of behaviors that, together, epitomize championship.

## APPENDIX G

## SCALE COMPOSITION AT THE CONCLUSION OF PHASE III

1. Persuasiveness and Political Savvy (coefficient  $\alpha = .81$ )

<i>Loading</i> <sup>1</sup>	<i>S.D.</i> <sup>2</sup>	<i>Item</i>
0.60	2.95	I know how to use my political connections in the company to make things happen.
0.56	2.05	I'm able to sell ideas to superiors one-on-one.
0.55	2.90	I am often able to very accurately anticipate the reactions of others in the organization to my plans.
0.51	1.85	I'm able to sell ideas to subordinates in meetings.
0.50	2.00	I usually deliver persuasive presentations.
0.49	2.50	I am able to get the time of executives in the company in order to communicate my ideas.
0.48	2.05	I know when to push hard for an idea and when to back off.
0.45	2.40	I know a lot of people in the company and I'm able to ask for their input and commitment when it is needed.
-0.27	7.25	I'm not very comfortable meeting new people.
-0.33	7.45	I don't speak up at meetings.
-0.39	6.55	I'm not very comfortable speaking in front of others.
<i>New Items</i>		
	2.74	I don't exploit political connections in the company in order to get my way.
	6.43	When my ideas meet with criticism and opposition, I stop trying to persuade people.

<sup>1</sup> The item loading from the principal component analysis of the 363 items. Positive loadings indicate championship.

<sup>2</sup> The judged mean social desirability for the item, based on ratings obtained in Phase II. High numbers indicate undesirable behavior. Mean ratings can range from a low of "1" (highly desirable) to a high of "9" (very undesirable).

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2. Disruptive Insensitivity (coefficient  $\alpha = .77$ )

<i>Loading</i>	<i>S.D.</i>	<i>Item</i>
0.51	7.75	I monopolize discussions.
0.49	8.05	I tend to disrupt meetings.
0.46	6.20	I tend to dominate meetings with my opinions and visions when I wish to convince others to accept my point of view.
0.43	6.05	I'm persistent in voicing my opinion over and over again, even if my ideas are rejected.
0.42	4.70	I tend to speak my mind, regardless of the audience.
0.38	8.30	When attending a meeting, I often disregard the topic of the meeting, and, instead, talk about what interests me.
0.38	8.20	I am stubborn and resistant, even in the face of legitimate criticism.
-0.26	5.70	I don't usually persist in arguing a point.
-0.31	6.30	I listen carefully when others debate a point, but I don't usually participate.
-0.46	3.50	I tend to listen more than talk when I'm around other people.

*New Items*

3.00	I try not to overpower people with my ideas.
1.96	I won't use a strategy of domination or intimidation in order to get my way.

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3. Spontaneity and Improvisation (coefficient  $\alpha = .85$ )

<i>Loading</i>	<i>S.D.</i>	<i>Item</i>
0.55	6.15	I don't typically take the time and effort to document all my plans and activities.
0.46	6.70	I usually don't take the time to document things.
0.38	4.80	I tend to "wing it"; I improvise on the spot.
0.34	6.25	I am easily consumed by challenges, sometimes to the point where I will neglect some of my normal responsibilities.
0.33	6.80	I frequently act without a well-thought-through action plan.
-0.41	3.65	I keep very good records, documenting all events and activities.
-0.43	2.20	I concentrate on doing what needs to be done to complete a task, and then moving on to the next issue.
-0.45	3.25	I approach most issues in a very systematic, analytical, and disciplined manner.
-0.50	3.70	I am a methodical, orderly worker, carefully considering and taking action on one issue, and then moving on to the next.
-0.51	4.00	I keep my office very neat and tidy.
-0.58	1.90	I'm very good at planning and organizing my activities.
-0.63	3.00	I plan my actions well in advance.

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 4. Job Involvement (coefficient  $\alpha = .74$ )

<i>Loading</i>	<i>S.D.</i>	<i>Item</i>
0.48	4.65	I rarely have any free time at work; I always find myself doing something.
0.47	3.85	I tend to start early and work late when I'm emotionally involved in a particular project.
0.47	5.00	I tend to work pretty irregular hours.
0.45	3.20	I tend to make personal sacrifices in my work, when I am dedicated to a task or project.
0.44	6.80	I have too little time to accomplish my work.
0.31	8.35	I show up late for meetings and appointments.
0.25	5.15	I address every task with urgency.
-0.29	1.80	I'm always punctual, arriving at meetings and other work obligations right on time.
-0.33	5.95	I follow a fairly precise schedule at work (e.g., coffee at 9:00, lunch at 12:00)
-0.42	6.05	I usually start work at around 8 and leave pretty close to 4.
-0.48	7.55	I don't typically expend a lot of energy in accomplishing my job.
-0.53	6.05	I usually don't work overtime.

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5. Rule and Authority Challenging (coefficient  $\alpha = .85$ )

<i>Loading</i>	<i>S.D.</i>	<i>Item</i>
0.64	4.50	If some company rule or procedure gets in my way, I go around it.
0.53	4.45	I take action without first seeking approval; I'll get forgiveness later.
0.49	3.25	I enjoy challenging established methods at work; I rather enjoy rocking the boat.
0.49	7.15	I ignore authority.
0.49	5.75	I don't recognize hierarchies in the organization; I bypass management levels in working toward my goals.
0.49	5.60	I have persisted in pursuing an idea even when I was explicitly directed to stop.
0.47	4.60	I question and challenge all processes and procedures.
-0.36	3.70	I follow instructions very accurately.
-0.39	5.15	I refer to policies and procedures to define and support my work behavior.
-0.43	4.20	I easily conform to company expectations.
-0.45	5.25	I know and follow the corporate rules very closely.
-0.48	5.80	I expect others to comply with company guidelines, no exception.
-0.55	4.30	I typically do what is correct and accepted in the company.

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6. Action Orientation (coefficient  $\alpha = .75$ )

<i>Loading</i>	<i>S.D.</i>	<i>Item</i>
0.46	1.60	When I make a promise to someone in the organization, I always keep it.
0.46	2.45	I always meet my deadlines at work.
0.42	2.40	I am very careful to always keep my time commitments.
0.40	1.90	I take action immediately on important projects or initiatives; I never drag it out if the item is critical.
0.38	1.95	When I make a decision, I like to push ahead and take action--implement.
0.33	2.20	I hold others accountable for delivering what they promise.
0.32	3.45	When someone asks me for information, I give a quick response, and then follow up.
0.28	1.80	I'm always looking for ways to do things just a little bit better and a little bit faster.
-0.26	7.60	I sometimes put important items on the back burner for a bit too long.
-0.29	5.35	I tend to work fairly slowly, but consistently.
-0.30	4.75	I am sometimes slow to take action in solving problems; I like to take my time and carefully consider the options first.
<i>New Items:</i>		
3.61		I'll re-evaluate risks and put a halt to progress on a project if I am unsure about something.
2.83		I will put the brakes on a project if I feel that more reflection or deliberation is needed.

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 7. Self-Promotion (coefficient  $\alpha = .60$ )
 

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<i>Loading</i>	<i>S.D.</i>	<i>Item</i>
0.50	3.45	I enjoy getting recognition from others in the company for my accomplishments.
0.43	4.65	I ensure that my successes in the company are known.
0.41	5.05	I make sure I rub shoulders with powerful individuals in other departments and business units in the company.
0.37	3.10	I watch other successful managers and try to adopt the methods they use that work.
0.29	5.20	I orchestrate situations (e.g., meetings, one-on-one conversations) so that my wishes are approved.
0.28	6.75	I will sometimes bend the truth in order to achieve my goals.
0.27	5.95	I get impatient with others when they don't work to my own high standards.
0.26	4.95	I promote ideas that have the highest visibility and likelihood of success.
-0.30	3.95	I don't seek out attention from others.

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*New Items*


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4.7	It's not important to me that my accomplishments and achievements are known to others in the company.
3.39	I will accept low-profile projects; I don't need "public" recognition for what I do.
1.48	I will not compromise my integrity just to get ahead.

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8. Support and Collaboration (coefficient  $\alpha = .82$ )

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<i>Loading</i>	<i>S.D.</i>	<i>Item</i>
0.58	1.55	I work to motivate teamwork--cooperation and collaboration among team members.
0.58	1.95	I am considerate of other peoples' well being in the company.
0.57	1.85	I am interested in other peoples' ideas and work to support and encourage them.
0.54	1.75	I recognize the achievements and accomplishments of others both publicly and privately.
0.53	2.80	I usually think of other peoples' needs and priorities before making decisions.
0.49	1.55	I support people to get the best out of them.
0.46	1.45	I can easily recognize and appreciate talent in others; I always try to use other peoples' talents.
0.35	1.75	I empower subordinates to take action on their own.
-0.26	7.75	I try to have a hand in all aspects of a project; I prefer not to delegate responsibilities.
-0.37	5.70	I prefer working on my own.
-0.43	6.45	I prefer to work independently, rather than in a team setting.
<i>New Items</i>		
2.91		I encourage others in my group to work independently.
2.30		I don't interfere in the work of my co-workers and subordinates; I encourage self-sufficiency.

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 9. Openness to Change (coefficient  $\alpha = .82$ )

<i>Loading</i>	<i>S.D.</i>	<i>Item</i>
0.45	2.25	I embrace and truly enjoy change in the workplace.
0.43	2.40	I volunteer for task forces and other related activities that allow me to be a change agent.
0.40	1.95	I am able to adapt quickly to changing situations.
0.39	3.55	I have taken on challenges and responsibilities unrelated to my area of job responsibility.
0.33	1.90	I am able to thrive when working under conditions of unusually high pressure.
0.28	2.80	I seek out diversity in people, places, things.
0.27	2.05	I'm comfortable taking risks at work and moving out into unknown business areas.
-0.28	5.05	I stay in one job for a long time, so that I become an expert in that one area.
-0.28	5.65	I will not take risks with company time, people, and money.
-0.45	6.55	I prefer to work in a fairly stable and unchanging work environment.
-0.49	6.45	I typically don't volunteer for extra work projects.
-0.51	5.75	I don't volunteer for "visible" jobs, preferring to remain more in the background.

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10. Big Picture Perspective (coefficient  $\alpha = .70$ )

<i>Loading</i>	<i>S.D.</i>	<i>Item</i>
-0.54	5.20	I like to get deeply involved in the more specific details of projects.
-0.52	4.30	I am interested in the technical side of projects.
-0.50	4.40	I'm able and willing to do repetitive tasks.
-0.48	4.30	I have a lot of patience for completing the more tedious tasks.
-0.40	2.40	I pay close attention to the details of what I am doing.
-0.30	3.95	I prefer to delay decision making at times, so that I can think through the issues more carefully.
-0.30	4.80	I prefer to work within my own department/office.
-0.28	4.75	My focus is more on the specifics of the task at hand, rather than the environment around me.

*New Items*

3.00	I have a "big picture" perspective; I don't get bogged down by the details of a project.
3.43	I enjoy working outside of my own office or department.
4.39	I think at a conceptual level; I let others worry about the details and specifics of projects.
6.30	I have no patience for the more tedious tasks.

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11. Willingness to Confront (coefficient  $\alpha = .67$ )

<i>Loading</i>	<i>S.D.</i>	<i>Item</i>
0.44	2.40	I am almost always willing to deal with difficult decisions, such as redundant employees.
0.42	3.55	I'm not afraid to tell others, in a direct and forceful manner, what should be done.
0.39	5.75	When I think that someone is incompetent, I tell them.
0.29	4.20	I have risked disappointing others in order to get my own ideas across.
0.27	5.05	I am willing to "weed out" team members who are not immediately productive.
0.26	8.35	I have written letters and memos that attack others personally.
-0.31	5.05	I do my best to accommodate to other peoples' wishes in order to keep them happy.
-0.33	7.60	If things get too hot, I prefer not to participate.
-0.43	4.35	I prefer to avoid conflict and, instead, work to smooth out disagreements and reach consensus.
-0.51	5.65	I avoid conflict and confrontation in my day-to-day work.
<i>New Items</i>		
	4.26	I find areas of compromise and accommodation in order to keep others happy.
	3.43	I give people a second chance, rather than confront them on issues right away.

## Overall Mean Social Desirability Across the Eleven Scales (not including new items)

Champion Items: 4.21

Non-Champion Items: 5.26

## Overall Mean Social Desirability Across the Eleven Scales (including new items)

Champion Items: 4.24

Non-Champion Items: 4.74

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**APPENDIX H**

**BCTEL COMPANY FEEDBACK REPORT**

**CHAMPIONSHIP PROJECT:  
COMPANY FEEDBACK**

**ASSESSMENT PREPARED FOR:**

**BCTel Managers**

**Date of Report: June 10, 1994**

**Prepared by:**

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## INFORMATION FOR PARTICIPANTS FROM THE BCTEL CHAMPIONSHIP PROJECT

We would like to take this chance to thank you very sincerely for your participation in this study. Organizational research requires the input of many participants. This study has been no exception. Over the past three months, 86 managers from BCTel completed ratings on 165 participants from the annual BCTel Career Development Project (CDP). BCTel's participation has helped us move one step further toward the development of an assessment tool for "top-down" assessment (traditional supervisory ratings of subordinate performance) or "bottom-up" assessment (ratings of managers by subordinates). Ratings obtained through such an assessment could be used to supplement current appraisal and performance management practices, or serve organizational development needs.

This report is a summary of *corporate* results obtained by averaging your ratings with the ratings of the 85 other managers in the company who took part in the study. We have conducted a number of different analyses that we hope you'll find interesting. The BCTel management group is profiled. As well, BCTel managers are compared with a sample of 435 managers surveyed earlier this year from the following companies: BC Hydro, Manitoba Telephone System, UBC Administration, H.A. Simons, BC Transit, The Ministry of Transportation and Highways, and ICBC.

Before turning to the results, we thought you might appreciate learning more about the history of the project and the study objectives. The original questionnaire used this past summer was made up of 363 items. The items or questions were originally written by 26 managers from BCTel whose task it was to compose statements describing what *champions* (or corporate entrepreneurs) do. Thus, the original questionnaire was designed to measure *championship*, defined below.

*The champion is an individual who takes a new idea for either an administrative or technical innovation (an idea s/he may or may not have generated) and introduces, pushes, promotes, and sells the idea to others in the organization.*

A series of statistical analyses were performed with the questionnaire (item analysis, factor analysis), resulting in the identification of 11 dimensions or aspects of championships. These preliminary analyses allowed us to come back to BCTel with a much refined (and shortened) instrument. Our next step was to administer the revised questionnaire to the managers of those BCTel employees who had been involved in the Career Development Project and obtain ratings on those employees on the 11 dimensions of championship.

To expand on the definition above, the champion operates as an entrepreneur, but in the corporate environment. Such individuals generate or adapt new ideas and promote their implementation. Champions have been described as innovative, driven to achieve, and committed to their ideas. They are often well connected in the organization (good networkers) and possess the interpersonal skill and political savvy to convince others of the importance of their ideas.

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Champions have been studied and described by Rosabeth Moss Kanter, for example, in her books "The Change Masters", and "When Giants Learn to Dance". Or, Peter Drucker's name may be more familiar to you and his book "Innovation and Entrepreneurship". Finally, the popular "guru" of management science, Tom Peters, has written about the importance of corporate entrepreneurs in his books "Thriving on Chaos: Handbook for a Management Revolution", and his earlier book with Waterman entitled "In Search of Excellence". All these references are excellent and very readable sources if you'd like to learn more about corporate entrepreneurship and its role in today's business environment.

The present research was motivated by our desire to better understand championship from a *behavioral* perspective--what is it that champions do?-- and to develop instruments that could be used to identify these individuals. BCTel's participation has enabled us to: (a) further refine a behavioral rating scale, and (b) identify tests (from the CDP assessment battery) that predict championship.

This feedback report is structured around the eleven dimensions of championship, identified in the first phase of this research project. You'll see BCTel's overall standing on what we've called "Openness to Change" and "Rule Challenging", to use two examples. Our analyses have enabled us to understand championship as made up of a number of independent dimensions, each measured by roughly 10 to 15 key items or questions from the questionnaire.

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#### GENERAL GUIDELINES FOR THE INTERPRETATION OF COMPANY RESULTS

As noted above, we're in the process of developing an instrument. Thus, the corporate results presented in this report must be interpreted with caution. All measurement contains error; this means that the scores recorded for BCTel are *estimates*. These estimates contain a degree of error, so interpret them with appropriate caution. It's also important to bear in mind that there's no ideal management profile. **It's not necessarily good or bad for your organization to be profiled as low or high on the dimensions measuring championship. Much depends on the culture of your company--the kinds of behaviors that are rewarded and seen as desirable.**

A second caution. These scores were obtained from *ratings* of behavior, and ratings contain error. They may be influenced by a variety of things. Friendship and leniency will tend to raise scores, while strained relations between a rater and ratee may lower scores. As well, these ratings reflect one perspective: a top-down, supervisory perspective. These ratings could be expected to change with the perspective and role of the rater.

This company feedback report is divided into two sections. In Section I we profile BCTel managers on the dimensions of championship. Information is presented in both graphic and tabular form. We describe your organization's standing in an *absolute* sense, by reporting average "raw" scores achieved by your managers: the average level of championship shown on the various dimensions of championship by managers in your company.

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In Section II, we report results for BCTel managers *relative* to a combined pool of managers from the seven companies involved in an earlier phase of the study. We report average T-Scores (*standard scores* having a mean [or average] of 50 and a standard deviation of 7) for managers at BCTel, broken down by gender. You should understand T-scores as follows. The vast majority of T-scores (95%) fall within the range of 36 to 64 and roughly 68% of T-scores fall between 43 and 57. A T-score would be characterized as LOW if it fell below 43, and VERY LOW if below 36. Scores in the 43-57 range are regarded as AVERAGE. Those scores above 57 are seen as HIGH, with those above 64 regarded as VERY HIGH. Of course, what is meant here by LOW and HIGH, etc., is LOW and HIGH in comparison with *the other managers who were rated with this questionnaire*. You should keep in mind that T-scores reflect how your managers compare with the other managers in the study.

### *Section I: A Profile of BCTel Managers*

#### *How to Interpret The Results*

In Tables 1 and 2 we report summary information on BCTel managers on the various dimensions of championship. From Table 1, you'll notice that we report the "average raw score" for each of the 11 dimensions as well as the Overall Championship scale. We obtained these numbers by calculating a scale score (e.g., a score on Job Involvement, Rule Challenging, etc.) for each manager and then computing an average across all BCTel managers for each scale. Thus, this figure provides you with our best estimate of your organization's standing on this dimension (based, of course, on the sample of managers who took part in the study). Naturally, there will be a degree of variability or scatter around this average; some individual managers will score much higher and others much lower than this average, but *most* will hover fairly close to the average raw score reported in Table 1.

To obtain the percentage figures in the last column, we divided the average raw score by the maximum score possible on each scale. These percentages have been plotted to provide you with a picture of your organization's profile. The information provided in Table 1 provides interesting diagnostic information, in that highs and lows are apparent. More detailed information on the organization's standing on each of the individual scales is given in Table 2.

In Table 2 we present each scale separately, with a description of the meaning of scores falling toward the high and low ends of the five-point scale. The placement of the arrow was determined by dividing the "average raw score" (from Table 1), by the number of items in the scale. Thus, the arrow indicates the average score of your managers on an overall 5-point scale for the particular dimension; so you can understand the placement of the arrow relative to the 5 anchor points used in the original questionnaire. We also indicate on each scale the range of scores (minimum and maximum) achieved by managers in your organization (marked by a parallel horizontal line). Thus, you get an indication of the score *variability*.

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### *A Discussion of BCTel's Results*

You will notice from the % Profile in Table 1 and the scales outlined in Table 2 that BCTel managers are highest on Action Orientation, Persuasion and Political Savvy, Collaboration and Support, and Openness to Change. Scores in all four of these areas are above the mid-point (see Table 2); thus, we can characterize them as roughly above average. The BCTel managers were rated as decisive and action oriented: as inclined to deal with issues right away, rather than delaying for consideration or study. The majority were rated as likely to follow through on commitments, ensuring that projects and other priorities are delivered on time.

The percentile score on Persuasion and Political Savvy is high as well, indicating that BCTel managers are persuasive in their dealings with others. They appear able to sell ideas...to promote projects and get a buy-in from others in the company. BCTel managers were also rated high on Collaboration and Support. They were rated as behaving in ways that encourage others to do their best. BCTel managers empower others and behave in ways that support those around them. Teamwork and collaboration appear to be strong components of the BCTel culture. Finally, BCTel managers were rated as open to change--as willing and eager to adapt to new work situations and strategic directions.

Further evidence of an orientation toward support and encouragement is seen from the relatively low overall company score on Candid Persistence. BCTel managers do not, as a group, appear to be blunt and argumentative when dealing with others. Although an aspect of championship, high levels of Candid Persistence *may* not necessarily be a positive thing in many situations.

The lowest score from Table 1 is seen on Spontaneity and Improvisation. BCTel managers appear to be, as a group, planful and methodical. They prefer to make decisions after carefully considering all available information. BCTel managers were rated as cautious and conservative—as unlikely to improvise and take risks. BCTel managers were also rated relatively low on Big Picture Perspective and Rule Challenging. The BCTel management group appears to be detail oriented and likely to follow carefully policies and guidelines in carrying out their responsibilities.

Over all dimensions, on average, BCTel managers appear to be just slightly above average on championship (see the Overall Championship scale at the end of Table 2). This overall rating is obtained by averaging across the eleven dimensions. As discussed above, the BCTel management group was rated as high in some areas and low in others. Although apparently not a strong part of the BCTel culture, some managers in the company do appear to take new ideas and promote and sell them to others in the organization.

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Table 1

Overall Company Results Reported in Raw<sup>4</sup> Scores for the 165 BCTel Managers Rated

Scale Name	Av. Raw Score	% of Max. Possible	% Profile						
			50	55	60	65	70	75	80
1. Persuasion & Political Savvy	42.2	77%							
2. Candid Persistence	26.0	52%							
3. Spontaneity & Improvisation	28.0	47%							
4. Job Involvement	40.1	67%							
5. Rule Challeng'g	36.5	56%							
6. Action Orient'n	43.2	79%							
7. Self Promotion	27.1	60%							
8. Collaboration & Support	41.2	75%							
9. Openness to Change	43.9	73%							
10. "Big Picture" Perspective	22.0	55%							
11. Willingness to Confront	31.6	63%							
12. Overall Championship	382.2	64%							

<sup>4</sup> A raw score is simply the number of items responded to in a manner reflecting championship; the score is not converted, like a T-score.

Table 2

A Detailed Description of the 11 Scales and a Profile of Your Managers on Each Scale<sup>5</sup>

**1. Persuasion and Political Savvy:** A measure of salesmanship and persuasiveness. Taps into one's ability to develop and use effectively political connections in the company.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
↓				
Quiet, reserved; un-assertive in group situations.			Socially persuasive; able to sell ideas; knows how to develop & use connections.	

**2. Candid Persistence:** A measure of one's directness and persistence.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
↓				
Good listening skills; attentive and patient in dealings with others.			Blunt and direct; persistent in arguing a point; outspoken.	

**3. Spontaneity and Improvisation:** A measure of one's inclination to "wing it"; to make decisions without careful consideration and caution.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
↓				
Planful and methodical; keeps careful records.			Intuitive, focused, and spontaneous; tends to "wing it".	

<sup>5</sup> See Appendix A for a listing of sample items from each of the scales.

Table 2 cont.

**4. Job Involvement:** A measure of job commitment, drive, and determination.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
<hr/>				
Doesn't typically work overtime; expends minimal energy at work. urgency.			Committed; hard-driving; hard working; goes after tasks with a sense of time	

**5. Rule Challenging:** A measure of one's inclination toward questioning rules and people in authority positions.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
<hr/>				
Accepting of authority & rules; follows policies and guidelines.			Questions authority; goes around obstacles; non-conforming.	

**6. Action Orientation:** A measure of decisiveness and thoroughness.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
<hr/>				
Slow to take action; may procrastinate by putting items on the "back burner".			Decisive; proactive; meets deadlines and commitments; deals with issues immediately.	

Table 2 cont.

**7. Self Promotion:** A measure of one's need for recognition and publicity in the company.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
<hr/>				
Doesn't seek out attention; prefers to stay in the back-ground.			Enjoys recognition; publicizes successes.	

**8. Collaboration and Support:** A measure of one's inclination toward developing and fostering a team approach through empowerment and encouragement.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
<hr/>				
Prefers to work independently; resists delegation.			Supports and encourages others; works to foster a positive team environment.	

**9. Openness to Change:** A measure of one's willingness and preference for change and unpredictability in the work environment.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
<hr/>				
Prefers predictability & structure; resists risk & change.			Adapts quickly to change; enjoys change and new responsibilities.	

Table 2 cont.

**10. "Big Picture" Perspective:** A measure of one's preference for systems and "big picture" thinking, rather than an orientation toward detail.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
↓				
Pays close attention to detail; willing and able to do repetitive tasks; enjoys technical side of projects.			Focuses on larger issues, rather than specific details; dislikes routine.	

**11. Willingness to Confront:** A measure of one's willingness to engage in discussion and debate in working through a conflict.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
↓				
Prefers to avoid conflict; accommodates to others.			Deals directly with conflict; confronts others on weaknesses.	

**12. Overall Championship:** A weighted average of the 11 individual scales.

Never True	Rarely True	Occasionally True	Often True	Very Frequently True
1	2	3	4	5
↓				

The champion is an individual who takes a new idea (an idea s/he may or may not have generated) and introduces, pushes, promotes, and sells the idea to others in the organization.

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*Section II: A Comparison of BCTel Managers with Managers From The Other  
Seven Participating Companies*

In this section, we compare BCTel managers with managers from the other seven participating companies on the various dimensions of championship.

At the beginning of this study, we had anticipated that significant differences might arise between the various participating companies. On the basis of the information reported in Table 3, however, it would appear, instead, that few differences exist.

Results in Table 3 are reported as T-Scores (refer back to pages 3 and 4 for a definition of T-scores). These scores were obtained by computing an overall average, across the managers from the other seven participating companies, for each of the championship scales. Then, each of your managers' scores was compared with this overall average and a BCTel average T-score calculated. Thus, the greater the distance BCTel's average T-score from the overall average, the more the T-score will deviate from the average—50.

The majority of T-scores in Table 3 fall in the average range. This means that, on balance, BCTel managers are not particularly different from managers in the other organizations on the various dimensions of championship. This result is telling us that the % Profile presented in Table 1 is fairly similar across the seven participating companies. Although no comparison groups appear on Table 3, each score represents BCTel's *relative* standing on each dimension, compared with the other managers in the study. Thus, a T-score below 43 on one of the dimensions would indicate that managers from your organization are LOW compared with the other managers.

Compared with the managers from the other companies sampled, BCTel managers were rated as high on Willingness to Confront. Thus, although the company's overall percentile score on this dimension (reported in Table 1) is about average, compared with the 435 managers from the other companies sampled, they appear to be very willing to deal in a direct manner with conflict—to confront other people and speak candidly.

The same appears to be true for Rule Challenging. BCTel managers were rated as relatively low on Rule Challenging in Table 2. And yet, compared with the other managers sampled, the BCTel management group appears to question rules and people in authority to a greater extent than the other managers tested.

The BCTel management group achieved the lowest T-scores on the dimensions of Spontaneity and Improvisation and Collaboration and Support. Thus, compared with other managers sampled, BCTel managers appear less likely to improvise and experiment than the other manager sampled. Even though the overall BCTel management group scores above the midpoint on Collaboration and Support (see Table 2), when we compare their standing relative to managers from the other companies sampled, they are relatively low.

In summary, over the eleven dimensions assessed, the BCTel management group is about average on championship, compared with the other managers tested. They appear very similar on overall championship to the other managers sampled.

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Table 3

T-Scores for the BCTel Managers, Broken Down by Gender, in Comparison to the Managers From the Other Seven Participating Companies

	Men (n=121)	Women (n=44)	Men and Women Combined (n=165)
<b>1. Persuasiveness and Political Skill</b>	<b>51.2</b>	<b>52.2</b>	<b>51.4</b>
<b>2. Candid Persistence</b>	<b>54.0</b>	<b>49.8</b>	<b>52.9</b>
<b>3. Spontaneity and Improvisation</b>	<b>45.9</b>	<b>43.7</b>	<b>45.3</b>
<b>4. Job Involvement</b>	<b>50.6</b>	<b>49.5</b>	<b>50.3</b>
<b>5. Rule Challenging</b>	<b>56.6</b>	<b>52.8</b>	<b>55.7</b>
<b>6. Action Orientation</b>	<b>50.7</b>	<b>50.9</b>	<b>50.7</b>
<b>7. Self Promotion</b>	<b>53.1</b>	<b>51.4</b>	<b>52.6</b>
<b>8. Collaboration and Support</b>	<b>44.4</b>	<b>47.6</b>	<b>45.2</b>
<b>9. Openness to Change</b>	<b>49.6</b>	<b>49.2</b>	<b>49.5</b>
<b>10. Big Picture Perspective</b>	<b>50.0</b>	<b>49.3</b>	<b>49.9</b>
<b>11. Willingness to Confront</b>	<b>59.0</b>	<b>57.5</b>	<b>58.6</b>
<b>12. Overall Championship</b>	<b>52.6</b>	<b>50.2</b>	<b>52.0</b>

**APPENDIX I**

**BOOKLET USED TO OBTAIN SUPERVISORY-REPORT DATA FOR THE  
SECOND FACTOR ANALYSIS**

**MANAGEMENT ACTIVITY  
PROJECT**

**February, 1994**

**Conducted by:  
Ross Woolley  
Department of Psychology  
UBC  
822-5626**

## DIRECTIONS

Contained in this questionnaire is a series of statements, each referring to a type of activity a manager might perform. In each of the statements below, you are asked to consider the activity of the person you are rating over **the past 12 months**. In responding to each of the statements, use the answer sheet appended to this test package. For each statement, circle the number corresponding to your choice on the answer sheet.

You will note, below, that each of the five numbers on the response scale is anchored by a brief descriptor. For each number there is a descriptive anchor relating to the **frequency** as well as the **likelihood** of participation for the person you're rating. When possible, please respond by indicating the **frequency** of involvement. If, however, you have not had the opportunity to observe the manager engage in a given activity contained in this booklet, then we ask that you consider the **likelihood** that s/he would have engaged in this behavior, given the opportunity. It's very important that you respond to **every** item in order for us to generate an accurate profile.

Some of the items may appear to overlap or be redundant. This instrument is in its early stages of development and we will be using your responses to each item to pare it down to a more manageable and concise form. At this stage of the process, our purpose is to be as comprehensive as possible.

**You'll be asked to respond on the following scale:**

Never true (or extremely unlikely to be true) or descriptive of his/her behavior 1	Rarely true (or unlikely to be true) or descriptive of his/her behavior 2	Occasionally true (or somewhat likely to be true) or descriptive of his/her behavior 3	Often true (or likely to be true) or descriptive of his/her behavior 4	Very frequently true (or extremely likely to be true) or descriptive of his/her behavior 5
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**Here's an example item:**

The manager I'm rating....."is able to sell ideas to subordinates one-on-one."

Let's say that you have observed the manager you're rating do the above fairly often....then you would respond by circling the number "4". If, on the other hand, you have never before seen him or her sell an idea to their subordinate (perhaps s/he never had someone report to him/her), then you would consider how **likely** it is that s/he *would* engage in this behavior. In this case, if you thought it likely that s/he *would* sell ideas to subordinates one-on-one, you would still circle the number "4".

Never true (or extremely unlikely to be true) or descriptive of his/her behavior 1	Rarely true (or unlikely to be true) or descriptive of his/her behavior 2	Occasionally true (or somewhat likely to be true) or descriptive of his/her behavior 3	Often true (or likely to be true) or descriptive of his/her behavior 4	Very frequently true (or extremely likely to be true) or descriptive of his/her behavior 5
---	--	---	---	---

**The manager I'm rating.....**

1. Knows how to use political connections in the company to make things happen.
2. Won't use a strategy of domination or intimidation in order to get his/her way.
3. Doesn't typically take the time and effort to document all his/her plans and activities.
4. Inspires and motivates others to achieve or exceed levels of performance.
5. Usually doesn't work overtime.
6. Will go around company rules or procedures if they get in his/her way.
7. Will put the brakes on a project if s/he feels that more reflection or deliberation is needed.
8. Fails to meet schedules, deadlines, and targets; is always behind; makes excuses or finds reasons to cover up his/her inadequacies.
9. Enjoys getting recognition from others in the company for his/her accomplishments.
10. Prefers to work independently, rather than in a team setting.
11. Embraces and truly enjoys change in the workplace.
12. Delivers clear and concise presentations at all levels of the corporation in a manner readily accepted by adults.
13. Likes to get deeply involved in the more specific details of projects.
14. Is almost always willing to deal with difficult decisions, such as redundant employees.
15. Is able to sell ideas to superiors one-on-one.
16. Fails to identify problems other than in the simplest scenarios, even then requires assistance to gather facts.
17. Tries not to overpower people with her/his ideas.
18. Usually doesn't take the time to document things.
19. Doesn't typically expend a lot of energy in accomplishing his/her job.
20. Reaches logical conclusions that are well-founded and "supportable".
21. Takes action without first seeking approval; s/he will get forgiveness later.
22. Re-evaluates risks and puts a halt to progress on a project if he/she is unsure about something.

**The manager I'm rating.....**

23. Ensures that his/her successes in the company are known.
24. Will not commit him/herself or take action without lengthy procrastination; s/he is difficult to "pin down" or "corner".
25. Prefers working on her/his own.
26. Volunteers for task forces and other related activities that allow him/her to be a change agent.
27. Is interested in the technical side of projects.
28. Puts in the extra effort and time to ensure that his/her work is of the highest quality; s/he consistently does more than is expected without being asked.
29. Is not afraid to tell others, in a direct and forceful manner, what should be done.
30. Is often able to very accurately anticipate the reactions of others in the organization to her/his plans.
31. Tends to listen more than talk when around other people.
32. Generates a number of new ideas of his/her own.
33. Tends to "wing it"; improvises on the spot.
34. Usually starts work at around 8 and leaves pretty close to 4.
35. Enjoys challenging established methods at work; s/he rather enjoys rocking the boat.
36. Does not question the way things are done; s/he does not offer more effective solutions; s/he refuses to enter into "uncharted waters".
37. Is sometimes slow to take action in solving problems; s/he likes to take his/her time and carefully consider the options first.
38. Makes sure to rub shoulders with powerful individuals in other departments and business units in the company.
39. Tries to have a hand in all aspects of a project; s/he prefers not to delegate responsibilities.
40. Demonstrates rigidity in the way s/he deals with others; s/he will not modify behavior to meet changing needs.
41. Is able to adapt quickly to changing situations.
42. Is able and willing to do repetitive tasks.
43. Tells others when s/he thinks that someone is incompetent.
44. Demonstrates diplomacy and tact; s/he works easily with difficult customers and employees.
45. Is able to sell ideas to subordinates in meetings.
46. Listens carefully when others debate a point, but doesn't usually participate.
47. Is easily consumed by challenges, sometimes to the point where s/he will neglect some of his/her normal responsibilities.
48. Handles pressure poorly; devotes energies to excuses rather than production.

### **The manager I'm rating.....**

49. Follows a fairly precise schedule at work (e.g., coffee at 9:00, lunch at 12:00).
50. Ignores authority.
51. Tends to work fairly slowly, but consistently.
52. Produces written work that is clear, concise, and usually requires no corrections; ideas are organized and presented in a logical manner.
53. Watches other successful managers and tries to adopt the methods they use that work.
54. Doesn't interfere in the work of his/her co-workers and subordinates; s/he encourages self-sufficiency.
55. Has taken on challenges and responsibilities unrelated to his/her area of job responsibility.
56. Takes a passive role in group situations; willingly allows others to take control.
57. Has a lot of patience for completing the more tedious tasks.
58. Has risked disappointing others in order to get his/her own ideas across.
59. Usually delivers persuasive presentations.
60. Adapts or builds on the ideas of others in the organization.
61. Doesn't usually persist in arguing a point.
62. Frequently acts without a well-thought-through action plan.
63. Is always punctual, arriving at meetings and other work obligations right on time.
64. Establishes a plan for the fiscal year; maps out when each event must take place in order to meet the stated goals; allows for unexpected circumstances.
65. Doesn't recognize hierarchies in the organization; s/he bypasses management levels in working toward his/her goals.
66. Sometimes puts important items on the back burner for a bit too long.
67. Orchestrates situations (e.g., meetings, one-on-one conversations) so that his/her wishes are approved.
68. Confuses others by mumbling and "rambling on" when talking.
69. Encourages others in his/her group to work independently.
70. Is able to thrive when working under conditions of unusually high pressure.
71. Pays close attention to the details of what s/he is doing.
72. Is able to consistently analyze complex problems and quickly assess the situation at hand.
73. Is willing to "weed out" team members who are not immediately productive.
74. Is able to get the time of executives in the company in order to communicate his/her ideas.
75. Is stubborn and resistant, even in the face of legitimate criticism.
76. Frequently makes inappropriate judgments that lack a factual basis; usually misses obvious alternatives.

### **The manager I'm rating.....**

77. Keeps very good records, documenting all events and activities.
78. Addresses every task with urgency.
79. Has persisted in pursuing an idea even when s/he was explicitly directed to stop.
80. Makes timely decisions after weighing risks and benefits for the company, department, and self.
81. Is always looking for ways to do things just a little bit better and a little bit faster.
82. Will sometimes bend the truth in order to achieve his/her goals.
83. Is considerate of other peoples' well being in the company.
84. Needs help to finish work; projects and other responsibilities are not done on time.
85. Seeks out diversity in people, places, things.
86. Prefers to delay decision making at times, so that s/he can think through the issues more carefully.
87. Has written letters and memos that attack others personally.
88. Introduces and promotes new ideas in the company.
89. Knows when to push hard for an idea and when to back off.
90. Often disregards the topic when attending a meeting, and instead talks about what interests s/he.
91. Concentrates on doing what needs to be done to complete a task, and then moves on to the next issue.
92. Can adjust quickly in the face of resistance (i.e. pressure, errors, different personalities).
93. Shows up late for meetings and appointments.
94. Questions and challenges all processes and procedures.
95. Gives a quick response when someone asks for information, and then follows up.
96. Makes no allowance for individuality--for personal needs; is abrasive in handling others.
97. Gets impatient with others when they don't work to his/her own high standards.
98. Works to motivate teamwork--cooperation and collaboration among team members.
99. Is comfortable taking risks at work and moving out into unknown business areas.
100. Completes assigned work and then initiates new work toward the success of a higher mandate; is eager to take on more responsibilities.
101. Prefers to work within his/her own department/office.
102. Does his/her best to accommodate to other peoples' wishes in order to keep them happy.
103. Knows a lot of people in the company and is able to ask for their input and commitment when it is needed.
104. Is "unshakable" under heavy pressure and confrontation; does not lose confidence.

**The manager I'm rating.....**

105. Tends to speak his/her mind, regardless of the audience.
106. Approaches most issues in a very systematic, analytical, and disciplined manner.
107. Has too little time to accomplish his/her work.
108. Produces letters/reports that are unclear or inconclusive, reflecting a poor and often superficial level of initial analysis.
109. Follows instructions very accurately.
110. Holds others accountable for delivering what they promise.
111. Promotes ideas that have the highest visibility and likelihood of success.
112. Frequently displays a negative attitude; has little enthusiasm or commitment to goals.
113. Is interested in other peoples' ideas and works to support and encourage them.
114. Stays in one job for a long time, so that s/he becomes an expert in that one area.
115. Focuses on the specifics of the task at hand, rather than the environment around him/her.
116. Meets deadlines, targets, and time schedules; has time for more than one project or job.
117. Prefers not to participate if things get too hot.
118. Is not very comfortable meeting new people.
119. Is persistent in voicing his/her opinion over and over again, even if his/her ideas are rejected.
120. Works aggressively to sell and champion new ideas in the company.
121. Is a methodical, orderly worker, carefully considering and taking action on one issue, and then moving on to the next.
122. Tends to make personal sacrifices in his/her work, when s/he is dedicated to a task or project.
123. Refers to policies and procedures to define and support his/her work behavior.
124. Refuses to speak to a group in a formal setting.
125. Likes to push ahead and take action--implement--when s/he makes decisions.
126. Doesn't seek out attention from others.
127. Recognizes the achievements and accomplishments of others both publicly and privately.
128. Gathers all appropriate information before attempting to diagnose a situation; logically structures information in order to present a strong case as to why a particular conclusion is reached.
129. Will not take risks with company time, people, and money.
130. Has a "big picture" perspective; s/he doesn't get bogged down by the details of a project.
131. Prefers to avoid conflict and, instead, works to smooth out disagreements and reach consensus.
132. Offers opinions that are consistently viewed as "out in left field".
133. Doesn't speak up at meetings.



**The manager I'm rating.....**

134. Tends to dominate meetings with his/her opinions and visions when s/he wishes to convince others to accept his/her point of view.
135. Keeps his/her office very neat and tidy.
136. Takes decisive action when situations arise.
137. Tends to start early and work late when emotionally involved in a particular project.
138. Easily conforms to company expectations.
139. Takes action immediately on important projects or initiatives; s/he never "drags it out" if the item is critical.
140. Is not willing to take the extra time and make the extra effort in his/her work.
141. Doesn't think that it's important that his/her accomplishments and achievements are known to others in the company.
142. Usually thinks of other peoples' needs and priorities before making decisions.
143. Prefers to work in a fairly stable and unchanging work environment.
144. Recognizes when something needs to be done and takes action without being told.
145. Enjoys working outside of his/her own office or department.
146. Avoids conflict and confrontation in his/her day-to-day work.
147. Is not very comfortable speaking in front of others.
148. Listens to all sides of an issue; can change his/her position and support the change.
149. Tends to disrupt meetings.
150. Is very good at planning and organizing his/her activities.
151. Tends to work pretty irregular hours.
152. Makes decisions, takes actions, and expresses opinions without regard for impacts.
153. Knows and follows the corporate rules very closely.
154. Is very careful to always keep his/her time commitments.
155. Will accept low-profile projects; s/he doesn't need "public" recognition for what s/he does.
156. Juggles work load while remaining cool, calm, and collected; has a calming influence on others.
157. Supports people to get the best out of them.
158. Typically doesn't volunteer for extra work projects.
159. Thinks at a conceptual level; s/he lets others worry about the details and specifics of projects.
160. Produces correspondence that is ambiguous and poorly organized; requires follow-up.
161. Finds areas of compromise and accommodation in order to keep others happy.
162. Doesn't exploit political connections in the company in order to get his/her way.

**The manager I'm rating.....**

- 163. Monopolizes discussions.
  - 164. Takes new ideas for an innovation (an idea s/he may or may not have generated) and introduces, pushes, promotes, and sells ideas to others in the organization.
  - 165. Plans his/her actions well in advance.
  - 166. Rarely has any free time at work; s/he always finds him/herself doing something.
  - 167. Expects others to comply with company guidelines, no exceptions.
  - 168. Always meets his/her deadlines at work.
  - 169. Will not compromise his/her integrity just to get ahead.
  - 170. Easily recognizes and appreciates talent in others; s/he always tries to use other peoples' talents.
  - 171. Doesn't volunteer for "visible" jobs, preferring to remain more in the background.
  - 172. Has no patience for the more tedious tasks.
  - 173. Gives people a second chance, rather than confronting them on issues right away.
  - 174. Stops trying to persuade people when his/her ideas meet with criticism and opposition.
  - 175. Typically does what is correct and accepted in the company.
  - 176. Always keeps his/her promises to others in the organization.
  - 177. Empowers subordinates to take action on their own.
-

Never true (or extremely unlikely to be true) or descriptive of his/her behavior					Rarely true (or unlikely to be true) or descriptive of his/her behavior					Occasionally true (or somewhat likely to be true) or descriptive of his/her behavior					Often true (or likely to be true) or descriptive of his/her behavior					Very frequently true (or extremely likely to be true) or descriptive of his/her behavior									
1					2					3					4					5									
(1)	1	2	3	4	5	(41)	1	2	3	4	5	(81)	1	2	3	4	5	(121)	1	2	3	4	5	(161)	1	2	3	4	5
(2)	1	2	3	4	5	(42)	1	2	3	4	5	(82)	1	2	3	4	5	(122)	1	2	3	4	5	(162)	1	2	3	4	5
(3)	1	2	3	4	5	(43)	1	2	3	4	5	(83)	1	2	3	4	5	(123)	1	2	3	4	5	(163)	1	2	3	4	5
(4)	1	2	3	4	5	(44)	1	2	3	4	5	(84)	1	2	3	4	5	(124)	1	2	3	4	5	(164)	1	2	3	4	5
(5)	1	2	3	4	5	(45)	1	2	3	4	5	(85)	1	2	3	4	5	(125)	1	2	3	4	5	(165)	1	2	3	4	5
(6)	1	2	3	4	5	(46)	1	2	3	4	5	(86)	1	2	3	4	5	(126)	1	2	3	4	5	(166)	1	2	3	4	5
(7)	1	2	3	4	5	(47)	1	2	3	4	5	(87)	1	2	3	4	5	(127)	1	2	3	4	5	(167)	1	2	3	4	5
(8)	1	2	3	4	5	(48)	1	2	3	4	5	(88)	1	2	3	4	5	(128)	1	2	3	4	5	(168)	1	2	3	4	5
(9)	1	2	3	4	5	(49)	1	2	3	4	5	(89)	1	2	3	4	5	(129)	1	2	3	4	5	(169)	1	2	3	4	5
(10)	1	2	3	4	5	(50)	1	2	3	4	5	(90)	1	2	3	4	5	(130)	1	2	3	4	5	(170)	1	2	3	4	5
(11)	1	2	3	4	5	(51)	1	2	3	4	5	(91)	1	2	3	4	5	(131)	1	2	3	4	5	(171)	1	2	3	4	5
(12)	1	2	3	4	5	(52)	1	2	3	4	5	(92)	1	2	3	4	5	(132)	1	2	3	4	5	(172)	1	2	3	4	5
(13)	1	2	3	4	5	(53)	1	2	3	4	5	(93)	1	2	3	4	5	(133)	1	2	3	4	5	(173)	1	2	3	4	5
(14)	1	2	3	4	5	(54)	1	2	3	4	5	(94)	1	2	3	4	5	(134)	1	2	3	4	5	(174)	1	2	3	4	5
(15)	1	2	3	4	5	(55)	1	2	3	4	5	(95)	1	2	3	4	5	(135)	1	2	3	4	5	(175)	1	2	3	4	5
(16)	1	2	3	4	5	(56)	1	2	3	4	5	(96)	1	2	3	4	5	(136)	1	2	3	4	5	(176)	1	2	3	4	5
(17)	1	2	3	4	5	(57)	1	2	3	4	5	(97)	1	2	3	4	5	(137)	1	2	3	4	5	(177)	1	2	3	4	5
(18)	1	2	3	4	5	(58)	1	2	3	4	5	(98)	1	2	3	4	5	(138)	1	2	3	4	5						
(19)	1	2	3	4	5	(59)	1	2	3	4	5	(99)	1	2	3	4	5	(139)	1	2	3	4	5						
(20)	1	2	3	4	5	(60)	1	2	3	4	5	(100)	1	2	3	4	5	(140)	1	2	3	4	5						
(21)	1	2	3	4	5	(61)	1	2	3	4	5	(101)	1	2	3	4	5	(141)	1	2	3	4	5						
(22)	1	2	3	4	5	(62)	1	2	3	4	5	(102)	1	2	3	4	5	(142)	1	2	3	4	5						
(23)	1	2	3	4	5	(63)	1	2	3	4	5	(103)	1	2	3	4	5	(143)	1	2	3	4	5						
(24)	1	2	3	4	5	(64)	1	2	3	4	5	(104)	1	2	3	4	5	(144)	1	2	3	4	5						
(25)	1	2	3	4	5	(65)	1	2	3	4	5	(105)	1	2	3	4	5	(145)	1	2	3	4	5						
(26)	1	2	3	4	5	(66)	1	2	3	4	5	(106)	1	2	3	4	5	(146)	1	2	3	4	5						
(27)	1	2	3	4	5	(67)	1	2	3	4	5	(107)	1	2	3	4	5	(147)	1	2	3	4	5						
(28)	1	2	3	4	5	(68)	1	2	3	4	5	(108)	1	2	3	4	5	(148)	1	2	3	4	5						
(29)	1	2	3	4	5	(69)	1	2	3	4	5	(109)	1	2	3	4	5	(149)	1	2	3	4	5						
(30)	1	2	3	4	5	(70)	1	2	3	4	5	(110)	1	2	3	4	5	(150)	1	2	3	4	5						
(31)	1	2	3	4	5	(71)	1	2	3	4	5	(111)	1	2	3	4	5	(151)	1	2	3	4	5						
(32)	1	2	3	4	5	(72)	1	2	3	4	5	(112)	1	2	3	4	5	(152)	1	2	3	4	5						
(33)	1	2	3	4	5	(73)	1	2	3	4	5	(113)	1	2	3	4	5	(153)	1	2	3	4	5						
(34)	1	2	3	4	5	(74)	1	2	3	4	5	(114)	1	2	3	4	5	(154)	1	2	3	4	5						
(35)	1	2	3	4	5	(75)	1	2	3	4	5	(115)	1	2	3	4	5	(155)	1	2	3	4	5						
(36)	1	2	3	4	5	(76)	1	2	3	4	5	(116)	1	2	3	4	5	(156)	1	2	3	4	5						
(37)	1	2	3	4	5	(77)	1	2	3	4	5	(117)	1	2	3	4	5	(157)	1	2	3	4	5						
(38)	1	2	3	4	5	(78)	1	2	3	4	5	(118)	1	2	3	4	5	(158)	1	2	3	4	5						
(39)	1	2	3	4	5	(79)	1	2	3	4	5	(119)	1	2	3	4	5	(159)	1	2	3	4	5						
(40)	1	2	3	4	5	(80)	1	2	3	4	5	(120)	1	2	3	4	5	(160)	1	2	3	4	5						

## APPENDIX J

THE TWELVE DIMENSIONS AND THEIR ITEMS USED TO MEASURE OVERALL  
MANAGEMENT PERFORMANCE (OMP)

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*Leadership*

- Inspires and motivates others to achieve or exceed levels of performance.
- Takes a passive role in group situations; willingly allows others to take control. (r)
- Frequently displays a negative attitude; has little enthusiasm or commitment to goals. (r)

*Planning/Organizing/Control*

- Fails to meet schedules, deadlines, and targets; is always behind; makes excuses or finds reasons to cover up his/her inadequacies. (r)
- Establishes a plan for the fiscal year; maps out when each event must take place in order to meet the stated goals; allows for unexpected circumstances.
- Meets deadlines, targets, and time schedules; has time for more than one project or job.

*Oral Communication*

- Delivers clear and concise presentations at all levels of the corporation in a manner readily accepted by adults.
- Confuses others by mumbling and "rambling on" when talking. (r)
- Refuses to speak to a group in a formal setting. (r)

*Analysis*

- Fails to identify problems other than in the simplest scenarios, even then requires assistance to gather facts. (r)
- Is able to consistently analyze complex problems and quickly assess the situation at hand.
- Gathers all appropriate information before attempting to diagnose a situation; logically structures information in order to present a strong case as to why a particular conclusion is reached.

*Judgment*

- Reaches logical conclusions that are well-founded and "supportable".
  - Frequently makes inappropriate judgments that lack a factual basis; usually misses obvious alternatives. (r)
  - Offers opinions that are consistently viewed as "out in left field". (r)
-

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*Decisiveness*

- Will not commit him/herself to take action without lengthy procrastination; s/he is difficult to "pin down" or "corner". (r)
- Makes timely decisions after weighing risks and benefits for the company, department, and self.
- Takes decisive action when situations arise.

*Work Ethic*

- Puts in the extra effort and time to ensure that his/her work is of the highest quality; s/he consistently does more than is expected without being asked.
- Needs help to finish work; projects and other responsibilities are not done on time. (r)
- Is not willing to take the extra time and make the extra effort in his/her work. (r)

*Initiative*

- Does not question the way things are done; s/he does not offer more effective solutions; s/he refuses to enter into "uncharted waters". (r)
- Completes assigned work and then initiates new work toward the success of a higher mandate; is eager to take on more responsibilities.
- Recognizes when something needs to be done and takes action without being told.

*Behavior Flexibility*

- Demonstrates rigidity in the way s/he deals with others; s/he will not modify behavior to meet changing needs. (r)
- Can adjust quickly in the face of resistance (i.e., pressure, errors, different personalities).
- Listens to all sides of an issue; can change his/her position and support change.

*Sensitivity*

- Demonstrates diplomacy and tact; s/he works easily with difficult customers and employees.
- Makes no allowance for individuality—for personal needs; is abrasive in handling others. (r)
- Makes decisions, takes actions, and expresses opinions without regard for impacts. (r)

*Performance Stability*

- Handles pressure poorly; devotes energies to excuses rather than production. (r)
  - Is "unshakable" under heavy pressure and confrontation; does not lose confidence.
  - Juggles work load while remaining cool, calm, and collected; has a calming influence on others.
-

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*Written Communications*

- Produces written work that is clear, concise, and usually requires no corrections; ideas are organized and presented in a logical manner.
  - Produces letters and reports that are unclear or inconclusive, reflecting a poor and often superficial level of initial analysis. (r)
  - Produces correspondence that is ambiguous and poorly organized; requires follow-up. (r)
-

## APPENDIX K

## SCALE COMPOSITION AT THE CONCLUSION OF PHASE IV

*1. Persuasiveness & Political Savvy*<sup>1</sup>

S.D. <sup>2</sup>	Loading S1 <sup>3</sup>	Loading S2 <sup>4</sup>	Item
2.94	0.55	0.45	I know how to use my political connections in the company to make things happen.
2.06	0.54	0.45	I'm able to sell ideas to superiors one-on-one.
2.83	0.48	0.48	I am often able to very accurately anticipate the reactions of others in the organization to my plans.
2.39	0.60	0.69	I am able to get the time of executives in the company in order to communicate my ideas.
2.06	0.61	0.50	I know when to push hard for an idea and when to back off.
2.06	0.48	0.38	I know a lot of people in the company and I'm able to ask for their input and commitment when it is needed.
3.00		0.65	<i>I have a big picture perspective; I don't get bogged down by the details of a project</i> <sup>5</sup>
4.39		0.60	<i>I think at a conceptual level; I let others worry about the details and specifics of projects.</i>

<sup>1</sup> The scale names given here are working names only. Subject matter experts will name the scales in Phase V of Study 1.

<sup>2</sup> The mean social desirability rating assigned to that item.

<sup>3</sup> S 1 - The factor loading for that item, arising from the rotation of the sample 1 unrotated pattern matrix into congruence with the common pattern.

<sup>4</sup> S 2 - The factor loading for that item, arising from the rotation of the sample 2 unrotated pattern matrix into congruence with the common pattern. New items give only sample 2 loadings. Where loadings are not available, item-scale correlations are given instead.

<sup>5</sup> The eleven new items are italicized.

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**2. Verbal Dominance**

	Loading		
S.D.	S1	S2	Item
7.72	0.61	0.85	I monopolize discussions.
8.11	0.49	0.57	I tend to disrupt meetings.
6.39	0.51	0.54	I tend to dominate meetings with my opinions and visions when I wish to convince others to accept my point of view.
6.44	0.45	0.67	I'm persistent in voicing my opinion over and over again, even if my ideas are rejected.
8.33	0.35	0.55	When attending a meeting, I often disregard the topic of the meeting, and, instead, talk about what interests me.
8.17	0.41	0.45	I am stubborn and resistant, even in the face of legitimate criticism.
5.56	-0.25	-0.33	I don't usually persist in arguing a point.
3.61	-0.56	-0.46	I tend to listen more than talk when I'm around other people.
3.00		-0.33	<i>I try not to overpower people with my ideas.</i>
1.96		-0.29	<i>I won't use a strategy of domination or intimidation in order to get my way.</i>

---

**3. Rushed Disorganization**

	Loading		
S.D.	S1	S2	Item
6.00	0.61	0.63	I don't typically take the time and effort to document all my plans and activities.
6.56	0.65	0.55	I usually don't take the time to document things.
5.00	0.33	0.44	I tend to "wing it"; I improvise on the spot.
6.30		0.61	I have no patience for the more tedious tasks.
3.83	-0.58	-0.50	I keep very good records, documenting all events and activities.
2.89	-0.43	-0.29	I approach most issues in a very systematic, analytical, and disciplined manner.
1.89	-0.47	-0.41	I'm very good at planning and organizing my activities.
4.17	-0.29	-0.31	I have a lot of patience for completing the more tedious tasks.
3.00	-0.63	-0.36	I plan my actions well in advance.
2.39	-0.22	-0.34	I pay close attention to the details of what I am doing.

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**4. Job Involvement**

S.D.	Loading		Item
	S1	S2	
6.72	0.41	0.39	I have too little time to accomplish my work.
3.28	0.39	0.65	I tend to make personal sacrifices in my work when I am dedicated to a task or project.
4.00	0.51	0.57	I tend to start early and work late when I'm emotionally involved in a particular project.
5.22	0.53	0.55	I tend to work pretty irregular hours.
4.78	0.47	0.33	I rarely have any free time at work; I always find myself doing something.
5.94	-0.63	-0.75	I usually don't work overtime.
7.61	-0.55	-0.47	I don't typically expend a lot of energy in accomplishing my job.
5.94	-0.45	-0.76	I usually start work at around 8 and leave pretty close to 4.
5.83	-0.39	-0.51	I follow a fairly precise schedule at work (e.g., coffee at 9:00, lunch at 12:00).

---

**5. Rule Breaking**

S.D.	Loading		Item
	S1	S2	
4.61	0.74	0.49	If some company rule or procedure gets in my way, I go around it.
7.56	0.51	0.50	I ignore authority.
5.94	0.52	0.24	I don't recognize hierarchies in the organization; I bypass management levels in working toward my goals.
5.72	0.53	0.51	I have persisted in pursuing an idea even when I was explicitly directed to stop.
4.78	0.38	0.26	I question and challenge all processes and procedures.
3.39	-0.39	-0.25	I follow instructions very accurately.
3.94	-0.47	-0.27	I easily conform to company expectations.
5.11	-0.55	-0.55	I know and follow the corporate rules very closely.
4.06	-0.55	-0.59	I typically do what is correct and accepted in the company.
5.5	-0.29	-0.39	I will not take risks with company time, people, and money.

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**6. Action Orientation**

S.D.	Loading S1	Loading S2	Item
2.44	0.54	0.63	I always meet my deadlines at work.
5.33	0.41	0.67	I address every task with urgency.
1.83	0.37	0.53	I take action immediately on important projects or initiatives; I never "drag it out" if the item is critical.
3.61	0.33	0.38	When someone asks me for information, I give a quick response, and then follow up.
1.78	0.29	0.42	I'm always looking for ways to do things just a little bit better and a little bit faster.
7.50	-0.44	-0.40	I sometimes put important items on the back burner for a bit too long.
5.17	-0.41	-0.48	I tend to work fairly slowly, but consistently.
4.39	-0.40	-0.35	I am sometimes slow to take action in solving problems; I like to take my time and carefully consider the options first.
3.94	-0.27	-0.47	I prefer to delay decision making at times, so that I can think through the issues more carefully.

---

**7. Self Promotion**

S.D.	Loading S1	Loading S2	Item
4.83	0.38	0.47	I promote ideas that have the highest visibility and likelihood of success.
7.17	0.28	0.24	I will sometimes bend the truth in order to achieve my goals.
4.94	0.28	0.48	I orchestrate situations (e.g., meetings, one-on-one conversations) so that my wishes are approved.
4.83	0.45	0.56	I make sure I rub shoulders with powerful individuals in other departments and business units in the company.
4.83	0.50	0.68	I ensure that my successes in the company are known.
4.11	-0.27	-0.32	I don't seek out attention from others.
2.74		-0.38	<i>I don't exploit political connections in the company in order to get my way.</i>
4.70		-0.66	<i>It's not important to me that my accomplishments and achievements are known to others in the company.</i>
3.39		-0.47	<i>I will accept low-profile projects; I don't need "public" recognition for what I do.</i>
1.48		-0.23	<i>I will not compromise my integrity just to get ahead.</i>

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**8. Collaboration and Support**

S.D.	Loading S1	Loading S2	Item
1.72	0.44	0.53	I empower subordinates to take action on their own.
2.78	0.52	0.63	I usually think of other peoples' needs and priorities before making decisions.
1.72	0.56	0.74	I recognize the achievements and accomplishments of others both publicly and privately.
1.78	0.59	0.65	I am interested in other peoples' ideas and work to support and encourage them.
1.44	0.63	0.64	I work to motivate teamwork--cooperation and collaboration among team members.
6.83	-0.38	-0.42	I prefer to work independently, rather than in a team setting.
6.00	-0.29	-0.22	I prefer working on my own.
8.11	-0.34	-0.21	I try to have a hand in all aspects of a project; I prefer not to delegate responsibilities.

---

**9. Openness to Change**

S.D.	Loading S1	Loading S2	Item
2.33	0.54	0.34	I volunteer for task forces and other related activities that allow me to be a change agent.
3.72	0.51	0.21	I have taken on challenges and responsibilities unrelated to my area of job responsibility.
1.89	0.31	0.20	I am able to thrive when working under conditions of unusually high pressure.
3.43		0.64	<i>I enjoy working outside of my own office or department.</i>
5.28	-0.25	-0.33	I stay in one job for a long time, so that I become an expert in that one area.
6.78	-0.39	-0.54	I prefer to work in a fairly stable and unchanging work environment.
6.83	-0.64	-0.40	I typically don't volunteer for extra work projects.
5.67	-0.63	-0.57	I don't volunteer for "visible" jobs, preferring to remain more in the background.
5.00	-0.35	-0.24	I prefer to work within my own department/office.

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**10. Willingness to Confront**

S.D.	Loading		Item
	S1	S2	
3.72	0.35	0.47	I'm not afraid to tell others, in a direct and forceful manner, what should be done.
5.72	0.28	0.42	When I think that someone is incompetent, I tell them.
4.28	0.28	0.27	I have risked disappointing others in order to get my own ideas across.
5.00	0.20	0.59	I am willing to "weed out" team members who are not immediately productive.
5.28	-0.44	-0.54	I do my best to accommodate to other peoples' wishes in order to keep them happy.
5.44	-0.62	-0.69	I avoid conflict and confrontation in my day-to-day work.
4.44	-0.50	-0.59	I prefer to avoid conflict and, instead, work to smooth out disagreements and reach consensus.
4.26		-0.36	<i>I find areas of compromise and accommodation in order to keep others happy.</i>
3.43		-0.25	<i>I give people a second chance, rather than confront them on issues right away.</i>

---

## APPENDIX L

THE RATING BOOKLET USED TO OBTAIN THE FACTOR LABELS AND  
PROTOTYPICALITY RATINGS FROM THE SUBJECT MATTER EXPERTS

Your Name: \_\_\_\_\_

Factor Labeling for  
Championship Research Project

April 25, 1994

Please return by FAX or Air Mail to:

Ross M. Woolley  
Department of Psychology  
2136 West Mall  
University of British Columbia  
Vancouver, B.C.  
Canada V6T 1Z4  
FAX: (604) 822-6923  
TEL: (604) 822-5626

***Championship Defined*** The champion takes a new idea for either an administrative or technical innovation (an idea s/he may or may not have generated) and introduces, pushes, promotes, and sells the idea to others in the organization.

This definition was gleaned from definitions and descriptions taken from 25 independent research reports on the champion and corporate innovation. It may be slightly different from your own working definition, but it should come close to capturing the core of championship. Please use this definition to guide your work in this booklet.

***Background of Project*** The items contained in this booklet have been organized into dimensions according to the results of two factor analyses, involving over 600 managers. In the first sample, just over 400 managers rated themselves on 363 items written by a panel of experienced managers to measure championship. These 363 items were factored into 11 dimensions (136 items remained). This reduced pool of items was assembled into a questionnaire and administered to a new sample of roughly 200 managers who were rated by their supervisors. Thus, in the second sample, the ratings were obtained by means of supervisory report. Ultimately, the two factor solutions (arising from the two different kinds of samples) were combined to obtain a common pattern; a 10-factor solution obtained; and a common set of items identified as central to each factor. These 10 factors are subsequently referred to as *first-order factors*. The correlations among the 10 factors were themselves factor analyzed, providing two more global *second-order factors* of championship.

### ***Directions***

Your task is to conceptualize and then label the 10 first-order and 2 second-order factors contained in this booklet and then to rate the *prototypicality* of the factors. By prototypicality we mean the extent to which each factor is a central or core aspect of championship. Please note the following:

- First, for each factor, the items marking the *champion* end of the scale are presented first, and they have positive loadings. The *non-champion* items for each scale have negative loadings and follow after the champion items. These non-champion items were written to measure the opposite pole of championship--to describe a person who is the exact opposite of the champion.

- Second, please take note of the size of the factor loadings. Factor loadings can be understood as correlations, thus revealing the strength of association between a given item and the associated factor. When interpreting the factor, give most weight to the items possessing the largest loadings (i.e., those items most central to the factor). For your convenience, the items for each factor are presented in descending order, according to the size of the factor loadings.
- Please work to first *conceptualize* the factor before naming it; record adjectives that come to mind in the space provided. After you have a clear understanding of each factor, record a 2 or 3-word label for each. Please try to name every factor, but if you cannot clearly understand the meaning of a factor, leave it blank rather than recording a label that you feel is inaccurate.
- Finally, be sure to name the "champion" end of the scale; for each factor, these are the items that have *positive loadings*. Use the items with the negative loadings to understand the *opposite* pole of the factor. The items marking the champion end of the scale always appear first. Please keep this in mind when naming the second-order factors as well.

***Returning Your Results*** Please return this booklet by FAX (or Air Mail) by May 16, 1994. I've enclosed a \$5.00 money order to help cover the cost of either the FAX or postage. I realize that I'm asking for a turnaround time of just under three weeks. Please understand that the next phase of this project cannot begin until your ratings have been received and analyzed. You will receive your feedback package approximately 2 weeks after I receive the last booklet...so roughly late May, early June. If you have any questions, please don't hesitate to call at the number listed on the booklet cover. Thank you so much for agreeing to take part in this project.

## PART A

### THE FIRST-ORDER FACTORS

**Factor 1 Label** \_\_\_\_\_

**Descriptive Adjectives** \_\_\_\_\_

**Item**

**Loading    Item From Questionnaire**

---

0.73	I monopolize discussions.
0.56	I'm persistent in voicing my opinion over and over again, even if my ideas are rejected.
0.53	I tend to disrupt meetings.
0.52	I tend to dominate meetings with my opinions and visions when I wish to convince others to accept my point of view.
0.45	When attending a meeting, I often disregard the topic of the meeting, and, instead, talk about what interests me.
0.43	I am stubborn and resistant, even in the face of legitimate criticism.
-0.51	I tend to listen more than talk when I'm around other people.
-0.33	I try not to overpower people with my ideas.
-0.29	I don't usually persist in arguing a point.
-0.29	I won't use a strategy of domination or intimidation in order to get my way.

---

**Factor 2 Label** \_\_\_\_\_

**Descriptive Adjectives** \_\_\_\_\_

**Item**

**Loading    Item From Questionnaire**

---

0.62	I don't typically take the time and effort to document all my plans and activities.
0.60	I usually don't take the time to document things.
0.40	I have no patience for the more tedious tasks.
0.38	I tend to "wing it"; I improvise on the spot.
-0.54	I keep very good records, documenting all events and activities.
-0.50	I plan my actions well in advance.
-0.44	I'm very good at planning and organizing my activities.
-0.36	I approach most issues in a very systematic, analytical, and disciplined manner.
-0.30	I have a lot of patience for completing the more tedious tasks.
-0.28	I pay close attention to the details of what I am doing.

---



**Factor 3 Label** \_\_\_\_\_**Descriptive Adjectives** \_\_\_\_\_**Item****Loading    Item From Questionnaire**


---

0.54	I tend to work pretty irregular hours.
0.54	I tend to start early and work late when I'm emotionally involved in a particular project.
0.52	I tend to make personal sacrifices in my work when I am dedicated to a task or project.
0.40	I rarely have any free time at work; I always find myself doing something.
0.40	I have too little time to accomplish my work.
-0.69	I usually don't work overtime.
-0.61	I usually start work at around 8 and leave pretty close to 4.
-0.51	I don't typically expend a lot of energy in accomplishing my job.
-0.45	I follow a fairly precise schedule at work (e.g., coffee at 9:00, lunch at 12:00).

---

**Factor 4 Label** \_\_\_\_\_**Descriptive Adjectives** \_\_\_\_\_**Item****Loading    Item From Questionnaire**


---

0.61	If some company rule or procedure gets in my way, I go around it.
0.52	I have persisted in pursuing an idea even when I was explicitly directed to stop.
0.51	I ignore authority.
0.38	I don't recognize hierarchies in the organization; I bypass management levels in working toward my goals.
0.32	I question and challenge all processes and procedures.
-0.57	I typically do what is correct and accepted in the company.
-0.55	I know and follow the corporate rules very closely.
-0.37	I easily conform to company expectations.
-0.34	I will not take risks with company time, people, and money.
-0.32	I follow instructions very accurately.

---

**Factor 5 Label** \_\_\_\_\_**Descriptive Adjectives** \_\_\_\_\_**Item****Loading    Item From Questionnaire**


---

0.65	I am able to get the time of executives in the company in order to communicate my ideas.
0.60	I think at a conceptual level; I let others worry about the details and specifics of projects.
0.55	I know when to push hard for an idea and when to back off.
0.55	I have a big picture perspective; I don't get bogged down by the details of a project.
0.50	I'm able to sell ideas to superiors one-on-one.
0.50	I know how to use my political connections in the company to make things happen.
0.48	I am often able to very accurately anticipate the reactions of others in the organization to my plans.
0.43	I know a lot of people in the company and I'm able to ask for their input and commitment when it is needed.

---

**Factor 6 Label** \_\_\_\_\_**Descriptive Adjectives** \_\_\_\_\_**Item****Loading    Item From Questionnaire**


---

0.58	I always meet my deadlines at work.
0.54	I address every task with urgency.
0.45	I take action immediately on important projects or initiatives; I never "drag it out" if the item is critical.
0.36	When someone asks me for information, I give a quick response, and then follow up.
0.35	I'm always looking for ways to do things just a little bit better and a little bit faster.
-0.45	I tend to work fairly slowly, but consistently.
-0.42	I sometimes put important items on the back burner for a bit too long.
-0.38	I am sometimes slow to take action in solving problems; I like to take my time and carefully consider the options first.
-0.37	I prefer to delay decision making at times, so that I can think through the issues more carefully.

---

**Factor 7 Label** \_\_\_\_\_**Descriptive Adjectives** \_\_\_\_\_**Item****Loading    Item From Questionnaire**


---

0.59	I ensure that my successes in the company are known.
0.51	I make sure I rub shoulders with powerful individuals in other departments and business units in the company.
0.42	I promote ideas that have the highest visibility and likelihood of success.
0.38	I orchestrate situations (e.g., meetings, one-on-one conversations) so that my wishes are approved.
0.26	I will sometimes bend the truth in order to achieve my goals.
-0.66	It's not important to me that my accomplishments and achievements are known to others in the company.
-0.47	I will accept low-profile projects; I don't need "public" recognition for what I do.
-0.38	I don't exploit political connections in the company in order to get my way.
-0.32	I don't seek out attention from others.
-0.23	I will not compromise my integrity just to get ahead.

---

**Factor 8 Label** \_\_\_\_\_**Descriptive Adjectives** \_\_\_\_\_**Item****Loading    Item From Questionnaire**


---

0.65	I recognize the achievements and accomplishments of others both publicly and privately.
0.63	I work to motivate teamwork--cooperation and collaboration among team members.
0.62	I am interested in other peoples' ideas and work to support and encourage them.
0.58	I usually think of other peoples' needs and priorities before making decisions.
0.48	I empower subordinates to take action on their own.
-0.40	I prefer to work independently, rather than in a team setting.
-0.27	I try to have a hand in all aspects of a project; I prefer not to delegate responsibilities.
-0.26	I prefer working on my own.

---

**Factor 9 Label** \_\_\_\_\_**Descriptive Adjectives** \_\_\_\_\_**Item****Loading    Item From Questionnaire**


---

0.44	I volunteer for task forces and other related activities that allow me to be a change agent.
0.42	I enjoy working outside of my own office or department.
0.36	I have taken on challenges and responsibilities unrelated to my area of job responsibility.
0.26	I am able to thrive when working under conditions of unusually high pressure.
-0.60	I don't volunteer for "visible" jobs, preferring to remain more in the background.
-0.52	I typically don't volunteer for extra work projects.
-0.47	I prefer to work in a fairly stable and unchanging work environment.
-0.29	I prefer to work within my own department/office.
-0.29	I stay in one job for a long time, so that I become an expert in that one area.

---

**Factor 10 Label** \_\_\_\_\_**Descriptive Adjectives** \_\_\_\_\_**Item****Loading    Item From Questionnaire**


---

0.41	I'm not afraid to tell others, in a direct and forceful manner, what should be done.
0.39	I am willing to "weed out" team members who are not immediately productive.
0.35	When I think that someone is incompetent, I tell them.
0.28	I have risked disappointing others in order to get my own ideas across.
-0.66	I avoid conflict and confrontation in my day-to-day work.
-0.55	I prefer to avoid conflict and, instead, work to smooth out disagreements and reach consensus.
-0.49	I do my best to accommodate to other peoples' wishes in order to keep them happy.
-0.36	I find areas of compromise and accommodation in order to keep others happy.
-0.25	I give people a second chance, rather than confront them on issues right away.

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## PART B DIRECTIONS

In this section, we're asking you to label two second-order factors that arose from a factoring of the 10 first-order factors. These two second-order factors represent a much-simpler structure of championship than do the 10 first-order factors. We wish to understand the meaning of these two second-order factors, and ask that you go through a similar exercise to that in Part A, by first conceptualizing and then naming each of the two factors.

You'll notice that we have reproduced the first-order factors in Part B, but this time they are sorted into two groups, corresponding to the two second-order factors. First-order factors 1, 2, 4, 7, and 10 loaded onto second-order Factor I, while first-order factors 3, 5, 6, 8, and 9 loaded onto second-order Factor II. We recommend that you do the following in deriving names for the two second-order factors:

- Transcribe the factor labels you used in Part A into the appropriate place in Part B; that way, all the information is in one place.
- Read through the items (and the first-order factor labels) that you have transcribed onto pages 10 through 13. Conceptualize the factor; try to see the inter-relationships among the first-order factors. Jot down any descriptive adjectives as they come to mind.
- Finally, after you have a clear understanding of the factor, please record a 2 or 3-word label for each of the two second-order factors.

You may find it interesting to know that the two second-order factors are uncorrelated in both of the research samples. That is, these 2 second-order factors appear to be independent aspects of championship. A manager high on one, will not necessarily be high on the other.

## PART B

### THE SECOND-ORDER FACTORS

#### Second-Order Factor I: BASED ON FIRST-ORDER FACTORS 1, 2, 4, 7, & 10

**Factor Label** \_\_\_\_\_

**Descriptive Adjectives** \_\_\_\_\_

*Factor 1* (Please transcribe Factor 1 label here) \_\_\_\_\_

- 0.73 I monopolize discussions.
- 0.56 I'm persistent in voicing my opinion over and over again, even if my ideas are rejected.
- 0.53 I tend to disrupt meetings.
- 0.52 I tend to dominate meetings with my opinions and visions when I wish to convince others to accept my point of view.
- 0.45 When attending a meeting, I often disregard the topic of the meeting, and, instead, talk about what interests me.
- 0.43 I am stubborn and resistant, even in the face of legitimate criticism.
- 0.51 I tend to listen more than talk when I'm around other people.
- 0.33 I try not to overpower people with my ideas.
- 0.29 I don't usually persist in arguing a point.
- 0.29 I won't use a strategy of domination or intimidation in order to get my way.

*Factor 2* (Please transcribe Factor 2 label here) \_\_\_\_\_

- 0.62 I don't typically take the time and effort to document all my plans and activities.
- 0.60 I usually don't take the time to document things.
- 0.40 I have no patience for the more tedious tasks.
- 0.38 I tend to "wing it"; I improvise on the spot.
- 0.54 I keep very good records, documenting all events and activities.
- 0.50 I plan my actions well in advance.
- 0.44 I'm very good at planning and organizing my activities.
- 0.36 I approach most issues in a very systematic, analytical, and disciplined manner.
- 0.30 I have a lot of patience for completing the more tedious tasks.
- 0.28 I pay close attention to the details of what I am doing.

## Second-Order Factor I Cont.: BASED ON FIRST-ORDER FACTORS 1, 2, 4, 7, & 10

*Factor 4 (Please transcribe Factor 4 label here)* \_\_\_\_\_

- 0.61 If some company rule or procedure gets in my way, I go around it.
- 0.52 I have persisted in pursuing an idea even when I was explicitly directed to stop.
- 0.51 I ignore authority.
- 0.38 I don't recognize hierarchies in the organization; I bypass management levels in working toward my goals.
- 0.32 I question and challenge all processes and procedures.
- 0.57 I typically do what is correct and accepted in the company.
- 0.55 I know and follow the corporate rules very closely.
- 0.37 I easily conform to company expectations.
- 0.34 I will not take risks with company time, people, and money.
- 0.32 I follow instructions very accurately.

*Factor 7 (Please transcribe Factor 7 label here)* \_\_\_\_\_

- 0.59 I ensure that my successes in the company are known.
- 0.51 I make sure I rub shoulders with powerful individuals in other departments and business units in the company.
- 0.42 I promote ideas that have the highest visibility and likelihood of success.
- 0.38 I orchestrate situations (e.g., meetings, one-on-one conversations) so that my wishes are approved.
- 0.26 I will sometimes bend the truth in order to achieve my goals.
- 0.66 It's not important to me that my accomplishments and achievements are known to others in the company.
- 0.47 I will accept low-profile projects; I don't need "public" recognition for what I do.
- 0.38 I don't exploit political connections in the company in order to get my way.
- 0.32 I don't seek out attention from others.
- 0.23 I will not compromise my integrity just to get ahead.

*Factor 10 (Please transcribe Factor 10 label here)* \_\_\_\_\_

- 0.41 I'm not afraid to tell others, in a direct and forceful manner, what should be done.
- 0.39 I am willing to "weed out" team members who are not immediately productive.
- 0.35 When I think that someone is incompetent, I tell them.
- 0.28 I have risked disappointing others in order to get my own ideas across.
- 0.66 I avoid conflict and confrontation in my day-to-day work.
- 0.55 I prefer to avoid conflict and, instead, work to smooth out disagreements and reach consensus.
- 0.49 I do my best to accommodate to other peoples' wishes in order to keep them happy.
- 0.36 I find areas of compromise and accommodation in order to keep others happy.
- 0.25 I give people a second chance, rather than confront them on issues right away.



## Second-Order Factor II: BASED ON FIRST-ORDER FACTORS 3, 5, 6, 8, & 9

**Factor Label** \_\_\_\_\_

**Descriptive Adjectives** \_\_\_\_\_

*Factor 3 (Please transcribe Factor 3 label here)* \_\_\_\_\_

- 0.54 I tend to work pretty irregular hours.
- 0.54 I tend to start early and work late when I'm emotionally involved in a particular project.
- 0.52 I tend to make personal sacrifices in my work when I am dedicated to a task or project.
- 0.40 I rarely have any free time at work; I always find myself doing something.
- 0.40 I have too little time to accomplish my work.
- 0.69 I usually don't work overtime.
- 0.61 I usually start work at around 8 and leave pretty close to 4.
- 0.51 I don't typically expend a lot of energy in accomplishing my job.
- 0.45 I follow a fairly precise schedule at work (e.g., coffee at 9:00, lunch at 12:00).

*Factor 5 (Please transcribe Factor 3 label here)* \_\_\_\_\_

- 0.65 I am able to get the time of executives in the company in order to communicate my ideas.
- 0.60 I think at a conceptual level; I let others worry about the details and specifics of projects.
- 0.55 I know when to push hard for an idea and when to back off.
- 0.55 I have a big picture perspective; I don't get bogged down by the details of a project.
- 0.50 I'm able to sell ideas to superiors one-on-one.
- 0.50 I know how to use my political connections in the company to make things happen.
- 0.48 I am often able to very accurately anticipate the reactions of others in the organization to my plans.
- 0.43 I know a lot of people in the company and I'm able to ask for their input and commitment when it is needed.

## Second-Order Factor II Cont.: BASED ON FIRST-ORDER FACTORS 3, 5, 6, 8, & 9

*Factor 6 (Please transcribe Factor 6 label here)* \_\_\_\_\_

- 0.58 I always meet my deadlines at work.
- 0.54 I address every task with urgency.
- 0.45 I take action immediately on important projects or initiatives; I never "drag it out" if the item is critical.
- 0.36 When someone asks me for information, I give a quick response, and then follow up.
- 0.35 I'm always looking for ways to do things just a little bit better and a little bit faster.
- 0.45 I tend to work fairly slowly, but consistently.
- 0.42 I sometimes put important items on the back burner for a bit too long.
- 0.38 I am sometimes slow to take action in solving problems; I like to take my time and carefully consider the options first.
- 0.37 I prefer to delay decision making at times, so that I can think through the issues more carefully.

*Factor 8 (Please transcribe Factor 8 label here)* \_\_\_\_\_

- 0.65 I recognize the achievements and accomplishments of others both publicly and privately.
- 0.63 I work to motivate teamwork--cooperation and collaboration among team members.
- 0.62 I am interested in other peoples' ideas and work to support and encourage them.
- 0.58 I usually think of other peoples' needs and priorities before making decisions.
- 0.48 I empower subordinates to take action on their own.
- 0.40 I prefer to work independently, rather than in a team setting.
- 0.27 I try to have a hand in all aspects of a project; I prefer not to delegate responsibilities.
- 0.26 I prefer working on my own.

**Factor 9** (Please transcribe Factor 9 label here) \_\_\_\_\_

- 0.44 I volunteer for task forces and other related activities that allow me to be a change agent.
- 0.42 I enjoy working outside of my own office or department.
- 0.36 I have taken on challenges and responsibilities unrelated to my area of job responsibility.
- 0.26 I am able to thrive when working under conditions of unusually high pressure.
- 0.60 I don't volunteer for "visible" jobs, preferring to remain more in the background.
- 0.52 I typically don't volunteer for extra work projects.
- 0.47 I prefer to work in a fairly stable and unchanging work environment.
- 0.29 I prefer to work within my own department/office.
- 0.29 I stay in one job for a long time, so that I become an expert in that one area.

## PART C: PROTOTYPICALITY RATINGS

In this last section, your task is to examine each factor of championship and rate the extent to which it is a prototype--a central component--of the champion role. Since the notion of prototypicality is central, here's what we mean by prototype. Take the word *bird* as an example. Imagine a true bird. You may have an image of a robin, an eagle, or a seagull. Now imagine a bird that is less typical--perhaps a penguin. Although you could still call the penguin a bird, it is not as good an example of a bird as a robin or seagull, for example. In short, some birds are more bird-like than others.

In Part C, please judge how good an example of a category various instances of the category are. The category is THE CHAMPION. Your task is to rate how good an example of the category of champion each factor is on a 7-point scale. A "7" means that you feel the dimension is a very good example of your idea of championship; a "1" means that you feel the factor fits very poorly with your idea of championship (or is unrelated to championship). A "4" means you feel that dimension fits moderately well. Use the other numbers of the 7-point scale to indicate intermediate judgments.

Transcribe your factor labels onto this page and then make your prototypicality ratings, by circling the appropriate number next to that factor.

<b>Very Unprototypic</b> <b>Is a Poor Example of</b> <b>Championship</b> <b>1                      2</b>	<b>Moderately Prototypic</b> <b>Is A Moderately Good</b> <b>Example of Championship</b> <b>3                      4                      5</b>	<b>Very Prototypic</b> <b>Is a Very Good Example</b> <b>of Championship</b> <b>6                      7</b>
<i>Factor 1 label:</i> _____	1   2   3   4   5   6   7	
<i>Factor 2 label:</i> _____	1   2   3   4   5   6   7	
<i>Factor 3 label:</i> _____	1   2   3   4   5   6   7	
<i>Factor 4 label:</i> _____	1   2   3   4   5   6   7	
<i>Factor 5 label:</i> _____	1   2   3   4   5   6   7	
<i>Factor 6 label:</i> _____	1   2   3   4   5   6   7	
<i>Factor 7 label:</i> _____	1   2   3   4   5   6   7	
<i>Factor 8 label:</i> _____	1   2   3   4   5   6   7	
<i>Factor 9 label:</i> _____	1   2   3   4   5   6   7	
<i>Factor 10 label:</i> _____	1   2   3   4   5   6   7	
<i>Second-Order</i>		
<i>Factor I label:</i> _____	1   2   3   4   5   6   7	
<i>Second-Order</i>		
<i>Factor II label:</i> _____	1   2   3   4   5   6   7	

## APPENDIX M

THE 5-ITEM AND 4-ITEM CRITERION MEASURES OF CHAMPIONSHIP

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5-items obtained from supervisory-report data:

The manager I'm rating.....

- Generates a number of new ideas of his/her own.
  - Adapts or builds on the ideas of others in the organization.
  - Introduces and promotes new ideas in the company.
  - Works aggressively to sell and champion new ideas in the company.
  - Takes new ideas for an innovation (an idea s/he may or may not have generated) and introduces, pushes, promotes, and sells ideas to others in the organization.
- 

4-items obtained from self-report data:

I have.....

- generated new ideas on my own.
- adapted or built on the ideas of others in the company.\*
- introduced and promoted new ideas in the company.
- worked to sell and champion new ideas in the company.

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\* This item had zero variance and, therefore, was not included in the self-report criterion measure of championship.

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## APPENDIX N

## THE SCORING FORM FOR THE BIOGRAPHICAL INFORMATION FORM

## Guidelines for Coding the Open-Ended Biodata Form

## Education

1. How far did you go in school or in some form of post-high school education, such as technical school, college, or university?
  - 1 = High School Graduation
  - 2 = Some University/College Technical School
  - 3 = University Bachelor's Degree
  - 4 = Post-Graduate Training
  
2. What degrees or diplomas have you obtained?
  - 0 = No degrees/diplomas (check 1 for clarification, if necessary)
  - 1 = 1 degree/diploma
  - 2 = 2 degrees/diplomas
  - 3 = 3 degrees/diplomas
  - n = n degrees/diplomas
  
3. If you obtained some form of post-high school education, what area or areas did you specialize in?
  - 0 = No area mentioned/have not completed
  - 1 = Business and Commerce
  - 2 = Not Business/Commerce related (e.g., technical training, B Eng., RN, Psychology)
  - 3 = Both 1 and 2
  
4. Comment on the strengths of your educational background in relation to your career.
  - 0 = None mentioned
  - 1 = Those mentioning business education courses as helpful in career (accounting, business, finance)
  - 2 = Those mentioning technical/professional programs as helpful in career
  - 3 = Those mentioning both business and technical programs as helpful in career
  - 4 = Those mentioning other types of programs as helpful in career

5. Comment on the weaknesses of your educational background in relation to your career.

- 0 = no weaknesses mentioned or no effect
- 1 = lacking in technical/practical skills (e.g., computers, writing)
- 2 = lacking in business training (e.g., finance, accounting, marketing, business mgt., sales)
- 3 = lacking in education in general (e.g., need a degree for advancement) or current knowledge is out of date
- 4 = education too theoretical and didn't prepare for real life/business

Career

6. What is your own approach to supervision, i.e., your management style?

- 0 = Don't know/no answer given
- 1 = Depends on the subordinate
- 2 = Collaborative/Participative/Teamwork approach
  - \*empower, trust others
  - \*person focused; considerate; involve others;
  - \*power is decentralized
- 3 = Setting Expectations/goals and tracking performance
  - \*task and performance focussed
  - \*clear communication of objectives/expectations
  - \*lead by example; show the way
  - \*power is centralized; willing to make decisions
  - \*provide direction; clear guidance (coach)

7. What type of tasks or assignments bring out the best in you? Why?

- 0 = None mentioned
- 1 = Innovativeness/creativity
- 2 = Influence and Change making
  - \*leadership
- 3 = Planning, organizing, and controlling
  - \*dealing with details; structuring things; administrative tasks
- 4 = Taking on challenges and responsibilities
  - \*feeling a sense of ownership and investment in your work
- 5 = Analysis/conceptualization
  - \*mental/intellectual stimulation
- 6 = Pragmatic, results oriented, structured, time-bounded tasks
- 7 = People oriented: team work opportunities; working closely with others

8. What type of tasks or assignments bring out the worst in you? Why?

- 0 = None mentioned
- 1 = Work that is routine, repetitive/redundant, and predictable
- 2 = Work with no clear purpose or value; work with no clear definition/non-essential work (e.g., filling out surveys; unnecessary meetings; bureaucracy)
- 3 = Long, drawn out projects/tasks
- 4 = Tasks requiring specialized skills (e.g., math, writing, computers)
- 5 = Tasks requiring interpersonal contact/coordination
- 6 = Tasks with little/no people contact

### Leisure and Social Influences on Life and Career Satisfaction

9. To what social clubs or organizations do you belong?

- 0 = none
- 1 = Business/professional: sales/marketing clubs; professional societies; IRMA, etc
- 2 = Athletic/recreational: skiing, painting, shooting, coaching, fitness clubs, etc
- 3 = Civic/political: Rotary, Kiwanis, Chamber of Commerce, PTA, etc
- 4 = Religious/cultural: church; YMCA
- 5 = Humanitarian/service: Big sisters, Scouts

10. Describe the leisure activities that help you cope with stress

- 0 = none mentioned
- 1 = Reading (business or pleasure); music, movies, TV, radio
- 2 = Participating in sports: working out, golf, tennis, etc.
- 3 = Social activities
- 4 = House and yard work
- 5 = Hobbies; model building, woodworking, cooking, art, painting, crafts
- 6 = Family activity
- 7 = Outdoor recreational activities: camping, fishing, hunting
- 8 = Religion, meditation



11. Your reaction to social situations and how important social activities are to you.

- 0 = Didn't answer; it depends; very vague response
- 1 = Not particularly important
  - \*family more important
  - \*uncomfortable in large groups
  - \*value time to myself
  - \*stay away from larger social gatherings
- 2 = Moderately important
  - \*enjoy small groups, dinner conversation
  - \*enjoy time with people, but time alone also important
  - \*enjoy social situations--some important, others not so important
- 3 = Very important
  - \*fundamental to my weekly life
  - \*highly enjoyable
  - \*very important; chance to meet new people

12. How do your leisure and social activities relate to your career?

- 0 = no answer
- 1 = They don't
- 2 = Leisure activities provide a stress relief
- 3 = Meet people at work with whom I socialize
- 4 = Develop skills, info., contacts in leisure that are useful in business
- 5 = I enjoy/do similar things in my work and leisure

## Self Appraisal

13. What are your most outstanding personal qualities?

- 0 = did not complete
- 1 = Conscientiousness: e.g., reliable, honesty, genuine, hard working, loyal, fair, professional, well organized, good admin. skills
- 2 = Calm stability: calm assured, patient, courage, good under pressure
- 3 = Extraversion--Warmth, Gregariousness: get along well with others, humorous
- 4 = Extraversion--Influence and Assertiveness: can motivate others leadership skills, charming, etc
- 5 = Openness: adaptable, innovative, creative, visionary, risk taker
- 6 = Cognitive/Intellectance: breadth of knowledge, analytical skills, objective, conceptual, good English language skills

14a. What are your shortcomings; your areas for development? (General)

- 1 = Remediable skills/competencies: finance, accounting, writing skills
- 2 = Trait/dispositional: assertiveness

14b. What are your shortcomings; your areas for development? (Specific)

- 0 = None mentioned
- 1 = Need more education
- 2 = Need more work experience (specific or general: supervisory, experience in different departments)
- 3 = Deficient in specific skill area (e.g., writing, computers, budgets)
- 4 = Interpersonal deficiency
- 5 = Conscientiousness
- 6 = Openness/Innovation
- 7 = Neuroticism (e.g., impatience, impulsivity, perfectionistic)

15. What do you consider your major accomplishment in life up to this point?

- 0 = None listed
- 1 = Work-related achievement
- 2 = Family-related achievement
- 3 = Education-related achievement
- 4 = Financial accomplishment
- 5 = Personal achievement (e.g., overcoming adversity)
- 6 = Other achievement/accomplishments

**APPENDIX O****SAMPLE FEEDBACK REPORT FOR THE MANAGEMENT PRACTICES SIMULATION**

**CHAMPIONSHIP PROJECT:  
INDIVIDUAL FEEDBACK  
FOR PARTICIPANTS**

**ASSESSMENT PREPARED FOR:  
Sample**

Date of Report: November 7, 1994

Prepared by:

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Department of Psychology  
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(604) 822-5626

Thank you BC Tel managers!

- As this research project draws to a close, I find that I have many, many people to thank. Close to a thousand managers from a variety of companies in Western Canada have participated at various stages in this study on championship. And the BC Tel managers have been the most consistently supportive sponsors. This feedback report is my way of thanking each of you for taking the time to complete the questionnaire I sent out and, in so doing, helping the company to update their assessment tools and helping a student to graduate. I sincerely appreciate the fact that you put aside the time to complete the *Management Practices Simulation*.

A definition of championship: *The champion is an individual who takes a new idea for either an administrative or technical innovation (an idea s/he may or may not have generated) and introduces, pushes, promotes, and sells the idea to others in the organization.*

- Champions operate as entrepreneurs in the corporate environment. They generate or adapt new ideas and promote their implementation. Champions have been described as innovative, driven to achieve, and committed to their ideas. They are often well connected in the organization (good networkers) and possess the interpersonal skill and political savvy needed to convince others of the importance of their ideas.
- Consultants and academics have acknowledged and discussed the importance of the champion in the implementation of innovation. Without a champion, many new and promising—but risky—ideas are not implemented. Of course, it is also true that champions will implement new products and processes that later fail. Implementation does not equal success.

### The purpose of the research

- The present research was motivated by my desire to develop tools to measure championship. Thus, in an earlier phase of the study, I developed a rating form designed to measure dimensions of championship (e.g., Influence and Political Savvy, Self Promotion, Collaboration and Support). This tool was designed for use as either a top-down or bottom-up appraisal instrument (ratings supplied by either one's direct report(s) or supervisor).
- The questionnaire that you completed recently was designed to measure dimensions of championship as well, with one difference. While taking the questionnaire – called the *Management Practices Simulation* – you were asked to imagine yourself in a variety of situations and indicate how you *would* react. Thus, this tool was designed to be used as a selection instrument, administered to applicants in order to measure their *potential* for championship if hired. Naturally, it is important to validate such a tool; and one of the objectives of the present research was to do just that.

## Understanding your results

- The feedback that you will find on the next few pages is based on the *Management Practices Simulation* that you completed. You will notice that this feedback is structured around 10 dimensions of championship. The solid bold horizontal line indicates the range within which the majority (95%) of other managers' scores fall on that dimension. The pointer *below* this line indicates the average score for the BC Tel management group. Your score is indicated by the pointer *above* the line.
- Recall that when you completed the questionnaire, you were presented with 9 scenarios and asked to consider how you would react. For each scenario you were presented with a list of different ways of reacting and you were instructed to indicate, for each, how likely it would be that you would behave in this way. You used a 4-point scale to respond, anchored by scale points ranging from 1 = "I Would Definitely Not Do This" to 4 = "I Would Definitely Do This".
- You'll notice that your scores in this feedback package are presented on this same four-point scale. So, if you receive a score of 3.5, for example, on the Collaboration and Support scale, this is a fairly high score and it indicates that, when responding to the various scenarios, you were fairly certain that you would behave in ways that would involve you supporting and collaborating with others.

## What are these dimensions of championship and where did they come from?

- As noted above, your scores on the following pages are reported for 10 dimensions of championship. These dimensions were uncovered as a result of research with well over 600 managers from a variety of different companies in Western Canada. Each dimension measures one key component of championship and, taken together, they measure overall championship. Each dimension represents a class of behaviors that belong together. For example, your score on Collaboration and Support is made up of your responses to a number of statements relating to your attitudes about working collaboratively and supportively with others. Thus, your scores on these dimensions are the result of a consistent pattern of responding....they're not based on just one or two (or even five or six) of your answers.

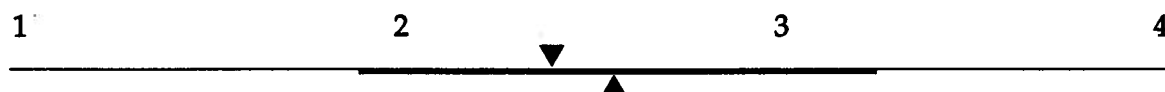
## Be cautious in interpreting your results

- First warning: I'm in the process of *developing* an instrument. Thus, the questionnaire you completed is new and, therefore, relatively untested. As a result, you should view your results with caution and understand your scores as estimates that contain error.
- Second warning: As you well know there is no one ideal management profile! It's not necessarily good or bad to be profiled as high or low on the dimensions of championship. Much depends on the culture of the company—the kinds of behaviors that are rewarded and seen as desirable.

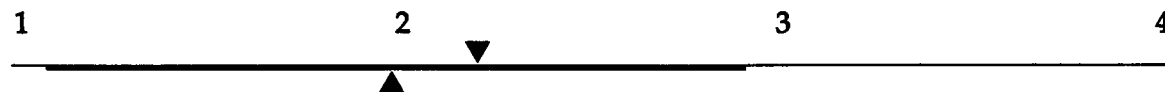
- Socially persuasive; able to sell ideas; knows how to develop & use connections.**



- Deals directly with conflict; confronts others directly regarding areas needing development.**



- Intuitive and spontaneous;  
unsystematic and unmethodical;  
avoids record keeping; dislikes  
detail and routine.**



4. **Driven Commitment:** A measure of job commitment and involvement; measures your drive to achieve and degree of energy, focus, and task orientation.

Doesn't typically work overtime; expends minimal energy at work; relaxed and unhurried approach.

Committed and job involved; goes after tasks with time urgency and focus; makes personal sacrifices; dedicated.



5. **Rule Challenging:** A measure of one's inclination toward challenging rules and procedures and those in positions of authority.

Accepting of authority and rules; follows policies and procedures; does not take risks.

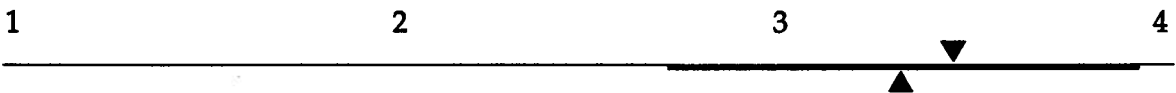
Questions authority; goes around obstacles; rebels and challenges standard practice; persists with ideas even when told to stop.



6. **Action Orientation:** A measure of decisiveness and responsiveness, and drive to accomplish and meet goals.

Reflective and thoughtful; slow to take action; may procrastinate; puts items on the "back burner".

Decisive and proactive; strives to meet and beat deadlines; deals with issues immediately; attacks projects with a sense of urgency.





**7. Self Promotion:** A measure of one's need for publicity and recognition.

Doesn't seek out attention; prefers to stay in the background; is modest, even self deprecating.

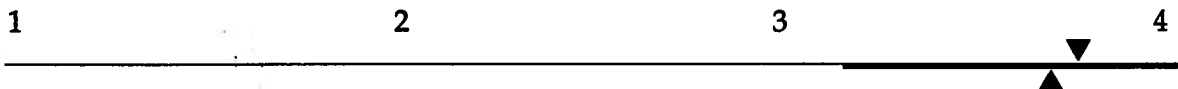
Enjoys recognition; publicizes successes; chooses high-profile projects; orchestrates situations so that needs for success are met.



**8. Collaboration and Support:** A measure of one's tendency to work as a member of a team rather than on one's own; taps into aspects of support, coaching, empowerment and encouragement.

Prefers to work independently; resists delegation; tries to have a hand in all aspects of a project; does not place priority on meeting others' needs

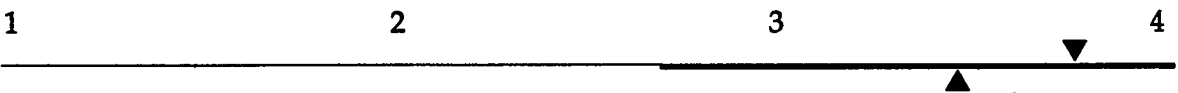
Supports and encourages others; works to foster a team culture; empowers others to take action; considers the people side of business.



**9. Visibility and Growth Seeking:** A measure of one's tendency to seek out new opportunities for professional growth and development.

Prefers predictability and structure to change and uncertainty; resists risks and change; prefers to remain in the background.

Adapts quickly to change; seeks out growth opportunities; shows initiative in planning own career development; enjoys the role of a change agent.



**10. Persistent Dominance:** A measure of one's tendency to speak his/her mind regardless of how others might be effected; measures persistence, forcefulness, and assertiveness.

Listens more than talks when around other people; does not voice one's own opinions; takes a passive role; accommodates to others.

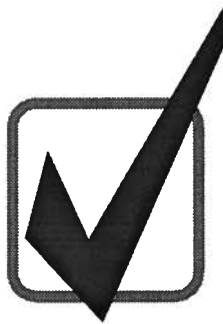
Monopolizes discussions; forcefully presents ideas; persists in arguing points; reacts stubbornly and resists criticism.



**Overall Championship:** An average of scores on the 10 championship dimensions.

The Champion is an individual who takes a new idea (an idea s/he may or may not have generated) and introduces, pushes, promotes, and sells the idea to others in the organization.



**APPENDIX P****FORM B OF THE MANAGEMENT PRACTICES SIMULATION USED TO OBTAIN  
THE ITEM SOCIAL DESIRABILITY MEANS****Management Practices Simulation****Form B: Social Desirability Ratings****Your Name:**

## INSTRUCTIONS

This simulation contains descriptions of situations that managers often find themselves in at work. You will be asked to make a series of judgments about how desirable you think it is to react in various ways in these situations. Begin by reading the situation and then read and rate each of the statements that follow using the nine-point scale shown below.

Your job is to judge whether each statement reflects a generally desirable or undesirable activity as performed by Kelly Davidson, a manager who works for a large company in North America. For each statement, circle the number corresponding to your choice right in this rating booklet.

Please read the following example before you begin.

DESIRABLE					UNDESIRABLE			
Extreme	Strong	Moderate	Mild	Neutral	Mild	Moderate	Strong	Extreme
1	2	3	4	5	6	7	8	9

Kelly Davidson has an idea about how to speed up customer service; however, it would involve making changes to the existing procedure: how orders are received and tracked. Kelly doesn't know whether or not the idea will work or how others in the company will react to it. Kelly has not yet talked to anyone, except her/his closest colleague at work. If Kelly promotes the idea and it bombs, his/her career will be damaged. If s/he does nothing, someone else might steal the spot light.

Please use the nine-point scale to indicate whether each statement below represents a generally desirable or undesirable response to the present situation if done by Kelly Davidson.

- |   |   |   |   |   |   |   |   |   |     |  |
|---|---|---|---|---|---|---|---|---|-----|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (a) | meet with key people one-on-one to discuss his/her idea.                                   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (b) | talk to the customers to find out if they would see the change as a big improvement.       |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (c) | encourage his/her colleague to "test the waters" in the company.                           |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (d) | be cautious; s/he would want to collect more information before doing something.           |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (e) | drop the idea; s/he wouldn't jeopardize his/her career over something that might not work. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (f) | stay in the background and let someone else present the idea.                              |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (g) | tell his/her colleague not to tell anyone else about his/her idea.                         |
-

If, in the example, you felt that it would be an extremely desirable thing for Kelly to meet with key people one-on-one to discuss the idea and encourage his/her colleague to "test the waters", you would circle the number "1" next to statements (a) and (c). If you thought that it would be a moderately desirable thing for Kelly to talk to the customers and be cautious and collect more information, then you would circle the number "3" next to statements (b) and (d). If you thought that it would be a mildly undesirable thing for Kelly to tell his colleague to keep quiet, then you would circle the number "6" next to statement (g). Finally, if you felt that it would be an extremely undesirable thing for Kelly to drop the idea and stay in the background, then you would circle the number "9" next to statements (e) and (f).

Please remember to rate all statements following each of the nine situations.....

<b>END OF INSTRUCTIONS: PLEASE TURN THE PAGE AND BEGIN</b>
--

DESIRABLE					UNDESIRABLE			
Extreme	Strong	Moderate	Mild	Neutral	Mild	Moderate	Strong	Extreme
1	2	3	4	5	6	7	8	9

1. A meeting has been called, involving a number of people that Kelly Davidson works with: peers, subordinates, and his/her boss. The purpose of the meeting is to discuss issues that have come up in connection with the proposed implementation of a new performance tracking system. The discussion becomes heated as some of the people in attendance argue that more time is needed for study, others claim that the proposed system does not represent an improvement over the existing one, while others believe that enough time has been wasted in discussing the system.

Please use the nine-point scale below to indicate whether each statement represents a generally desirable or undesirable activity if done by Kelly Davidson in response to the present situation.

Kelly Davidson would.....

- |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (a) push hard for his/her ideas, but know when to back off.                                      |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (b) try to draw the others to his/her own input and ideas.                                       |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (c) do his/her best to accommodate other peoples' wishes in order to keep them happy.            |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (d) disrupt the discussion if s/he disagreed with what was being said.                           |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (e) not persist in arguing his/her points.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (f) disregard the issues being raised in the meeting, and, instead, talk about his/her concerns. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (g) speak his/her mind, regardless of who is in attendance at the meeting.                       |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (h) avoid conflict and confrontation.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (i) plan to work on his/her own in the future.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (j) not speak up at the meeting.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (k) bend the truth slightly in order to get his/her way.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (l) tell others, in a direct and forceful manner, what should be done.                           |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (m) lead others into a confrontation.  |

DESIRABLE					UNDESIRABLE			
Extreme	Strong	Moderate	Mild	Neutral	Mild	Moderate	Strong	Extreme
1	2	3	4	5	6	7	8	9

2. Kelly Davidson is a manager working in the Information Systems division of a large utilities company. Kelly is working with a project team to implement a new process that s/he believes will increase the productivity of sales staff. Kelly's group has made a number of presentations to all levels of management; their ideas are well known and most (but not all) people have reacted positively to their presentations. They're having trouble getting a firm commitment from the decision makers. The team has been told to back off and wait; to put the project on hold. Kelly's boss is worried that s/he and the other team members are developing reputations as troublemakers.

Please use the nine-point scale below to indicate whether each statement represents a generally desirable or undesirable activity if done by Kelly Davidson in response to the present situation.

Kelly Davidson would.....

- |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (a) avoid conflict and, instead, work to smooth out disagreements and reach consensus on a plan of action.                                       |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (b) use his/her political connections in the company to make things happen.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (c) not overpower people with his/her ideas.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (d) continue to ask for other peoples' input and commitment.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (e) keep pushing the idea and dominate others with his/her opinions and visions if s/he wished to convince them to accept his/her point of view. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (f) follow closely the corporate expectations (or rules).  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (g) react stubbornly and resist, even in the face of legitimate criticism.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (h) follow instructions given to him/her very accurately.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (i) continue to start early and work late if s/he were emotionally involved in the project.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (j) challenge the way things are decided and done at work; s/he would enjoy "rocking the boat".  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (k) not expend a lot of energy in pursuing things.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (l) take action without first seeking approval; s/he would get forgiveness later.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (m) push ahead and take action--implement--despite what his/her boss says.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (n) refer to company policies and procedures to define and support his/her work behavior.  |

DESIRABLE					UNDESIRABLE			
Extreme	Strong	Moderate	Mild	Neutral	Mild	Moderate	Strong	Extreme
1	2	3	4	5	6	7	8	9

3. Kelly Davidson is a middle manager working for a large "high-tech" Canadian organization. S/he has just heard of a bright new product idea coming out of the Research & Development division in the company. Kelly believes that it has great market potential, but it's a bit of a long shot since the product would represent a significant departure from the company's traditional line. In addition, the company's manufacturing equipment would have to be changed in order to produce this product, resulting in additional start-up costs.

Please use the nine-point scale below to indicate whether each statement represents a generally desirable or undesirable activity if done by Kelly Davidson in response to the present situation.

Kelly Davidson would.....

- |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (a) sell the idea to superiors one-on-one.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (b) not use a strategy of intimidation in order to get his/her way.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (c) conform to company expectations about how new ideas should be introduced and discussed.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (d) take action immediately; s/he would not delay getting the idea out to others if s/he thought it was a good one.                                  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (e) deliver presentations that influence and persuade others.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (f) not take risks with company time, people, and money.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (g) persist in voicing his/her opinion over and over again, even if his/her ideas were rejected.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (h) not exploit political connections in the company in order to promote the idea.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (i) ignore authority in formulating a plan in connection with the idea.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (j) get the time of executives in the company in order to communicate the new product idea.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (k) persist in pursuing the idea even if explicitly directed to stop.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (l) not volunteer to be involved if it meant extra work.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (m) follow through with the idea; after s/he has spent time pondering and considering something, s/he won't leave it alone until some action begins. |



DESIRABLE					UNDESIRABLE			
Extreme	Strong	Moderate	Mild	Neutral	Mild	Moderate	Strong	Extreme
1	2	3	4	5	6	7	8	9

4. A consultant was hired by the executive to examine how Kelly Davidson's department at work is structured. The consultant reported a number of inefficiencies which, if remedied, would result in a much smoother operation. For example, some job responsibilities overlap, while some necessary tasks are not covered in any job description. The consultant made a number of recommendations. Four people (Kelly is one of the four) from the department have been made jointly responsible for sifting through the recommendations and formulating a plan for implementation. Kelly agrees with some of their findings but, as an insider, can also see where they missed the mark with other ideas.

Please use the nine-point scale below to indicate whether each statement represents a generally desirable or undesirable activity if done by Kelly Davidson in response to the present situation.

Kelly Davidson would.....

- |   |   |   |   |   |   |   |   |   |     |  |
|---|---|---|---|---|---|---|---|---|-----|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (a) | try to anticipate the reactions of others in the organization to the consultant's recommendations and formulate plans accordingly. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (b) | keep very good records, documenting all events and activities.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (c) | work only with others from his/her immediate work group.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (d) | monopolize the discussion of issues.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (e) | approach his/her responsibilities in a methodical, orderly manner, carefully considering and taking action on one issue at a time. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (f) | react impatiently when dealing with the more tedious tasks.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (g) | try to have a hand in all aspects of the project, preferring not to share or delegate responsibilities.                            |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (h) | bypass management levels in working toward goals.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (i) | orchestrate situations (e.g., meetings, one-on-one conversations) so that others listen to his/her ideas.                          |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (j) | become impatient with trivial details connected with his/her involvement in the project.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (k) | work independently, rather than with the team.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (l) | not take the time and effort to document all plans and ideas.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (m) | not take a visible role in the project, preferring to remain more in the background.   |

DESIRABLE					UNDESIRABLE			
Extreme	Strong	Moderate	Mild	Neutral	Mild	Moderate	Strong	Extreme
1	2	3	4	5	6	7	8	9

5. Kelly Davidson has just recently begun to work with a group of people from various areas in the company who are each experts in their own field. Some are researchers and scientists, some are specialists in production, while others are very knowledgeable about the marketplace. As the project leader, and as the individual who originally came up with the idea driving the team, Kelly must find a way to utilize the various expertise available in the best, most efficient way possible. The team has a deadline of one year, at which time they must either outline a feasible plan for implementation or drop the project altogether.

Please use the nine-point scale below to indicate whether each statement represents a generally desirable or undesirable activity if done by Kelly Davidson in response to the present situation.

Kelly Davidson would.....

- |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (a) adopt a big picture perspective; s/he would not get bogged down by the details of the project.               |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (b) listen to others more than talk.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (c) think at a conceptual level and lets others worry about details and specifics.                               |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (d) always find him/herself doing something and have little free time.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (e) carefully plan and organize activities.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (f) argue if s/he disagreed with the others' ideas.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (g) recognize the achievements and accomplishments of the project team members as they work towards their goals. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (h) listen carefully when others debate, but not participate.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (i) work to motivate teamwork--cooperation and collaboration among the project members.                          |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (j) be very direct in expressing what s/he wants; s/he wouldn't "beat around the bush".                          |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (k) work slowly, but consistently.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (l) be considerate of the other peoples' well being.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (m) delay decision making in order to think through issues carefully.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (n) risk disappointing others in order to get his/her own ideas across.  |

DESIRABLE					UNDESIRABLE			
Extreme	Strong	Moderate	Mild	Neutral	Mild	Moderate	Strong	Extreme
1	2	3	4	5	6	7	8	9

6. A deadline is rapidly approaching for implementation of a new product that Kelly Davidson and a number of team members have been developing over the past several months at work. All the "bugs" haven't quite been worked out yet, but Kelly feels that the team is getting close to being able to deliver a product. It is important that the product be delivered on time, but it is also crucial that it not be introduced before the team is satisfied that it is ready. Significant problems at the implementation stage could result in the product being "shelved", while if Kelly's team fails to meet the deadline the company will lose their window of opportunity.

Please use the nine-point scale below to indicate whether each statement represents a generally desirable or undesirable activity if done by Kelly Davidson in response to the present situation.

Kelly Davidson would.....

- |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (a) work pretty irregular hours in order to meet his/her commitments.                               |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (b) go around company rules or procedures that got in his/her way.                                  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (c) take tight control of the project and very closely monitor the progress of the team members.    |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (d) be sure to meet deadlines.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (e) hold others accountable for delivering what they had promised.                                  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (f) be patient while completing the more tedious tasks.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (g) empower others to take action on their own.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (h) show interest in other peoples' ideas and work to support and encourage them.                   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (i) not compromise his/her integrity just to meet the deadline.                                     |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (j) recognize and use the talents of the various team members.                                      |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (k) pay close attention to the details of what s/he was doing.                                      |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (l) talk down to those who are not up to speed or operating at a highly competent level.            |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (m) thrive when working under conditions of such high pressure.                                     |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (n) continue to work fairly regular hours: starting work at around 8 and leaving pretty close to 4. |

DESIRABLE					UNDESIRABLE			
Extreme	Strong	Moderate	Mild	Neutral	Mild	Moderate	Strong	Extreme
1	2	3	4	5	6	7	8	9

7. Kelly Davidson is beginning to work with a project team to look into the viability of developing an information system (to track expenditures) that would benefit the company. Kelly has taken on a role in this project in addition to his/her regular responsibilities. Kelly has discovered that s/he is over-committed, but it's getting a bit too late to back out now. S/he possesses knowledge that would greatly aid the project team. It is unclear, at this point, how viable this new system might be. As a result, support for the project is not unanimous among the senior management group.

Please use the nine-point scale below to indicate whether each statement represents a generally desirable or undesirable activity if done by Kelly Davidson in response to the present situation.

Kelly Davidson would.....

- |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (a) not take the time to document things.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (b) continue to follow a fairly routine schedule at work (e.g., coffee at 9:00, lunch at 12:00).  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (c) tend to wing it; improvise on the spot.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (d) become consumed by the challenges of the new project, to the point where s/he might neglect some of his/her other responsibilities. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (e) plan all his/her actions well in advance.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (f) be so busy that s/he would have too little time to accomplish his/her regular work.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (g) show up late for meetings and appointments if s/he had other, more pressing, matters to attend to.                                  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (h) not work overtime.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (i) be very careful to keep all of his/her time commitments.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (j) give quick answers to people's comments and requests for information, and then follow up later.                                     |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (k) do what is correct and accepted in the company.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (l) work to ensure that his/her many involvements and accomplishments in the company were known to others.                              |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (m) put some important items on the back burner for a bit too long.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (n) think of others' needs and priorities in deciding what to do.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (o) adapt quickly to changing situations and demands on his/her time.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (p) be very punctual, arriving at meetings and other work obligations right on time.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (q) have difficulty adjusting, preferring to work in a fairly stable and unchanging work environment.                                   |

DESIRABLE					UNDESIRABLE			
Extreme	Strong	Moderate	Mild	Neutral	Mild	Moderate	Strong	Extreme
1	2	3	4	5	6	7	8	9

8. Kelly Davidson has been successful in getting the backing of senior management for the development of a new product. Kelly and his/her project team have been assigned separate office and warehouse space and Kelly has been put in charge of managing roughly 3 dozen people working in various production, clerical, and marketing capacities. This project represents a significant investment for the company. Lately, the project has experienced a number of setbacks and delays and those who were originally supportive are telling Kelly to make it work fast, or the plug will be pulled. Kelly feels that the problems stem from team productivity problems.

Please use the nine-point scale below to indicate whether each statement represents a generally desirable or undesirable activity if done by Kelly Davidson in response to the present situation.

Kelly Davidson would.....

- |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (a) sell the importance of the project to subordinates and get their commitment.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (b) make personal sacrifices if dedicated to the project.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (c) give people a second chance, rather than confront them on issues right away.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (d) question and challenge all processes and procedures currently in place in order to fix the productivity problems.    |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (e) address every task with urgency.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (f) be somewhat slow to take action in solving the problem; s/he would want to carefully consider his/her options first. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (g) look for ways to do things just a little bit better and a little bit faster.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (h) tell people that there was a problem if s/he thought they were incompetent.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (i) weed out those who were not productive.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (j) approach all issues in connection with the project in a very systematic, analytical, and disciplined manner.         |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (k) be willing to deal with difficult decisions, such as redundant employees.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (l) find areas of compromise and accommodation to keep those working on the project happy.                               |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (m) support the people involved to get the best out of them.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (n) become impatient if others weren't working up to his/her own high standards.   |

DESIRABLE					UNDESIRABLE			
Extreme	Strong	Moderate	Mild	Neutral	Mild	Moderate	Strong	Extreme
1	2	3	4	5	6	7	8	9

9. Kelly Davidson is a middle manager employed by a large manufacturing company. S/he has just spent the last two years pursuing the development of a new customer-service system that failed. It was a good idea, a useful innovation, but others in the company weren't enthusiastic and lobbied against implementation. Kelly now finds him/herself in a transition period in the company as her/his involvement in the now-defunct project winds down.

Please use the nine-point scale below to indicate whether each statement represents a generally desirable or undesirable activity if done by Kelly Davidson in response to the present situation.

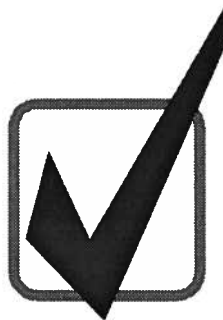
Kelly Davidson would.....

- |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (a) promote new ideas that have high visibility and are likely to lead to success.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (b) meet new people, but be rather uncomfortable.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (c) make sure to rub shoulders with powerful individuals in other departments and business units in the company.                             |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (d) lay low for a while and tell him/herself that it's not important that his/her accomplishments and achievements are known in the company. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (e) volunteer for task forces and other related activities that would allow him/her to be a change agent.                                    |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (f) accept a new low-profile project; s/he doesn't need public recognition for what s/he does.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (g) take on challenges and responsibilities unrelated to his/her area of job responsibility.   |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (h) not seek out attention from others.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (i) seek out opportunities to work outside of his/her own office or department.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (j) move out into unknown business opportunities; s/he would be comfortable taking risks at work.  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (k) return to his/her old job and stay in that one job so that s/he became an expert in that one area.                                       |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (l) seek out opportunities to do new things, with new people, in new environments.   |

**APPENDIX Q**  
**THE MANAGEMENT PRACTICES SIMULATION**

**Management Practices Simulation**

**A Situational Exercise**



**Your Name:**

## INSTRUCTIONS

This simulation contains descriptions of situations you might find yourself in at work. You will be asked to act *as if* you were a *manager* in that situation and to indicate what you *would* do. Begin by reading the situation and think about how you would handle it. Then, read and rate *each* statement that follows according to the 4-point rating scale displayed at the top of the page. Before beginning the simulation, please read and complete the following example.

---

### EXAMPLE:

- 1 = *I Would Definitely Not Do This*  
 2 = *I Probably Would Not Do This, But I Might*  
 3 = *I Probably Would Do This, But I Might Not*  
 4 = *I Would Definitely Do This*

You have an idea about how to speed up customer service; however, it would involve making changes to the existing procedure: how orders are received and tracked. You don't know whether or not the idea will work or how others in the company will react to it. You have not yet talked to anyone, except your closest colleague at work. If you promote your idea and it bombs, your career will be damaged. If you do nothing, someone else might steal the spot light. Imagine yourself in such a situation and indicate, for each of the 7 statements below, how likely it is that you would do each of the following:

I would.....

- |   |   |   |   |     |  |
|---|---|---|---|-----|--|
| 1 | 2 | 3 | 4 | (a) | meet with key people one-on-one to discuss my idea.                                  |
| 1 | 2 | 3 | 4 | (b) | talk to our customers to find out if they would see the change as a big improvement. |
| 1 | 2 | 3 | 4 | (c) | encourage my colleague to "test the waters" in the company.                          |
| 1 | 2 | 3 | 4 | (d) | be cautious; I would want to collect more information before doing something.        |
| 1 | 2 | 3 | 4 | (e) | drop the idea; I wouldn't jeopardize my career over something that might not work.   |
| 1 | 2 | 3 | 4 | (f) | stay in the background and let someone else present the idea.                        |
| 1 | 2 | 3 | 4 | (g) | tell my colleague not to tell anyone else about my idea.                             |
- 

If, in the example above, you felt that you *would definitely* meet with key people one-on-one to discuss the idea and encourage your colleague to "test the waters", you would circle the number "4" next to statements (a) and (c). If you thought that you *would probably* talk to the customers and be cautious and collect more information, then you would circle the number "3" next to statements (b) and (d). If you thought that you *would probably not* tell your



colleague to keep quiet, then you would circle the number "2" next to statement (g). Finally, if you felt that you *would definitely not* drop the idea, and *would definitely not* stay in the background, then you would circle the number "1" next to statements (e) and (f).

We realize that there may be other, perhaps more effective, ways of dealing with the situations in this simulation. For the purposes of this exercise, however, please limit yourself to the statements given.

Please remember to respond to all statements following each of the nine situations.....

<b>END OF INSTRUCTIONS: PLEASE TURN THE PAGE AND BEGIN</b>
--

<b>I Would Definitely Not Do This</b>	<b>I Probably Would Not Do This, But I Might</b>	<b>I Probably Would Do This, But I Might Not</b>	<b>I Would Definitely Do This</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

1. A meeting has been called, involving a number of people you work with: peers, subordinates, and your boss. The purpose of the meeting is to discuss issues that have come up in connection with the proposed implementation of a new performance tracking system. The discussion becomes heated as some of the people in attendance argue that more time is needed for study, others claim that the proposed system does not represent an improvement over the existing one, while others believe that enough time has been wasted in discussing the system.

Imagine yourself in such a situation and indicate, for each of the 13 statements below, how likely it is that you would do each of the following:

I would.....

- |   |   |   |   |     |   |
|---|---|---|---|-----|---|
| 1 | 2 | 3 | 4 | (a) | push hard for my ideas, but know when to back off.                                      |
| 1 | 2 | 3 | 4 | (b) | try to draw the others to my own input and ideas.                                       |
| 1 | 2 | 3 | 4 | (c) | do my best to accommodate other peoples' wishes in order to keep them happy.            |
| 1 | 2 | 3 | 4 | (d) | disrupt the discussion if I disagreed with what was being said.                         |
| 1 | 2 | 3 | 4 | (e) | not persist in arguing my points.   |
| 1 | 2 | 3 | 4 | (f) | disregard the issues being raised in the meeting, and, instead, talk about my concerns. |
| 1 | 2 | 3 | 4 | (g) | speak my mind, regardless of who was in attendance at the meeting.                      |
| 1 | 2 | 3 | 4 | (h) | avoid conflict and confrontation.   |
| 1 | 2 | 3 | 4 | (i) | plan to work on my own in the future.   |
| 1 | 2 | 3 | 4 | (j) | not speak up at the meeting.  |
| 1 | 2 | 3 | 4 | (k) | bend the truth slightly in order to get my way.   |
| 1 | 2 | 3 | 4 | (l) | tell others, in a direct and forceful manner, what should be done.                      |
| 1 | 2 | 3 | 4 | (m) | lead others into a confrontation.   |

<b>I Would Definitely Not Do This</b>	<b>I Probably Would Not Do This, But I Might</b>	<b>I Probably Would Do This, But I Might Not</b>	<b>I Would Definitely Do This</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

2. You are a manager working in the Information Systems division of a large utilities company. You are working with a project team to implement a new process that you believe will increase the productivity of sales staff. Your group has made a number of presentations to all levels of management; your ideas are well known and most (but not all) people have reacted positively to your presentations. You're having trouble getting a firm commitment from the decision makers. Your team has been told to back off and wait; to put the project on hold. Your boss is worried that yourself and the other team members are developing reputations as troublemakers.

Imagine yourself in such a situation and indicate, for each of the 14 statements below, how likely it is that you would do each of the following:

I would.....

- |   |   |   |   |   |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | (a) avoid conflict and, instead, work to smooth out disagreements and reach consensus on a plan of action.                          |
| 1 | 2 | 3 | 4 | (b) use my political connections in the company to make things happen.  |
| 1 | 2 | 3 | 4 | (c) not overpower people with my ideas.   |
| 1 | 2 | 3 | 4 | (d) continue to ask for other peoples' input and commitment.  |
| 1 | 2 | 3 | 4 | (e) keep pushing the idea and dominate others with my opinions and visions if I wished to convince them to accept my point of view. |
| 1 | 2 | 3 | 4 | (f) follow closely the corporate expectations (or rules).   |
| 1 | 2 | 3 | 4 | (g) react stubbornly and resist, even in the face of legitimate criticism.  |
| 1 | 2 | 3 | 4 | (h) follow instructions given to me very accurately.  |
| 1 | 2 | 3 | 4 | (i) continue to start early and work late if I were emotionally involved in the project.  |
| 1 | 2 | 3 | 4 | (j) challenge the way things are decided and done at work; I would enjoy "rocking the boat".  |
| 1 | 2 | 3 | 4 | (k) not expend a lot of energy in pursuing things.  |
| 1 | 2 | 3 | 4 | (l) take action without first seeking approval; I would get forgiveness later.  |
| 1 | 2 | 3 | 4 | (m) push ahead and take action--implement--despite what my boss said.   |
| 1 | 2 | 3 | 4 | (n) refer to company policies and procedures to define and support my work behavior.  |

<b>I Would Definitely Not Do This</b>	<b>I Probably Would Not Do This, But I Might</b>	<b>I Probably Would Do This, But I Might Not</b>	<b>I Would Definitely Do This</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

3. You're a middle manager working for a large "high-tech" Canadian organization. You've just heard of a bright new product idea coming out of the Research & Development division in the company. You believe that it has great market potential, but it's a bit of a long shot since the product would represent a significant departure from the company's traditional line. In addition, the company's manufacturing equipment would have to be changed in order to produce this product, resulting in additional start-up costs.

Imagine yourself in such a situation and indicate, for each of the 13 statements below, how likely it is that you would do each of the following:

I would.....

- |   |   |   |   |     |   |
|---|---|---|---|-----|---|
| 1 | 2 | 3 | 4 | (a) | sell the idea to superiors one-on-one.  |
| 1 | 2 | 3 | 4 | (b) | not use a strategy of intimidation in order to get my way.  |
| 1 | 2 | 3 | 4 | (c) | conform to company expectations about how new ideas should be introduced and discussed.   |
| 1 | 2 | 3 | 4 | (d) | take action immediately; I would not delay getting the idea out to others if I thought it was a good one.                                   |
| 1 | 2 | 3 | 4 | (e) | deliver presentations that would influence and persuade others.   |
| 1 | 2 | 3 | 4 | (f) | not take risks with company time, people, and money.  |
| 1 | 2 | 3 | 4 | (g) | persist in voicing my opinion over and over again, even if my ideas were rejected.  |
| 1 | 2 | 3 | 4 | (h) | not exploit political connections in the company in order to promote the idea.  |
| 1 | 2 | 3 | 4 | (i) | ignore authority in formulating a plan in connection with the idea.   |
| 1 | 2 | 3 | 4 | (j) | get the time of executives in the company in order to communicate the new product idea.   |
| 1 | 2 | 3 | 4 | (k) | persist in pursuing the idea even if I was explicitly directed to stop.   |
| 1 | 2 | 3 | 4 | (l) | not volunteer to be involved if it meant extra work.  |
| 1 | 2 | 3 | 4 | (m) | follow through with the idea; after I have spent time pondering and considering something, I won't leave it alone until some action begins. |

<b>I Would Definitely Not Do This</b>	<b>I Probably Would Not Do This, But I Might</b>	<b>I Probably Would Do This, But I Might Not</b>	<b>I Would Definitely Do This</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

4. A consultant was hired by the executive to examine how your department at work is structured. S/he reported a number of inefficiencies which, if remedied, would result in a much smoother operation. For example, some job responsibilities overlap, while some necessary tasks are not covered in any job description. The consultant made a number of recommendations. Four of you from the department have been made jointly responsible for sifting through the recommendations and formulating a plan for implementation. You agree with some of their findings but, as an insider, also see where they missed the mark with other ideas.

Imagine yourself in such a situation and indicate, for each of the 13 statements below, how likely it is that you would do each of the following:

I would.....

- |   |   |   |   |     |  |
|---|---|---|---|-----|--|
| 1 | 2 | 3 | 4 | (a) | try to anticipate the reactions of others in the organization to the consultant's recommendations and formulate any plans accordingly. |
| 1 | 2 | 3 | 4 | (b) | keep very good records, documenting all events and activities.   |
| 1 | 2 | 3 | 4 | (c) | work only with others from my immediate work group.  |
| 1 | 2 | 3 | 4 | (d) | monopolize the discussion of issues.   |
| 1 | 2 | 3 | 4 | (e) | approach my responsibilities in a methodical, orderly manner, carefully considering and taking action on one issue at a time.          |
| 1 | 2 | 3 | 4 | (f) | react impatiently when dealing with the more tedious tasks.  |
| 1 | 2 | 3 | 4 | (g) | try to have a hand in all aspects of the project; I prefer not to share or delegate responsibilities.                                  |
| 1 | 2 | 3 | 4 | (h) | bypass management levels in working toward goals.  |
| 1 | 2 | 3 | 4 | (i) | orchestrate situations (e.g., meetings, one-on-one conversations) so that others listened to my ideas.                                 |
| 1 | 2 | 3 | 4 | (j) | become impatient with trivial details connected with my involvement in the project.  |
| 1 | 2 | 3 | 4 | (k) | work independently, rather than with the team.   |
| 1 | 2 | 3 | 4 | (l) | not take the time and effort to document all plans and ideas.  |
| 1 | 2 | 3 | 4 | (m) | not take a visible role in the project; I prefer to remain more in the background.   |

<b>I Would Definitely Not Do This</b>	<b>I Probably Would Not Do This, But I Might</b>	<b>I Probably Would Do This, But I Might Not</b>	<b>I Would Definitely Do This</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

5. You have just recently begun to work with a group of people from various areas in the company who are each experts in their own field. Some are researchers and scientists, some are specialists in production, while others are very knowledgeable about the marketplace. As the project leader, and as the individual who originally came up with the idea driving the team, you must find a way to utilize the various expertise available in the best, most efficient way possible. Your team has a deadline of one year, at which time you must either outline a feasible plan for implementation or drop the project altogether.

Imagine yourself in such a situation and indicate, for each of the 14 statements below, how likely it is that you would do each of the following:

I would.....

- |   |   |   |   |     |  |
|---|---|---|---|-----|--|
| 1 | 2 | 3 | 4 | (a) | adopt a big picture perspective; I wouldn't get bogged down by the details of the project.                   |
| 1 | 2 | 3 | 4 | (b) | listen to others more than talk.   |
| 1 | 2 | 3 | 4 | (c) | think at a conceptual level and let others worry about details and specifics.                                |
| 1 | 2 | 3 | 4 | (d) | always find myself doing something and have little free time.  |
| 1 | 2 | 3 | 4 | (e) | carefully plan and organize activities.  |
| 1 | 2 | 3 | 4 | (f) | argue if I disagreed with the others' ideas.   |
| 1 | 2 | 3 | 4 | (g) | recognize the achievements and accomplishments of the project team members as they work towards their goals. |
| 1 | 2 | 3 | 4 | (h) | listen carefully when others debate, but not participate myself.   |
| 1 | 2 | 3 | 4 | (i) | work to motivate teamwork--cooperation and collaboration among the project members.                          |
| 1 | 2 | 3 | 4 | (j) | be very direct in expressing what I want; I wouldn't "beat around the bush".                                 |
| 1 | 2 | 3 | 4 | (k) | work slowly, but consistently.   |
| 1 | 2 | 3 | 4 | (l) | be considerate of the other peoples' well being.   |
| 1 | 2 | 3 | 4 | (m) | delay decision making in order to think through issues carefully.  |
| 1 | 2 | 3 | 4 | (n) | risk disappointing others in order to get my own ideas across.   |

<b>I Would Definitely Not Do This</b>	<b>I Probably Would Not Do This, But I Might</b>	<b>I Probably Would Do This, But I Might Not</b>	<b>I Would Definitely Do This</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

6. A deadline is rapidly approaching for implementation of a new product that you and a number of team members have been developing over the past several months at work. All the "bugs" haven't quite been worked out yet, but you feel that the team is getting close to being able to deliver a product. It is important that the product be delivered on time, but it is also crucial that it not be introduced before your team is satisfied that it is ready. Significant problems at the implementation stage could result in the product being "shelved", while if you fail to meet the deadline your company will lose their window of opportunity.

Imagine yourself in such a situation and indicate, for each of the 14 statements below, how likely it is that you would do each of the following:

I would.....

- |   |   |   |   |   |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | (a) work pretty irregular hours in order to meet my commitments.                                    |
| 1 | 2 | 3 | 4 | (b) go around company rules or procedures that got in my way.                                       |
| 1 | 2 | 3 | 4 | (c) take tight control of the project and very closely monitor the progress of the team members.    |
| 1 | 2 | 3 | 4 | (d) be sure to meet my deadlines.   |
| 1 | 2 | 3 | 4 | (e) hold others accountable for delivering what they had promised.                                  |
| 1 | 2 | 3 | 4 | (f) be patient while completing the more tedious tasks.   |
| 1 | 2 | 3 | 4 | (g) empower others to take action on their own.   |
| 1 | 2 | 3 | 4 | (h) show interest in other peoples' ideas and work to support and encourage them.                   |
| 1 | 2 | 3 | 4 | (i) not compromise my integrity just to meet the deadline.  |
| 1 | 2 | 3 | 4 | (j) recognize and use the talents of the various team members.                                      |
| 1 | 2 | 3 | 4 | (k) pay close attention to the details of what I was doing.   |
| 1 | 2 | 3 | 4 | (l) talk down to those who are not up to speed or operating at a highly competent level.            |
| 1 | 2 | 3 | 4 | (m) thrive when working under conditions of such high pressure.                                     |
| 1 | 2 | 3 | 4 | (n) continue to work fairly regular hours: starting work at around 8 and leaving pretty close to 4. |

<b>I Would Definitely Not Do This</b>	<b>I Probably Would Not Do This, But I Might</b>	<b>I Probably Would Do This, But I Might Not</b>	<b>I Would Definitely Do This</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

7. You are beginning to work with a project team to look into the viability of developing an information system (to track expenditures) that would benefit the company. You've taken on a role in this project in addition to your regular responsibilities. You've discovered that you're over-committed, but it's getting a bit too late for you to back out now. You possess knowledge that would greatly aid the project team. It is unclear, at this point, how viable this new system might be. As a result, support for the project is not unanimous among the senior management group.

Imagine yourself in such a situation and indicate, for each of the 17 statements below, how likely it is that you would do each of the following:

I would.....

- |   |   |   |   |     |   |
|---|---|---|---|-----|---|
| 1 | 2 | 3 | 4 | (a) | not take the time to document things.   |
| 1 | 2 | 3 | 4 | (b) | continue to follow a fairly routine schedule at work (e.g., coffee at 9:00, lunch at 12:00).                                |
| 1 | 2 | 3 | 4 | (c) | tend to wing it; improvise on the spot.   |
| 1 | 2 | 3 | 4 | (d) | become consumed by the challenges of the new project, to the point where I might neglect some of my other responsibilities. |
| 1 | 2 | 3 | 4 | (e) | plan all my actions well in advance.  |
| 1 | 2 | 3 | 4 | (f) | be so busy that I would have too little time to accomplish my regular work.   |
| 1 | 2 | 3 | 4 | (g) | show up late for meetings and appointments if I had other, more pressing, matters to attend to.                             |
| 1 | 2 | 3 | 4 | (h) | not work overtime.  |
| 1 | 2 | 3 | 4 | (i) | be very careful to keep all of my time commitments.   |
| 1 | 2 | 3 | 4 | (j) | give quick answers to people's comments and requests for information, and then follow up later.                             |
| 1 | 2 | 3 | 4 | (k) | do what is correct and accepted in the company.   |
| 1 | 2 | 3 | 4 | (l) | work to ensure that my many involvements and accomplishments in the company were known to others.                           |
| 1 | 2 | 3 | 4 | (m) | put some important items on the back burner for a bit too long.   |
| 1 | 2 | 3 | 4 | (n) | think of others' needs and priorities in deciding what to do.   |
| 1 | 2 | 3 | 4 | (o) | adapt quickly to changing situations and demands on my time.  |
| 1 | 2 | 3 | 4 | (p) | be very punctual, arriving at meetings and other work obligations right on time.  |
| 1 | 2 | 3 | 4 | (q) | have difficulty adjusting; I prefer to work in a fairly stable and unchanging work environment.                             |



<b>I Would Definitely Not Do This</b>	<b>I Probably Would Not Do This, But I Might</b>	<b>I Probably Would Do This, But I Might Not</b>	<b>I Would Definitely Do This</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

8. You have been successful in getting the backing of senior management for the development of a new product. You and your project team have been assigned separate office and warehouse space and you've been put in charge of managing roughly 3 dozen people working in various production, clerical, and marketing capacities. Your project represents a significant investment for the company. Lately, the project has experienced a number of setbacks and delays and those who were originally supportive are telling you to make it work fast, or the plug will be pulled. You feel that the problems stem from team productivity problems.

Imagine yourself in such a situation and indicate, for each of the 14 statements below, how likely it is that you would do each of the following:

I would.....

- |   |   |   |   |     |   |
|---|---|---|---|-----|---|
| 1 | 2 | 3 | 4 | (a) | sell the importance of the project to subordinates and get their commitment.                                      |
| 1 | 2 | 3 | 4 | (b) | make personal sacrifices if I were dedicated to the project.  |
| 1 | 2 | 3 | 4 | (c) | give people a second chance, rather than confront them on issues right away.                                      |
| 1 | 2 | 3 | 4 | (d) | question and challenge all processes and procedures currently in place in order to fix the productivity problems. |
| 1 | 2 | 3 | 4 | (e) | address every task with urgency.  |
| 1 | 2 | 3 | 4 | (f) | be somewhat slow to take action in solving the problem; I like to carefully consider my options first.            |
| 1 | 2 | 3 | 4 | (g) | look for ways to do things just a little bit better and a little bit faster.                                      |
| 1 | 2 | 3 | 4 | (h) | tell people that there was a problem if I thought they were incompetent.  |
| 1 | 2 | 3 | 4 | (i) | weed out those who were not productive.   |
| 1 | 2 | 3 | 4 | (j) | approach all issues in connection with the project in a very systematic, analytical, and disciplined manner.      |
| 1 | 2 | 3 | 4 | (k) | be willing to deal with difficult decisions, such as redundant employees.   |
| 1 | 2 | 3 | 4 | (l) | find areas of compromise and accommodation to keep those working on the project happy.                            |
| 1 | 2 | 3 | 4 | (m) | support the people involved to get the best out of them.  |
| 1 | 2 | 3 | 4 | (n) | become impatient if others weren't working up to my own high standards.   |

<b>I Would Definitely Not Do This</b>	<b>I Probably Would Not Do This, But I Might</b>	<b>I Probably Would Do This, But I Might Not</b>	<b>I Would Definitely Do This</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

9. You are a middle manager employed by a large manufacturing company. You have just spent the last two years pursuing the development of a new customer-service system that failed. It was a good idea, a useful innovation, but others in the company weren't enthusiastic and lobbied against implementation. You now find yourself in a transition period in the company as your involvement in the now-defunct project winds down.

Imagine yourself in such a situation and indicate, for each of the 12 statements below, how likely it is that you would do each of the following:

I would.....

- |   |   |   |   |  |
|---|---|---|---|--|
| 1 | 2 | 3 | 4 | (a) promote new ideas that have high visibility and are likely to lead to success.   |
| 1 | 2 | 3 | 4 | (b) meet new people, but be rather uncomfortable.  |
| 1 | 2 | 3 | 4 | (c) make sure to rub shoulders with powerful individuals in other departments and business units in the company.                   |
| 1 | 2 | 3 | 4 | (d) lay low for a while and tell myself that it's not important that my accomplishments and achievements are known in the company. |
| 1 | 2 | 3 | 4 | (e) volunteer for task forces and other related activities that would allow me to be a change agent.                               |
| 1 | 2 | 3 | 4 | (f) accept a new low-profile project; I don't need public recognition for what I do.   |
| 1 | 2 | 3 | 4 | (g) take on challenges and responsibilities unrelated to my area of job responsibility.  |
| 1 | 2 | 3 | 4 | (h) not seek out attention from others.  |
| 1 | 2 | 3 | 4 | (i) seek out opportunities to work outside of my own office or department.   |
| 1 | 2 | 3 | 4 | (j) move out into unknown business opportunities; I would be comfortable taking risks at work.                                     |
| 1 | 2 | 3 | 4 | (k) return to my old job and stay in that one job so that I became an expert in that one area.                                     |
| 1 | 2 | 3 | 4 | (l) seek out opportunities to do new things, with new people, in new environments.   |

**PLEASE TURN THE PAGE AND RESPOND TO THE STATEMENTS AND QUESTIONS ON THAT PAGE, THEN PLACE THIS BOOKLET IN THE ENCLOSED RETURN ENVELOPE**

Consider your involvement in various projects at BCTel over the past 12 months, and respond to each of the statements below by circling either "T" for True or "F" for False.

I have.....

- |   |   |   |
|---|---|---|
| T | F | (a) generated new ideas on my own.                          |
| T | F | (b) adapted or built on the ideas of others in the company. |
| T | F | (c) introduced and promoted new ideas in the company.       |
| T | F | (d) worked to sell and champion new ideas in the company.   |

For the next eight questions, think about how you typically are at work and answer each by circling the number corresponding to your choice.

- 1 = *Completely False*  
 2 = *Somewhat False*  
 3 = *Somewhat True*  
 4 = *Completely True*

- |   |   |   |   |  |
|---|---|---|---|--|
| 1 | 2 | 3 | 4 | (e) I tend to challenge existing ways of doing things.                           |
| 1 | 2 | 3 | 4 | (f) I enjoy and seek out repetitive tasks.                                       |
| 1 | 2 | 3 | 4 | (g) I don't follow many routines in my life; I like a lot of change.             |
| 1 | 2 | 3 | 4 | (h) I find it difficult to have something unexpected interrupt my daily routine. |
| 1 | 2 | 3 | 4 | (i) I prefer to work in a fairly stable and unchanging work environment.         |
| 1 | 2 | 3 | 4 | (j) I like to keep things neat, tidy, and in good order.                         |
| 1 | 2 | 3 | 4 | (k) I have a lot of patience for completing the more tedious tasks in life.      |
| 1 | 2 | 3 | 4 | (l) I enjoy routine, and use routine to organize my work schedule.               |

Please answer YES or NO to the following questions, by circling either "Y" or "N".

- |   |   |  |
|---|---|--|
| Y | N | (m) Do you currently own (or have you ever owned) your own business? |
|---|---|--|

*If you answered "No" to (m), then please place this booklet in the return envelope. If you answered Yes to (m), please respond to these last few questions.*

- |   |   |  |
|---|---|--|
| Y | N | (n) Were you the founder of this business?                                     |
| Y | N | (o) Has this business been (or was it) in operation for more than 5 years?     |
| Y | N | (p) Did this business result in the introduction of new goods/products?        |
| Y | N | (q) Did this business result in the introduction of new methods of production? |
| Y | N | (r) Did this business result in the opening of new markets?                    |
| Y | N | (s) Did this business result in the opening of new sources of supply?          |

## APPENDIX R

ITEM CONTENT OF THE PRIMARY AND SECONDARY SCALES OF THE  
MANAGEMENT PRACTICES SIMULATION*Primary Scales***Persistent Dominance**

I would.....

- 1 2 3 4 1 (d) disrupt the discussion if I disagreed with what was being said.
- 1 2 3 4 1 (e) not persist in arguing my points (r).
- 1 2 3 4 1 (g) speak my mind, regardless of who was in attendance at the meeting.
- 1 2 3 4 2 (c) not overpower people with my ideas (r).
- 1 2 3 4 2 (e) keep pushing the idea and dominate others with my opinions and visions if I wished to convince them to accept my point of view.
- 1 2 3 4 2 (g) react stubbornly and resist, even in the face of legitimate criticism.
- 1 2 3 4 3 (b) not use a strategy of intimidation in order to get my way (r).
- 1 2 3 4 3 (g) persist in voicing my opinion over and over again, even if my ideas were rejected.
- 1 2 3 4 5 (b) listen to others more than talk (r).
- 1 2 3 4 5 (f) argue if I disagreed with the others' ideas.

**Impatient Expediency**

I would.....

- 1 2 3 4 4 (b) keep very good records, documenting all events and activities (r).
- 1 2 3 4 4 (e) approach my responsibilities in a methodical, orderly manner, carefully considering and taking action on one issue at a time (r).
- 1 2 3 4 4 (f) react impatiently when dealing with the more tedious tasks.
- 1 2 3 4 4 (l) not take the time and effort to document all plans and ideas.
- 1 2 3 4 5 (e) carefully plan and organize activities (r).
- 1 2 3 4 6 (f) be patient while completing the more tedious tasks (r).
- 1 2 3 4 7 (a) not take the time to document things.
- 1 2 3 4 7 (c) tend to wing it; improvise on the spot.
- 1 2 3 4 7 (e) plan all my actions well in advance (r).
- 1 2 3 4 8 (j) approach all issues in connection with the project in a very systematic, analytical, and disciplined manner (r).

## Rebellious Drive

I would.....

- |   |   |   |   |       |   |
|---|---|---|---|-------|---|
| 1 | 2 | 3 | 4 | 2 (f) | follow closely the corporate expectations (or rules) (r).                                   |
| 1 | 2 | 3 | 4 | 2 (h) | follow instructions given to me very accurately (r).  |
| 1 | 2 | 3 | 4 | 2 (j) | challenge the way things are decided and done at work; I would enjoy "rocking the boat".    |
| 1 | 2 | 3 | 4 | 2 (n) | refer to company policies and procedures to define and support my work behavior (r).        |
| 1 | 2 | 3 | 4 | 3 (c) | conform to company expectations about how new ideas should be introduced and discussed (r). |
| 1 | 2 | 3 | 4 | 3 (i) | ignore authority in formulating a plan in connection with the idea.                         |
| 1 | 2 | 3 | 4 | 3 (k) | persist in pursuing the idea even if I was explicitly directed to stop.                     |
| 1 | 2 | 3 | 4 | 4 (h) | bypass management levels in working toward goals.   |
| 1 | 2 | 3 | 4 | 6 (b) | go around company rules or procedures that got in my way.                                   |
| 1 | 2 | 3 | 4 | 7 (k) | do what is correct and accepted in the company (r).   |

## Self Promotion

I would.....

- |   |   |   |   |       |  |
|---|---|---|---|-------|--|
| 1 | 2 | 3 | 4 | 3 (h) | not exploit political connections in the company in order to promote the idea (r).                           |
| 1 | 2 | 3 | 4 | 4 (j) | become impatient with trivial details connected with my involvement in the project.                          |
| 1 | 2 | 3 | 4 | 6 (i) | not compromise my integrity just to meet the deadline (r).   |
| 1 | 2 | 3 | 4 | 6 (l) | talk down to those who are not up to speed or operating at a highly competent level.                         |
| 1 | 2 | 3 | 4 | 7 (l) | work to ensure that my many involvements and accomplishments in the company were known to others.            |
| 1 | 2 | 3 | 4 | 8 (n) | become impatient if others weren't working up to my own high standards.                                      |
| 1 | 2 | 3 | 4 | 9 (c) | make sure to rub shoulders with powerful individuals in other departments and business units in the company. |
| 1 | 2 | 3 | 4 | 9 (f) | accept a new low-profile project; I don't need public recognition for what I do (r).                         |
| 1 | 2 | 3 | 4 | 9 (h) | not seek out attention from others (r).  |

### Confrontive Candor

I would.....

- 1 2 3 4 1 (c) do my best to accommodate other peoples' wishes in order to keep them happy (r).
- 1 2 3 4 1 (h) avoid conflict and confrontation (r).
- 1 2 3 4 1 (l) tell others, in a direct and forceful manner, what should be done.
- 1 2 3 4 1 (m) lead others into a confrontation.
- 1 2 3 4 2 (a) avoid conflict and, instead, work to smooth out disagreements and reach consensus on a plan of action (r).
- 1 2 3 4 5 (j) be very direct in expressing what I want; I wouldn't "beat around the bush".
- 1 2 3 4 5 (n) risk disappointing others in order to get my own ideas across.
- 1 2 3 4 8 (c) give people a second chance, rather than confront them on issues right away (r).
- 1 2 3 4 8 (i) weed out those who were not productive.
- 1 2 3 4 8 (k) be willing to deal with difficult decisions, such as redundant employees.

### Influence and Political Savvy

I would.....

- 1 2 3 4 1 (a) push hard for my ideas, but know when to back off.
- 1 2 3 4 2 (b) use my political connections in the company to make things happen.
- 1 2 3 4 3 (a) sell the idea to superiors one-on-one.
- 1 2 3 4 3 (e) deliver presentations that would influence and persuade others.
- 1 2 3 4 5 (a) adopt a big picture perspective; I wouldn't get bogged down by the details of the project.
- 1 2 3 4 5 (c) think at a conceptual level and let others worry about details and specifics.
- 1 2 3 4 9 (j) move out into unknown business opportunities; I would be comfortable taking risks at work.

### Driven Commitment

I would.....

- 1 2 3 4 2 (i) continue to start early and work late if I were emotionally involved in the project.
- 1 2 3 4 2 (k) not expend a lot of energy in pursuing things (r).
- 1 2 3 4 5 (d) always find myself doing something and have little free time.
- 1 2 3 4 6 (a) work pretty irregular hours in order to meet my commitments.
- 1 2 3 4 6 (n) continue to work fairly regular hours: starting work at around 8 and leaving pretty close to 4 (r).
- 1 2 3 4 7 (g) show up late for meetings and appointments if I had other, more pressing, matters to attend to.
- 1 2 3 4 7 (h) not work overtime (r).
- 1 2 3 4 8 (b) make personal sacrifices if I were dedicated to the project.

### Immediate Responsiveness

I would.....

- 1 2 3 4 3 (d) take action immediately; I would not delay getting the idea out to others if I thought it was a good one.
- 1 2 3 4 5 (m) delay decision making in order to think through issues carefully.
- 1 2 3 4 6 (d) be sure to meet my deadlines.
- 1 2 3 4 6 (e) hold others accountable for delivering what they had promised.
- 1 2 3 4 7 (i) be very careful to keep all of my time commitments.
- 1 2 3 4 7 (m) put some important items on the back burner for a bit too long.
- 1 2 3 4 8 (f) be somewhat slow to take action in solving the problem; I like to carefully consider my options first.

### Collaboration and Support

I would.....

- 1 2 3 4 4 (g) try to have a hand in all aspects of the project; I prefer not to share or delegate responsibilities (r).
- 1 2 3 4 4 (k) work independently, rather than with the team (r).
- 1 2 3 4 5 (l) be considerate of the other peoples' well being.
- 1 2 3 4 6 (g) empower others to take action on their own.
- 1 2 3 4 6 (h) show interest in other peoples' ideas and work to support and encourage them.
- 1 2 3 4 6 (j) recognize and use the talents of the various team members.
- 1 2 3 4 7 (n) think of others' needs and priorities in deciding what to do.
- 1 2 3 4 9 (l) seek out opportunities to do new things, with new people, in new environments.

### Visibility and Growth Seeking

I would.....

- 1 2 3 4 4 (m) not take a visible role in the project; I prefer to remain more in the background (r).
- 1 2 3 4 6 (m) thrive when working under conditions of such high pressure.
- 1 2 3 4 7 (o) adapt quickly to changing situations and demands on my time.
- 1 2 3 4 7 (q) have difficulty adjusting; I prefer to work in a fairly stable and unchanging work environment (r).
- 1 2 3 4 9 (e) volunteer for task forces and other related activities that would allow me to be a change agent.
- 1 2 3 4 9 (g) take on challenges and responsibilities unrelated to my area of job responsibility.
- 1 2 3 4 9 (i) seek out opportunities to work outside of my own office or department.
- 1 2 3 4 9 (k) return to my old job and stay in that one job so that I became an expert in that one area (r).

## *Secondary Scales*

### **MPS-Forceful Drive and Expediency**

I would.....

- CC 1 (c) do my best to accommodate other peoples' wishes in order to keep them happy (r).
- PD 1 (e) not persist in arguing my points (r).
- CC 1 (h) avoid conflict and confrontation (r).
- CC 1 (l) tell others, in a direct and forceful manner, what should be done.
- CC 2 (a) avoid conflict and, instead, work to smooth out disagreements and reach consensus on a plan of action (r).
- RD 2 (f) follow closely the corporate expectations (or rules) (r).
- RD 2 (h) follow instructions given to me very accurately (r).
- RD 2 (j) challenge the way things are decided and done at work; I would enjoy "rocking the boat".
- SP 4 (j) become impatient with trivial details connected with my involvement in the project.
- PD 5 (f) argue if I disagreed with the others' ideas.
- CC 5 (j) be very direct in expressing what I want; I wouldn't "beat around the bush".
- CC 5 (n) risk disappointing others in order to get my own ideas across.
- RD 6 (b) go around company rules or procedures that got in my way.
- IE 6 (f) be patient while completing the more tedious tasks (r).
- SP 6 (i) not compromise my integrity just to meet the deadline (r).
- RD 7 (k) do what is correct and accepted in the company (r).
- CC 8 (i) weed out those who were not productive.
- CC 8 (k) be willing to deal with difficult decisions, such as redundant employees.
- SP 8 (n) become impatient if others weren't working up to my own high standards.
- SP 9 (c) make sure to rub shoulders with powerful individuals in other departments and business units in the company.
- SP 9 (f) accept a new low-profile project; I don't need public recognition for what I do (r).
- SP 9 (h) not seek out attention from others (r).



# **MPS-Influence and Visible Drive**

I would.....

- IPS 2 (b) use my political connections in the company to make things happen.
- IPS 3 (a) sell the idea to superiors one-on-one.
- CS 4 (k) work independently, rather than with the team (r).
- IPS 5 (c) think at a conceptual level and let others worry about details and specifics.
- CS 6 (g) empower others to take action on their own.
- VGS 6 (m) thrive when working under conditions of such high pressure.
- DC 6 (n) continue to work fairly regular hours: starting work at around 8 and leaving pretty close to 4 (r).
- CS 7 (n) think of others' needs and priorities in deciding what to do.
- VGS 7 (q) have difficulty adjusting; I prefer to work in a fairly stable and unchanging work environment (r).
- IR 8 (f) be somewhat slow to take action in solving the problem; I like to carefully consider my options first (r).
- VGS 9 (e) volunteer for task forces and other related activities that would allow me to be a change agent.
- VGS 9 (g) take on challenges and responsibilities unrelated to my area of job responsibility.
- VGS 9 (i) seek out opportunities to work outside of my own office or department.
- IPS 9 (j) move out into unknown business opportunities; I would be comfortable taking risks at work.
- VGS 9 (k) return to my old job and stay in that one job so that I became an expert in that one area (r).
- CS 9 (l) seek out opportunities to do new things, with new people, in new environments.

## APPENDIX S

CROSS-CORRELATIONS BETWEEN THE ASSESSMENT CENTER BATTERY  
SCALES AND THE PRIMARY AND SECONDARY SCALES FROM THE  
MANAGEMENT PRACTICES SIMULATION

	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	FDE	IVD
<i>Measures of Cognitive Ability</i>												
Wonderlic	-02	06	03	-09	-01	-13	13	-12	-05	-09	01	-07
Culture-Fair	00	16	12	-11	07	-16	09	-16	-15	-07	03	-11
ConceptM	-08	16	00	10	-00	-01	12	<b>-26</b>	-07	-11	08	-05
Read'g Sp	-03	20	11	-02	01	00	03	-06	04	02	08	05
Read'g Cmp	-10	19	07	07	13	-11	-04	<b>-25</b>	-10	-02	14	-03
Vocab	-07	07	-00	-00	06	-02	03	-17	-02	-08	08	-01
Writing	-11	08	-02	04	06	02	07	-10	03	-01	07	03
Fluency	-06	05	03	09	05	03	-03	-09	-11	08	11	07
Flexibility	-12	<b>28</b>	18	-00	-01	10	05	-13	-08	05	08	09

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .05: .162; .01: .212; .005: .230; .001: .269. Correlations significant at  $p < .005$  have been bolded.

The column headings refer to the following MPS primary and secondary scales: PD: Persistent Dominance; IE: Impatient Expediency; RD: Rebellious Drive; SP: Self Promotion; CC: Confrontive Candor; IPS: Influence and Political Savvy; DC: Driven Commitment; IR: Immediate Responsiveness; CS: Collaboration and Support; VGS: Visibility and Growth Seeking; FDE: Forceful Drive and Expediency; IVD: Influence and Visible Drive

The row headings refer to the following measures of cognitive ability: Wonderlic: Wonderlic Personnel Test; Culture-Fair: Culture Fair Intelligence Test; ConceptM: Concept Mastery Test; Read'g Sp: Nelson-Denny Reading Speed; Read'g Cmp: Nelson-Denny Reading Comprehension; Vocab: Nelson-Denny Vocabulary; Writing: Flanagan Industrial Tests Expression; Fluency: Comprehensive Ability Battery (CAB) Ideational Fluency; Flexibility: CAB Spontaneous Flexibility.

## APPENDIX S CONT.

	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	FDE	IVD
<i>California Psychological Inventory Scales</i>												
Do	06	14	<b>23</b>	<b>24</b>	19	16	10	04	12	<b>30</b>	<b>33</b>	<b>33</b>
Cs	09	<b>25</b>	21	12	00	12	12	-09	-07	11	<b>23</b>	14
Sy	04	19	15	04	08	11	05	-03	01	18	15	17
Sp	07	<b>26</b>	13	15	09	16	-02	-07	-07	20	<b>23</b>	19
Sa	08	20	16	18	19	14	04	03	05	<b>26</b>	<b>30</b>	<b>24</b>
Wb	-11	-00	05	-15	-06	-00	-07	08	14	06	-11	12
Re	-00	-01	11	-07	-09	05	05	-01	16	14	02	18
So	07	-15	-03	06	04	-02	06	05	-05	01	04	-01
Sc	-14	<b>-27</b>	-08	<b>-27</b>	-20	-10	01	12	12	05	<b>-28</b>	03
To	-07	07	11	-10	00	10	11	-06	01	18	02	20
Gi	06	-11	15	-15	-06	02	-01	13	15	19	-06	19
Cm	05	-17	-18	01	05	-08	08	01	17	03	01	05
Ac	-10	-17	-05	-02	-01	07	11	07	04	10	-04	16
Ai	-19	10	06	-11	-13	-10	07	-20	-11	-02	-08	-02
Ie	-09	<b>25</b>	17	-01	03	20	04	-02	-06	11	12	21
Py	05	-04	20	-10	-12	00	08	-12	04	-01	-02	01
Fx	-09	19	12	-06	<b>-25</b>	02	11	-06	00	08	-08	09
Fe	-18	-21	-19	-06	-17	-11	-03	-08	12	-14	-18	-13
An	-06	-01	-03	02	<b>-32</b>	09	-08	06	01	00	-14	-01

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .05: .162; .01: .212; .005: .230; .001: .269. Correlations significant at  $p < .005$  have been bolded.

The column headings refer to the following MPS primary and secondary scales: PD: Persistent Dominance; IE: Impatient Expediency; RD: Rebellious Drive; SP: Self Promotion; CC: Confrontive Candor; IPS: Influence and Political Savvy; DC: Driven Commitment; IR: Immediate Responsiveness; CS: Collaboration and Support; VGS: Visibility and Growth Seeking; FDE: Forceful Drive and Expediency; IVD: Influence and Visible Drive.

The row headings refer to the following CPI scales: Do: Dominance; Cs: Capacity for Status; Sy: Sociability; Sp: Social Presence; Sa: Self Acceptance; Wb: Well Being; Re: Responsibility; So: Socialization; Sc: Self Control; To: Tolerance; Gi: Good Impression; Cm: Communal; Ac: Achievement via Conformance; Ai: Achievement via Independence; Ie: Intellectual Efficiency; Py: Psychological Mindedness; Fx: Flexibility; Fe: Femininity; An: Anxiety.

## APPENDIX S CONT.

	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	FDE	IVD
<i>16 Personality Factor Questionnaire Scales</i>												
A	-05	02	-03	11	03	14	09	-00	06	16	05	17
B	-07	05	01	-11	-04	-03	21	-03	-01	00	-01	-01
C	03	-02	15	-17	07	-06	-04	12	-04	14	-02	07
E	07	<b>25</b>	20	15	<b>23</b>	07	05	02	-01	12	<b>29</b>	10
F	01	19	09	11	11	19	-02	11	02	<b>27</b>	15	22
G	05	<b>-26</b>	-16	-02	08	-17	-01	-00	06	-15	-03	-14
H	04	09	17	09	02	19	-02	08	07	<b>31</b>	12	<b>26</b>
I	00	01	10	06	04	11	10	-01	01	07	08	10
L	16	11	08	<b>32</b>	16	14	-04	-04	-02	-01	<b>31</b>	03
M	-04	<b>24</b>	<b>24</b>	-09	-03	-03	02	-04	-02	-04	06	01
N	-04	-13	-03	02	-07	10	09	06	03	-06	-03	-03
O	01	-02	-08	02	-08	-02	-02	07	-01	-12	-05	-11
Q <sub>1</sub>	02	13	06	07	10	04	01	03	06	07	13	09
Q <sub>2</sub>	-08	-09	12	-11	06	01	-03	03	08	-09	00	-05
Q <sub>3</sub>	-15	<b>-41</b>	-22	-05	-00	00	-06	11	02	-04	-15	-07
Q <sub>4</sub>	07	-02	-07	04	-01	-05	-03	-09	-05	-18	01	-12
Q <sub>I</sub>	05	17	10	14	10	16	00	06	03	<b>27</b>	17	22
Q <sub>III</sub>	11	13	18	-03	04	02	-10	12	-01	07	09	02
Q <sub>IV</sub>	03	<b>28</b>	<b>29</b>	09	21	10	02	00	03	12	<b>28</b>	13
AA	-01	12	11	-00	15	05	-00	10	03	<b>26</b>	10	15

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .05: .162; .01: .212; .005: .230; .001: .269. Correlations significant at  $p < .005$  have been bolded.

The column headings refer to the following criterion scales: PD: Persistent Dominance; IE: Impatient Expediency; RD: Rebellious Drive; SP: Self Promotion; CC: Confrontive Candor; IPS: Influence and Political Savvy; DC: Driven Commitment; IR: Immediate Responsiveness; CS: Collaboration and Support; VGS: Visibility and Growth Seeking; FDE: Forceful Drive and Expediency; IVD: Influence and Visible Drive.

The row headings refer to the following 16PF scales (the meaning of high scores is listed): Factor A: outgoing; Factor B: bright; Factor C: emotionally stable; Factor E: assertive; Factor F: happy-go-lucky; Factor G: conscientiousness; Factor H: venturesome; Factor I: tender-minded; Factor L: suspicious; Factor M: imaginative; Factor N: astute; Factor O: apprehensive; Factor Q<sub>1</sub>: experimenting; Factor Q<sub>2</sub>: self sufficient; Factor Q<sub>3</sub>: controlled; Factor Q<sub>4</sub>: tense; Factor Q<sub>I</sub>: extraversion; Factor Q<sub>III</sub>: tough poise; Factor Q<sub>VI</sub>: independence; Factor AA: adequacy of adjustment.

## APPENDIX S CONT.

	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	FDE	IVD
<i>Personality Research Form Scales</i>												
Ab	-00	00	06	-20	<b>-28</b>	-01	09	-03	11	-08	-21	00
Ac	12	-04	09	12	10	-11	15	15	-08	09	13	06
Af	-04	-06	-03	03	-07	06	04	07	09	22	-01	13
Ag	<b>23</b>	06	-06	<b>30</b>	<b>34</b>	-00	06	-02	-16	-02	<b>29</b>	-07
Au	12	<b>26</b>	<b>25</b>	02	11	17	13	14	02	09	19	17
Ch	05	16	<b>24</b>	-07	02	20	09	<b>26</b>	<b>23</b>	<b>32</b>	05	<b>37</b>
Cs	-04	<b>-40</b>	-11	10	09	-01	00	11	-00	-05	00	-05
De	17	-04	-17	<b>29</b>	18	-06	03	-04	-13	00	18	-08
Do	10	07	14	12	15	12	19	<b>26</b>	15	<b>36</b>	18	<b>34</b>
En	-02	-10	06	-15	05	-07	04	04	09	09	-09	05
Ex	05	14	16	<b>25</b>	12	17	09	04	05	<b>24</b>	<b>27</b>	18
Ha	01	<b>-29</b>	<b>-29</b>	04	-03	-11	-11	-02	-05	-06	-08	-11
Im	13	<b>42</b>	19	05	07	09	06	05	-12	03	17	08
Nu	-03	-05	-02	-03	-06	05	06	-06	16	10	-06	13
Or	03	<b>-32</b>	-08	14	16	04	-12	19	05	07	07	03
Pl	02	15	13	03	07	<b>25</b>	04	07	-02	11	11	15
Se	-09	19	14	22	10	20	21	-00	15	19	20	<b>29</b>
Sr	-09	-10	-17	<b>29</b>	06	-07	02	-05	-01	-00	06	-08
Su	-14	-21	-18	07	-13	-10	03	-11	-03	-09	-12	-09
Un	-13	16	<b>24</b>	08	02	10	06	-02	-01	08	13	13

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .05: .162; .01: .212; .005: .230; .001: .269. Correlations significant at  $p < .005$  have been bolded.

The column headings refer to the following criterion scales: PD: Persistent Dominance; IE: Impatient Expediency; RD: Rebellious Drive; SP: Self Promotion; CC: Confrontive Candor; IPS: Influence and Political Savvy; DC: Driven Commitment; IR: Immediate Responsiveness; CS: Collaboration and Support; VGS: Visibility and Growth Seeking; FDE: Forceful Drive and Expediency; IVD: Influence and Visible Drive.

The row headings refer to the following PRF scales: Ab: Abasement; Ac: Achievement; Af: Affiliation; Ag: Aggression; Au: Autonomy; Ch: Change; Cs: Cognitive Structure; De: Defence; Do: Dominance; En: Endurance; Ex: Exhibition; Ha: Harm Avoidance; Im: Impulsivity; Nu: Nurturance; Or: Order; Pl: Play; Se: Sentience; Sr: Social Recognition; Su: Succorance; Un: Understanding.

## APPENDIX S CONT.

	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	FDE	IVD
<i>Jenkins Activity Survey Scales</i>												
Type A	10	-04	07	<b>34</b>	22	08	20	<b>26</b>	-02	21	<b>28</b>	16
Factor S	11	15	-07	17	19	-05	13	-00	-03	-08	16	-03
Factor J	03	09	14	<b>25</b>	15	13	02	-06	-03	21	<b>26</b>	<b>23</b>
Factor H	01	-18	07	14	-00	08	<b>23</b>	13	11	17	08	14

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .05: .162; .01: .212; .005: .230; .001: .269. Correlations significant at  $p < .005$  have been bolded.

The column headings refer to the following criterion scales: PD: Persistent Dominance; IE: Impatient Expediency; RD: Rebellious Drive; SP: Self Promotion; CC: Confrontive Candor; IPS: Influence and Political Savvy; DC: Driven Commitment; IR: Immediate Responsiveness; CS: Collaboration and Support; VGS: Visibility and Growth Seeking; FDE: Forceful Drive and Expediency; IVD: Influence and Visible Drive.

The row headings refer to the following JAS scales: Type A: Type A; Factor S: Speed and Impatience; Factor J: Job Involvement; Factor H: Hard Driving and Competitive.

## APPENDIX S CONT.

	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS		FDE	IVD
<i>Telephone Supervisor In-Basket Exercise</i>													
IB1	09	12	18	21	19	07	-01	09	-08	01		29	04
IB2	05	04	25	18	22	09	07	04	-15	17		30	16
IB3	15	-12	10	16	19	00	-04	-02	-15	09		20	04
IB4	18	-01	04	21	25	-24	04	-29	-11	-11		24	-16
IB5	-03	06	05	10	11	-05	-03	-23	-17	05		17	-02
IB6	07	-07	08	19	18	-11	-10	-23	-11	-01		24	-08
IB7	13	09	30	<b>35</b>	31	20	10	03	-07	23		<b>47</b>	22
IB8	08	02	03	06	08	-11	-01	-13	-09	-04		12	-09

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .05: .233; .01: .304; .005: .332; .001: .383 for IB1 to IB7. Critical values for  $r$  for various (two-tailed) significance levels: .05: .162; .01: .212; .005: .230; .001: .269. for IB8. Correlations significant at  $p < .005$  (two-tailed) for all variables have been bolded.

## APPENDIX S CONT.

	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	FDE	IVD
<i>Role Play Exercise Dimensions</i>												
Lead	08	13	13	20	15	15	<b>26</b>	12	-06	17	<b>27</b>	22
Comm	05	09	05	18	14	12	20	14	-06	16	21	18
Entre	07	10	09	13	04	-12	24	-09	-03	-04	12	-00
Comit	02	10	08	13	08	10	<b>26</b>	12	-04	16	18	22
Inter	05	07	07	19	18	16	19	14	-05	18	<b>23</b>	<b>23</b>
PerSt	01	09	18	20	07	07	09	-09	-08	01	23	06
In/Inn	-03	08	10	09	11	13	20	04	-12	09	17	15
Decis	-02	-08	-04	06	03	-02	18	14	-03	05	07	07
Concp	-02	01	-02	11	07	09	10	05	-10	07	13	13
Cntrl	-03	-03	04	12	06	07	02	-02	-02	05	11	10
Apprs	-01	00	00	12	03	12	13	14	-02	15	10	19

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .05: .162; .01: .212; .005: .230; .001: .269 for Lead, Comm, Comit, Inter, In/Inn, Decis, Concp, Cntrl, and Apprs. Critical values for  $r$  for various (two-tailed) significance levels: .05: .233; .01: .304; .005: .332; .001: .383 for Entre and PerSt. Correlations significant at  $p < .005$  (two-tailed) for all variables have been bolded.

The column headings refer to the following criterion scales: PD: Persistent Dominance; IE: Impatient Expediency; RD: Rebellious Drive; SP: Self Promotion; CC: Confrontive Candor; IPS: Influence and Political Savvy; DC: Driven Commitment; IR: Immediate Responsiveness; CS: Collaboration and Support; VGS: Visibility and Growth Seeking; FDE: Forceful Drive and Expediency; IVD: Influence and Visible Drive.

The row headings refer to the following role-play scales: Lead: Leadership; Comm: Communication; Entre: Entrepreneurship; Comit: Commitment; Inter: Interpersonal; PerSt: Performance Stability; In/Inn: Initiative/Innovation; Decis: Decisiveness; Concp: Conceptual and Analytical; Cntrl: Control and Follow Up; Apprs: Appraisal and Development of Subordinates.



## APPENDIX S CONT.

	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	FDE	IVD
<i>Structured Interview Dimensions</i>												
Lead	-04	16	15	22	04	19	18	20	03	18	22	<b>23</b>
Comm	-04	15	17	21	06	20	05	08	-03	15	<b>23</b>	21
Entre	-01	19	<b>32</b>	09	11	<b>25</b>	13	09	08	19	<b>25</b>	<b>29</b>
Comit	-04	15	17	16	05	20	13	11	07	20	19	<b>26</b>
Inter	-01	08	07	15	-07	16	16	13	08	08	09	15
PerSt	-06	12	22	20	10	20	-03	11	08	<b>27</b>	<b>26</b>	<b>28</b>
In/Inn	-02	22	20	08	-01	22	10	08	08	10	16	20
Decis	-16	11	13	11	04	11	08	02	01	05	16	11
PlnOrg	-01	04	14	17	09	<b>26</b>	-00	16	-01	22	22	<b>28</b>
Cntrl	08	05	15	07	06	11	13	14	00	07	14	13
Apprs	03	09	09	05	-01	13	<b>23</b>	13	11	15	07	<b>23</b>

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .05: .162; .01: .212; .005: .230; .001: .269. Correlations significant at  $p < .005$  have been bolded.

The column headings refer to the following criterion scales: PD: Persistent Dominance; IE: Impatient Expediency; RD: Rebellious Drive; SP: Self Promotion; CC: Confrontive Candor; IPS: Influence and Political Savvy; DC: Driven Commitment; IR: Immediate Responsiveness; CS: Collaboration and Support; VGS: Visibility and Growth Seeking; FDE: Forceful Drive and Expediency; IVD: Influence and Visible Drive; 5CC: 5-Item Championship Criterion.

The row headings refer to the following interview scales: Lead: Leadership; Comm: Communication; Entre: Entrepreneurship; Comit: Commitment; Inter: Interpersonal; PerSt: Performance Stability; In/Inn: Initiative/Innovation; Decis: Decisiveness; PlnOr: Planning and Organizing; Cntrl: Control and Follow Up; Apprs: Appraisal and Development of Subordinates.

## APPENDIX S CONT.

	PD	IE	RD	SP	CC	IPS	DC	IR	CS	VGS	FDE	IVD
<i>Scales From the Rahim Organizational Conflict Inventory-Form II</i>												
ROCI-II-I	-07	<b>25</b>	-18	-13	-09	-04	04	03	11	15	<b>26</b>	<b>29</b>
ROCI-II-O	-20	-07	<b>-25</b>	-15	-15	03	03	07	15	08	<b>-24</b>	09
ROCI-II-D	04	<b>25</b>	05	17	15	08	02	-09	10	-01	21	09
ROCI-II-A	-03	-01	-17	-02	-10	03	-06	-10	-05	-10	-14	-07
ROCI-II-C	-17	-11	-08	-11	<b>-27</b>	13	04	15	14	21	-20	17

*Note.* Critical values for  $r$  for various (two-tailed) significance levels: .05: .162; .01: .212; .005: .230; .001: .269. Correlations significant at  $p < .005$  have been bolded.

The column headings refer to the following criterion scales: PD: Persistent Dominance; IE: Impatient Expediency; RD: Rebellious Drive; SP: Self Promotion; CC: Confrontive Candor; IPS: Influence and Political Savvy; DC: Driven Commitment; IR: Immediate Responsiveness; CS: Collaboration and Support; VGS: Visibility and Growth Seeking; FDE: Forceful Drive and Expediency; IVD: Influence and Visible Drive.

The row headings refer to the following JAS scales: Type A: Type A; Factor S: Speed and Impatience; Factor J: Job Involvement; Factor H: Hard Driving and Competitive.