INTERPERSONAL TRUST: THE ROLE OF
RISK IN TRUST BEHAVIOUR

by

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Abstract

The first two experiments examined the relationship between risk and trust behaviour in two field situations. The third experiment was a replication of Wright, Maggied, and Palmer (1975). A conceptualization of trust, which included the factors: disposition, risk assessment (level of risk and interpersonal variables), and behavioural intention was outlined. The subject group was composed of 240 female undergraduates enlisted on the premises of the main library at the University of Victoria, Canada. In the first two experiments, a between groups' trust behaviour was compared over conditions of low and high manipulated risk. In both experiments, trust behaviour, which was found to vary significantly over risk conditions, was compared with ratings of risk assessment and scores obtained on Rotter's Interpersonal Trust Scale (ITS). Preliminary indications are that trust behaviour is not significantly related to risk-taking as reflected by subjects' choice of prize for completing the experiment. The third experiment did not replicate the results of Wright, et al. (1975) and showed no relationship between the number and type of questions asked by high or low scorers on the ITS.
Results from these experiments explain the relationship between risk and trust and indicate that trust behaviour, in these situations, is significantly related to risk assessment and level of risk but not to disposition, as measured by the ITS. A modification to the conceptualization of trust outlined earlier was proposed to include the variable, risk acceptance. Further examination of risk acceptance and the development of a new situation-specific scale of interpersonal trust which is content and grammatically bias-free are suggested.
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Society's operation is highly dependent on the trust of its members. Trust and feelings of suspicion are present on every level from two person interactions to the negotiations between nations. For over twenty years, psychologists have been examining trust in many settings and from many different points of view. Hence, a large body of research findings has accumulated. Nevertheless, there are major aspects of trust yet to be explained.

One difficulty in the research has been the defining of the variable, trust. Part of the problem lies with the vernacular usage of the term. Laymen have given the word so many meanings that it is difficult for psychologists to narrow their focus in order to make research feasible. Unfortunately, restrictions on the term leave some of the more interesting aspects of trust untouched. Broad distinctions should be made among trust in one's self (self-confidence), trust in superhuman or natural events (faith), and trust in others (interpersonal trust). Interpersonal trust will be the focus of the present study.

Discussion of suspicion in the literature is limited. Generally, it is discussed as being the opposite of trust and then ignored. In recent indices of Psychological Abstracts, a category exists for trust literature but not for suspicion. The only mention of suspicion by itself is that of suspicion of intent, an experimental artifact. It may be that suspicion is not the opposite of trust, but in this paper it will be considered as such and will be used interchangeably with "distrust".
There are many definitions of trust which are closely tied to a particular research approach. For example, in game research, trust is generally defined in terms of cooperative and competitive responses (e.g., Kee, 1967); in sociological literature, trust is defined in terms of normative role performance and role expectation (e.g., Garfinkel, 1963); and, in communication research, trust is defined in terms of the accuracy with which a message is relayed to another person (e.g., Brehm and Lipsher, 1959).

Several variables must be present in a situation before trust is a relevant factor. The outcome of the situation must be uncertain and contingent upon the behaviour of another person. That is, the situation must be one of dependence and vulnerability where the outcome is affected by the behaviour of other(s). There are loss-gain contingencies for each participant in the trust situation which are dependent upon mutual behavioural choices. The dependent individual, if he behaves correctly (trusts when trust is appropriate or distrusts when distrust is appropriate) accrues positive gain in the form of either material or psychological benefit. If the dependent individual behaves incorrectly (trusts when trust is not appropriate or distrusts when distrust is not appropriate), he will experience negative results. The individual's
decision to trust or not to trust depends upon several variables including assessment of risk, dispositional or personality variables, a history of previous trust choice outcomes, and interpersonal variables relating to the interacting trust agent.

A short review of trust literature and various research approaches to this topic will give an indication of the present state of the area.

Communication Research

Experiments dealing with communication, persuasion, and attitude change were among the first studies to investigate trust. Early in the 1950's, Hovland and his associates (Hovland, Janis, and Kelley, 1953) made one of the first systematic studies of persuasion and attitude change.

An example of an early investigation of trust and communication is a study by Mellinger (1956). He investigated the effect of trust and distrust on the prediction of the attitudes of one person by another after there had been an exchange of information between them. It was hypothesized that if a feeling of distrust existed between two people, A and B, there would be inaccurate reporting of A's attitudes by B. B would obtain an inaccurate sounding of A's trust attitudes because A would engage in evasion or other
distortions of his true opinion because of his underlying distrust of B. Trust was measured by means of a written questionnaire which asked A to judge B on the basis of the sincerity of his motives and whether the person meant what he said.

Results showed that when B trusted A, there was better prediction of A's attitudes by B than when distrust existed. Mellinger found that the status difference between A and B and the degree of their attitudinal agreement were also important factors in the accurate prediction of another's attitude to a particular issue.

Mellinger's study is reported here because it is one of the earliest experimental attempts to investigate trust and it serves as an example of the role of trust in communication research. Furthermore, Mellinger's measurement of trust, which is based upon subjects' ratings of another person's sincerity, motives, and dependability of communication, is a precursor of Rotter's Interpersonal Trust Scale (ITS) which will be discussed later. Both Mellinger and Rotter consider the same factors to be dimensions of trust measurement.

One further study will be mentioned in this area. Schlenker, Helm, and Tedeschi (1973) showed how source credibility in the form of promises about which choice a person (actually
a simulated player) was going to make during a series of
Prisoner's Dilemma Games affected subjects' method of
playing. Schlenker et al. found that when the simulated
player made highly credible promises (kept 75% of the
promises about which choice was to be made), trust behaviour
was induced in all subjects more often than when low
credibility promises were made. Furthermore, they were able
to show that subjects who had obtained high scores on
Rotter's Interpersonal Trust Scale relied more frequently
upon the promises of the simulated player as compared to
subjects who had obtained low scores on the ITS.²

The two studies cited above illustrate how trust has
been systematically studied in communication research.
Giffin (1967) points out that research of trust in this
area has been along six dimensions: expertness of the
communicator, his reliability, intentions, dynamism,
personal attraction, and the majority opinion about the
communicator (i.e., do others trust the communicator?).

There have been immediate, practical applications of
results of communications research in the area of business,
politics, and personnel training, from the selling of soap

²Milberg (1974) has since found that in perceptual
judgements, intentionality is a stronger variable affecting
trust than competence.
to the winning of votes. Furthermore, communication findings on trust have led to the investigation of the same variables in other areas of psychology.

Communication research has proved a fruitful ground for the germination of trust research approaches. Unfortunately, trust has not been measured in the same way in all studies, and this makes it difficult to assess the experimental findings in relation to other studies and to generalize from one study to another.

**Self-Disclosure and the Therapeutic Milieu**

An offshoot of communication research has been the study of self-disclosure by Jourard (1968; 1971) and others (Clarke, 1971; Cozby, 1973; Derlega, Harris, and Chalkin, 1973; Derlega, Walmer and Furman, 1973; Ellison and Firestone, 1974; Johnson and Noonan, 1972; Jourard and Friedman, 1970; MacDonald, Kessel, and Fuller, 1972; Rubin, 1973).

The development of trust in the counselling setting [and even the measurement and delivery of counselling techniques (Weinstein, 1972)] is a necessary component of psychotherapy. Trust has even been investigated in relation to the "fall back latency" of subjects engaging in the Gestalt game of falling backwards into the arms of a stranger! (Zoble, 1972)
the part of clients. Clinicians wish to facilitate an atmosphere of trust to make self-disclosure possible. Hence, the variables of trust, counselling style, and amount of self-disclosure have been of particular interest to clinical psychologists.

A typical example of self-disclosure/trust research may be illustrated by an outline of the study by Ellison and Firestone (1974): Their study investigated directive and non-directive counselling approaches and the influence of each on the amount of trust behaviour elicited in subjects. Trust was measured by the willingness of subjects to discuss information which had previously been judged as being of high or low intimacy content. Counselling style was varied and the dependent measure was the number of intimacy items that subjects were willing to discuss with the therapist. The results failed to show significant differences. Different counselling style had no effect on the number of high intimacy items which subjects indicated a willingness to disclose. The Ellison and Firestone study does illustrate, however, the method often used in

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4 Jourard (1971) has developed a self-disclosure scale. Items on the scale vary from low intimacy topics such as: my favorite food, things which make me furious, and what I would appreciate most for a present, to high intimacy items such as: things in the past I feel ashamed and guilty about, what are my shortcomings and handicaps, and my adequacy in sexual behaviour.
self-disclosure experiments. Factors thought to be related to trust are varied and then measured in terms of willingness to disclose high intimacy information.

Self-disclosure experiments have very practical and immediate application to psychotherapy, which makes these experiments of particular interest to clinicians. Furthermore, the method of measuring trust in terms of self-disclosure is a very different concept from other forms of trust measurement—for example, cooperation and competitive choices in game research.

Social Perception

While trust and suspicion were first regarded as factors of peripheral interest in persuasion investigations, over the years they have become variables of central importance. Heider's work (1958) on social perception aided this shift in attention. This work is a landmark in social psychology because many of Heider's principles captured the interest of social psychologists and led to much research activity on issues suggested by his theories—for example, balance and attribution of causality. His theorizing on the processes by which we observe, and give meaning to, the actions of others has influenced interpersonal trust research by focussing on the dyadic nature of the trust
phenomenon. The expression of Heiderian concepts is evident in the work of Kee (Note 1).

Kee (Note 1) made an exhaustive study of the literature on trust and suspicion and analyzed the complexity of a trust situation from the point of view of P and O, the interacting parties of the trust situation. Later, Kee and Knox (1970) offered a definition of trust as well as a schematic conceptualization. While their definition has roots in Heiderian thinking, it can also be applied to trust research which employs mixed-motive games. According to Kee and Knox, a trust situation exists,

when two parties . . . are to a certain extent inter-dependent with respect to the outcomes defined by their choices, and one of the parties (P) is confronted with the choice between trusting and not trusting the other (O). If P's choice is to manifest trust toward O, then O, in turn, has the choice of being either trustworthy or untrustworthy. However, P's choice not to manifest trust toward O will preclude betrayal usually leaving O with no further option with respect to the particular situation. It is important to note that both P and O are cognizant of the risk to which P exposes himself in his decision to trust. (p. 358)

In their schema of trust, Kee and Knox show that subjective trust or suspicion precedes the behavioural expression. To learn about subjective levels of trust and suspicion, psychologists may administer questionnaires and expect that responses on a trust questionnaire have behavioural implications. Researchers might also infer internal levels
of trust from behavioural measures. One might expect to find a higher rate of trusting expressed by subjects on trust questionnaires partly because of the social desirability inherent in this factor (Rotter, 1971) than would be found from behavioural measures (where the purpose of the measurement is generally easier to disguise).

Laboratory Games

The development of the mathematics of game theory, especially mixed-motive, non-zero sum games, provided psychologists with a new research tool for trust experiments. Deutsch (1958; 1960) was the first, and the most influential, student of trust to work within the game paradigm. In a conceptual paper, Deutsch (1958) argued that trust entailed two components, prediction and vulnerability. The first component, prediction, meant that a person must have the ability to predict the actions of another; that is, one has an expectation about how another person will behave. The second component, vulnerability, refers to the fact that in a trust situation, a person is placed in a position of dependence where the outcome is uncertain and contingent upon the behaviour of (an)other person(s).

Deutsch's paper offers explanations for some other terms directly related to trust. He describes "suspicion"
as the direct opposite of trust, "gullibility" as pathological, excessive or indiscriminate trust,\(^5\) and "trustworthiness" as the awareness that you are the recipient of trust which stimulates the need to honour (as opposed to betray) the trust. Deutsch influenced later research by suggesting that trust would facilitate both communication and cooperation between people. His paper directed the attention of others to non-zero sum games as a means by which trust could be studied.

One game in particular, the Prisoner's Dilemma Game (PDG)\(^6\), was thoroughly studied and became the major research vehicle for investigating trust. Trust and suspicion soon became defined in terms of particular game behaviours. For example, Solomon (1960), in a study directed by Deutsch, stated that trust behaviour arises when a subject chooses

\(^5\)Recently, Rotter (Note 7) has disputed Deutsch's claim that gullibility is excessive trust. Rotter reviews several studies on gullibility which directly or indirectly show that high trusters are no more likely to be deceived than low trusters. Rotter says: "It may be true that the high truster is fooled more often by crooks, but the low truster is probably fooled equally often by distrusting honest people and thereby forfeits the benefits that trusting others might bring." (p. 9)

\(^6\)PDG is described in Rappaport and Chammah (1965, p. 24). Other investigators (Benton, Gelber, Kelley, and Liebling, 1969; Gallo, 1966; Miller and Hamblin, 1963; Pilisuk and Skolnik, 1968) have developed other complex mixed-motive games.
to be cooperative and expects his partner or opponent to reciprocate. Others have used similar definitions of trust in terms of particular game behaviours (e.g., Deutsch, 1960; Gallo and McClintock, 1973; Lave, 1965; Lindskold and Bennett, 1973; Lindskold and Horai, 1974; Pilisuk and Skolnik, 1968; Rekosh and Feigenbaum, 1966; Schlenker, Helm, and Tedeschi, 1973; Ward, 1972).

Investigators soon began to manipulate various conditions within which the PDG was conducted. These manipulations included payoff matrices, players' sex and race, strategies, amount of communication, motivational instructions, and personality characteristics of the other players. The games were sometimes, but not always, interpretable in terms of trust. The findings are too situation-specific to yield broad generalizations about trust.

In time, fewer studies involving PDG associated their experimental manipulations and findings with trust and suspicion. Instead, the focus of these studies was gaming behaviour and cooperation and competition. Researchers began to realize that subjects' responses in non-zero sum games were complexly determined and that a single response could not be attributed to a single motive. Hence, the meaning of subjects' choices in mixed-motive games, including PDG, were not considered to be exclusively determined by trust and suspicion.
The appeal of PDG and other mixed-motive game research is evident. The method is elegant, its administration simple, and the data produced quantifiable. The original Prisoner's Dilemma story very convincingly demands a painful decision about interpersonal trust. However, the PDG is a complex situation, and when subjects are confronted by a matrix of numbers the subtle dilemma element is frequently lost. Kee, Knox, and Coughlan (Note 2) and Kanouse and Weist (1967) have shown that many subjects do, in fact, fail to recognize the dilemma. Knox and Douglas (1971) question whether the stakes represented in the matrix table are meaningful enough to render trust relevant to subjects' decisions. One might also question how such a specific situation can be said to relate to trust in other areas. The translation of the Prisoner's Dilemma into a game trivializes the trust element into a game of strategy and luck with negligible stakes.

There has been a recent resurgence of PDG trust studies, perhaps because experimenters find the situation so compelling. But, as Wrightsman (1974) points out, the investigation of trust through PDG has added little to the understanding of generalized trust behaviour.

Great is the temptation to overlook the criticisms that the Prisoner's Dilemma and other mixed-motive games encourage players to respond in terms of odds-playing rather than trust so that the paradigm may be revived for one last dissertation study!
Social Learning Theory

In "real life" we observe trust behaviours in a friend or acquaintance over some period of time and treat this information, as it unfolds, like data from an informal longitudinal study. Such observations lead to conjectures about how trusting and trustworthy others are. In the laboratory, multiple trust measures are difficult to contrive, especially when the experimental procedures tend to arouse subjects' suspicions and encourage guessing of the experimenter's purpose and motives. Questionnaires, however, have the advantage of providing an estimate of a person's trust level without resorting to actual manipulation of situation.

Rotter's Interpersonal Trust Scale (ITS) has been the most frequently used paper and pencil measure of trust and it has shown varied success at correlating generalized and specific trust expectancies. The scale is based upon a definition of trust as "the expectancy that the word, promise, verbal or written statement of another individual or group can be relied upon" (Rotter, 1967, p. 651). It was validated by sociometric measures of trust by a group of individuals who had lived together for a period of time and were presumably able to observe multiple trust behaviours of others.
Rotter describes trust as having two aspects. First, there is the conceptualization of trust as a generalized expectancy, which is similar to the psychoanalytical concept, "basic trust," employed by Erikson (1968). Generalized expectancy determines behaviours because "as a result of repeated experience in the same or similar situations, the individual builds up reinforcement which extends across situations" (Hamsher, Geller, and Rotter, 1968, p. 211). Second, there are specific expectancies elicited by each trust situation confronting a person because of the special circumstances inherent in the situation. Both these expectancies determine the trust response.

There have been several factor analytic attempts to analyze and to refine the ITS. These analyses have shown that the ITS, like most personality scales, is not a unidimensional measure. For example, Chun and Campbell (1974) found four clusters comprising the ITS. These were: i) skepticism about politics; ii) interpersonal exploitation; iii) societal hypocrisy; and, iv) reliable role performance. Previously, Kaplan (1973), using a different factor analytic technique, found that there were three factors which he labelled: i) institutional trust; ii) sincerity; and iii) caution.
Studies such as those of Kaplan (1973) and Chun and Campbell (1974) are useful in refining a scale and elucidating the elements contained in a measure. Future researchers might do as Chun and Campbell suggest and compare any trust behaviours under investigation with factor clusters in an attempt to increase correlation between the paper and pencil measure and actual behaviour.

Field and Behavioural Studies

Questionnaires such as the ITS discussed in the section above allow a wider examination of trust situations and behaviour than one-shot field studies. Nevertheless, the validity of questionnaires is frequently questioned on the basis of whether what a person says he would do is, in fact, what he will do.

Questionnaires may not be indicative of behaviour at all. The classic study by La Piere (1934) involving his successful experiences with a Chinese couple seeking lodging and meals and the subsequent negative reports by motel operators and restaurant managers of their willingness to accommodate Chinese patrons is but one of many illustrations that there is often little relationship between self-reports of behaviour and actual behaviour.
A behavioural measure provides a tangible expression of trust with the expectation that one example of behaviour generalizes to trust in other situations. The study of real life behaviour does not entail the "leap in faith" demanded by questionnaire treatments of a psychological phenomenon. Questionnaires are based on the premise that responses to them accurately reflect behaviour and attitudes.

There is a small body of trust research which has been conducted by means of field studies and naturalistic experiments. The compelling attraction of these experiments is that they deal with matters clearly identifiable as everyday life situations. These field experiments on trust have been designed in imaginative ways which are interesting to psychologists and laymen alike.

One of the problems of naturalistic studies on trust has been the limited number of measures from each subject which can be obtained by the experimenter without alerting the subject to the fact that he or she is participating in an experiment. With multiple behavioural measures from

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8 In fairness, it must be admitted that there are different sorts of "leaps in faith" associated with behavioural studies. Namely with naturalistic studies, there is the issue of generalizing one example of behaviour to a range of behaviours or a global trait.
subjects, more confidence could be placed in the result of naturalistic studies and their relationship to an underlying disposition.

Four examples of field studies of trust will be mentioned here. First, Te Vault, Forbes, and Gromoll (1971) conducted a field study to compare the trust of conservative and liberal church members. Conservative and liberal church membership was defined in terms of Glock and Stark's Index of Orthodoxy (Glock and Stark, 1966). To obtain their measures, Te Vault et al. counted the number of unlocked cars in church parking lots during services. Factors such as location of church and vintage of car were controlled by matching. Results showed that members of conservative churches locked cars significantly more often and hence were judged to be less trusting than liberal church members.

Second, Rubin (1973) and his students conducted a field experiment in a Boston airport. They investigated mutual self-disclosure between strangers by means of an ingenious experimental manipulation. Student experimenters approached strangers and asked them to take part in a handwriting experiment. Students then wrote out a message, ostensibly to provide a sample of their own writing for comparison purposes before asking subjects to reciprocate in providing
a handwriting sample. The intimacy of students' messages was randomly varied.

Results showed that in low and medium intimacy conditions, subjects reciprocated the intimacy of messages. In the high intimacy condition, subjects' messages did not correspond. Rubin hypothesized that subjects in the high intimacy condition were suspicious of the student. (The low intimacy messages referred to the weather and general remarks about the experiment while high intimacy messages revealed thoughts about the students' sexual adequacy.)

Because intimacy and self-disclosure are behaviours associated with trust, Rubin's experiments can justifiably be considered to be an experiment of trust. There was present the element of the psychological vulnerability which comes with unburdening oneself to another. Not only was there psychological vulnerability involved but there also existed the outside possibility that the subject might later meet the student in a different context and reveal to others the subject's intimate disclosure.

Third, a pilot study conducted by Rose (Note 3) involved approaching strangers and simply requesting to borrow a watch without any further explanation. This method yielded a surprisingly high rate of compliance
(i.e., trust) in college students.9

Finally, Levine, Vilena, Altman, and Nadien (1976) investigated trust in a stranger in an urban vs rural environment. Trust was measured in response to the experimenter's request to use a telephone. High trust subjects were those who allowed the experimenter to enter their apartment or house in order to use the telephone. Their results showed that in the city the door was kept closed against the experimenters in 75% of the cases. In the small town the door was always opened to the experimenters and 100% of the female experimenters were admitted (compared to 40% of the male experimenters). In the city, only 40% of the homes admitted the female experimenters and only 12% of the male experimenters were admitted. Hence, males were less trusted than females ($p < .001$) and town residents were more trusting than city residents ($p < .001$).

9A distinction might be drawn at this point between altruism and trust. In situations where altruism is the most salient motivator, e.g., giving directions to a stranger who is lost, the risk to the individual is minimal or negligible. Psychological or physical vulnerability is not present. In trust situations, the trusting individual is in a dependent position where a negative outcome is a real possibility. Levine et al. (1976) noted this distinction in the behaviour of city dwellers responding to the request to use the telephone. They found that they were given a telephone book by subjects (helped) but not given admittance (trusted).
These few field studies demonstrate some of the inventive ways in which trust can be researched. To date, naturalistic studies and field experiments have been interesting sidelights to other trust research conducted within the confines of the laboratory. The paucity of field experimentation in the study of trust can partly be attributed to the general preference of experimenters to remain in the laboratory to maximize experimental control. There are also ethical considerations which have operated against experimentation in the field.

The ethical criticisms levelled against field studies of trust are the same as the criticisms of field studies in general. Very often the design of such studies makes it impossible to obtain previous consent from subjects whose behaviour is being measured. In trust studies, the ethical questions have heightened significance since subjects must be put (or observed) in a vulnerable position in order to create a meaningful trust situation. The contrived situation of dependency may cause subjects distress which they would not have willingly agreed to experience if they had been apprised of the experimental methods and purposes beforehand. The vetting role of human subjects' ethics committees is particularly important in guarding the rights of subjects and keeping experimental
methods within generally acceptable bounds.\(^{10}\)

**Other Approaches to Trust**

The foregoing classifications of trust research does not exhaust all the discussion which has taken place on this topic. Several theoretical examinations have offered relevant and different insights on trust. For example, Garfinkel (1963) takes the sociological view that trust behaviour is congruent with fulfilling normative role requirements. When subjects behave in a normative and role-conforming manner they induce trust. This point of view on trust is supported by factor analysis of Rotter's trust scale. Kaplan (1973) showed that one factor of the multivariate scale could be labelled, "role performance". Henslin (1972) has given observational support of the pertinence of role conformity to trust assessments in his sociological

\(^{10}\)Even after a human subjects' committee approves a research project, the psychologist must answer to the questioning of ethics by colleagues. A case in point is the washroom study of Middlemist, Knowles, and Matter (1976) which bears peripheral relationship to one of the experiments undertaken in this study in that the locus of measurement was similar, i.e., a university washroom. Although the study of Middlemist et al. was not one involving trust, it is certainly the case that subjects were observed in a vulnerable position in order to investigate behaviour of debated meaningfulness (cf. Koocher, 1977). It is not expected that the experimental procedures employed in the current study will arouse similar outrage and uproar.
study of taxi-cab drivers and their customers. Henslin found that among cabbies, there are particular behaviours of their "fares", e.g., where they sit in the cab, what they are wearing, where they are picked up, etc. which are noted and then enable the driver to assess the customer. From his observations, a cab driver assesses how large his tip is likely to be, whether a person will be able to pay his fare and what the chances are that he will be robbed by the passenger.

Finally, in the literature, risk has often been mentioned as a variable closely associated with trust. The relationship between risk and trust has not, however, been specified despite the recent calls by Stack (1976) and Rotter (Note 7) to do so. Because the three experiments which comprise this dissertation are concerned with the association between risk and trust, the two studies found in the literature concerned with the relationship between these variables are reviewed here.

Deutsch (1958), an early investigator of trust, distinguished between the variables "trust" and "risk" in terms of their probability of outcome. Specifically, he stated that in risk-taking the probability of the expected outcome occurring was much smaller than in trust situations. Initially, risk was seen as a "nuisance variable" in trust
research, but sufficiently similar to trust to require explicit differentiation. In research employing non-zero sum games (e.g., the Prisoner's Dilemma), this distinction between risk and trust was largely ignored.

In another study, Lillibridge and Lundstedt (1967) correlated risk-taking and dispositional trust. Risk-taking was measured by a modification of Kogan and Wallach's dilemma-of-choice paradigm (Wallach and Kogan, 1965) and dispositional trust was assessed by a subscale from Cattell's Sixteen Personality Factor Questionnaire. Results showed that, based on these questionnaire measures, risk-taking and trust did co-vary and that high trust scores were associated with higher levels of risk than low trust scores.

Obviously, the risk and trust relationship has not been thoroughly explored and there is need for further investigation.

The above summary of trust definitions and research admittedly has imposed artificial divisions. But the research classifications which have been suggested do serve to emphasize the various aspects of trust. Furthermore, the foregoing review of the literature suggests new areas for trust research to pursue, as will be seen in the next section.
Background to the Proposed Experiments

As is the case in the research of other social psychological variables such as helping behaviour and altruism, research on interpersonal trust has followed two main paths: trust as a personality trait, and trust behaviour as it is influenced by situational factors. The interaction between dispositional and situational factors has been less often studied.

Most trust research along the lines of trait investigation has relied upon Rotter's Interpersonal Trust Scale, Wrightsman's Philosophies of Human Nature Scale, and, to a lesser extent, subscales of Cattell's 16 Personality Factors Test. To date, none of these scales has shown strong correlations with a variety of trust behaviours. Nevertheless, trait investigations continue.

Situational investigations of trust have considered factors such as where one is; with whom one is interacting (i.e., the trustworthiness of the other person); how long one must trust; when one trusts; why one trusts; etc. The importance of situational variables in relation to disposition may be understood by considering the two different situations of locking car doors and lending money.

Most people lock their car doors in a dark, unattended, downtown parking lot while they would not do so at a group
picnic. In the case of lending money, more people would lend money to a friend than to a stranger. In these two situations, dispositional levels of trust do not appreciably affect generalization of trust behaviour arising from situational conditions, such as city-country, friend-stranger dimensions. Extreme trust situations can be concocted so that all people will trust; other situations where no one would trust.  

Situational effects can overcome individual differences in trust disposition. However, few trust situations present themselves in these extreme terms. The majority of trust situations are more ambiguous and, doubtless, admit the consideration of disposition and other factors in arriving at an accurate prediction of trust behaviour.

A further complication to understanding trust behaviour arises because, as a complex behaviour, trust is not always the sole motivator. People in the same situation make different attributions about it, attend to different cues, and respond to different motivations. It is quite probable that dispositional differences such as how trustworthy one believes others to be, how optimistic one is about positive outcomes resulting from one's behaviour, and how much

\[ 11 \text{ What Mixon (1972) describes as "All or None" research.} \]
importance one places on the various situational outcomes underlie interpretative discrepancies. Individual differences conspire against uniformity of behaviour among people in the same situation. Such differences are grist for the psychologist's mill.

The correlation between attitude and behaviour has often been shown to be low. Furthermore, as Proshansky and Seidenberg (1965) point out:

... to expect a simple, consistent relationship between a person's attitude and his behaviour is to ignore the complexity of persons and situations. ... Some attitudes may have a greater potential for overt behaviour than others. ... Attitudes have consequences for behaviour only to the extent that they are aroused by appropriate situational cues. ... No less significant is the fact that even in situations where an attitude has been aroused, there may be situational factors that lead to the arousal of stronger, competing attitudes or needs, thereby preventing the first attitude from influencing the person's behaviour. (p. 101)

In the case of trust research, situations of "pure trust" are difficult, if not impossible, to create inside or outside the laboratory. Trust attitudes are rarely held with the tenacity and conviction which characterize primary beliefs such as religion or morality. Consequently, trust researchers will always be plagued by competing "noise" of other attitudes and values which adds to the imprecision in interpreting data. Nevertheless, the topics
of underlying trust attitudes and behaviours are important warp and weft in the social fabric, and interpretative difficulties will not deter psychological interest in this topic.

The Experiments

Three experiments comprise this dissertation. An opportunity was provided in the first experiment to investigate trust behaviour in relation to unspecified others, that is, people in general, and then, in the second experiment, to investigate trust behaviour in relation to a specific stranger in a face-to-face confrontation. Experiment III was a replication of a study by Wright, Maggied, and Palmer (1975).

The first two experiments took place in the library at the University of Victoria. The experimental measure in Experiment I was whether or not women left their coats and books on a bench out of view while they were in a toilet cubicle. The second experiment measured subjects' trust response to a request that they borrow books for a stranger on their own library card.

In Experiments I and II, level of risk was manipulated by the experimenter. Risk is discussed in the literature as being composed of the value of the object at stake and
the probability of negative outcome (Wallach and Kogan, 1967). In terms of the experimental trust situations which follow, factors such as the posting of a warning sign, the location of the washroom and library, the type of articles carried by subjects, and, the number and size of books subjects were asked to borrow are relevant to level of manipulated risk decisions.

In Experiment I where people in general were to be trusted, the manipulation of risk most likely affected subjects' perceptions of the trustworthiness of others. In the high risk condition, the posting of a warning sign implied that others were not trustworthy.

In Experiment II where a particular stranger was involved, the trustworthiness of the stranger presumably remained constant despite changes in level of risk (the same individual, i.e., the experimenter, approached subjects with a trust request). In the high risk condition, the value of the library material which the subject was asked to borrow was greater than it had been in the low risk condition. Hence, in these two experiments level of risk was increased by the manipulation of its different components. In Experiment I, the perception of the probability of a negative outcome was increased while the value/utility variable remained the same. In
Experiment II, the value of the objects at stake changed over the risk condition while the probability of negative outcome remained the same.

As was done in Wright et al. (1975), in Experiment III subjects were contacted by phone and asked to participate in a psychology experiment. The subjects were members of an undergraduate psychology class who had previously completed the ITS in the study of Wright et al. and in Experiment III, subjects had already taken part in either Experiment I or II and had completed the ITS in connection with one of these experiments.

ITS scores provided the estimates of subjects' dispositional trust level and the number and kind of questions asked by subjects when phoned by experimenters were taken as indices of behavioural trust. Subjects were unaware of the connection between the telephone request and their administration of the ITS.

Wright et al. found that those subjects who obtained low ITS scores (the bottom third scores) asked more questions, and more questions of a suspicious (rather than logistical) nature, than did subjects who obtained high ITS scores (the top third scores).

There were several reasons for carrying out the replication of Wright et al. in conjunction with
Experiments I and II. First, Wright et al. purport to show in a naturalistic experiment important behavioural validation of the ITS, and, because one of the purposes of the first two experiments in this dissertation was to obtain similar validation, the Wright et al. procedures are clearly relevant.

Second, the trust measures which had been employed in the Wright et al. study were far removed in nature from the item content of the ITS. Such would also be the case in the first two experiments reported here.

Third, by replicating the Wright et al. study, the experimenter sought to obtain an additional trust measure from subjects who were participants in Experiments I and II, without arousing their suspicions about the experimental variable of interest and the experimental hypotheses. The opportunity is not often found to obtain several trust measures from experimental subjects without arousing suspicion. Although measurement in two trust situations gives an admittedly limited sampling of all trust behaviours, there was at least, some opportunity to check for behavioural consistency.

Finally, a replication of Wright et al. links the results of the first two experiments to the existing literature. The behavioural measures of Experiments I and II
are innovative and deviate from the more usual method employed in trust research (e.g., game paradigms). Consequently, it is advantageous to demonstrate that the behavioural measures in the first two experiments are similarly related to the ITS as the behavioural trust measures reported in Wright et al. Questionnaires such as the ITS, though they are designed to measure stable, enduring dispositions, are susceptible to changes over time and subject group. Hence, it was deemed desirable to replicate Wright et al. with the same subjects that participated in the first two experiments. (All experimentation took place within a two month period.)

A Conceptualization of Trust

The present study is based upon a conceptualization in which there are two major contributors to trust behaviour. The first is trust disposition which in these experiments is operationalized through the use of Rotter's ITS. His scale taps the generalized expectancy a person has about "... the word, promise, verbal or written statement of another individual or group." Such expectancies aid in making behavioural decisions.

The second contributor to trust behaviour is risk assessment. Risk assessment itself is based upon two elements. One is the characteristics of the situation
which contribute to level of risk; another is the aspects of risk assessment resulting from interpersonal interaction.

As was mentioned earlier, level of risk is based upon the probability of a negative outcome and the utility or value of the object at stake. Interpersonal variables include assessments of trustworthiness, age, social group membership, sex, the type of contact between the trust agent and subject (face-to-face or not), and the number of people (one or many) subjects must trust.

Level of risk and interpersonal variables influence risk assessments. In turn, trust disposition and risk assessment produce the observable trust behaviour with one intervening step, namely, behavioural intention. Behavioural intention is based upon social norms and the subject's attitudes towards a particular behaviour (Fishbein and Ajzen, 1975). In the case of trust, conceivably disposition and risk assessment might encourage a trust behaviour but social norms and subject's attitudes might override such a trust decision. Conversely, even though disposition and risk assessment might tend towards distrust, one might trust because of social desirability, the impact of face-to-face confrontation, and/or because of social pressure. No attempt was made to investigate
systematically the effect of these variables in the present experiment.

Schematically, the derivation of trust behaviour in a trust situation may be represented as illustrated on the following page. The dotted line shown between trust disposition and risk assessment indicates that these variables are not independent.

A general purpose of these experiments is to investigate some of the factors included in the conceptualization of trust outlined above. In these experiments, the independent variable is level of manipulated risk. The two dependent variables are risk assessment and trust behaviour. The dispositional trust scores obtained from the ITS (Rotter's Interpersonal Trust Scale) is an antecedent variable. Unfortunately, because of the strong demand characteristics, direct measurement of the interpersonal component of risk assessment could not be undertaken in the present investigation.

The experimental situations involve subjects' behaviour toward strangers, either in one-to-one situations or in a public place where many unobserved strangers must be trusted. Demand characteristics were reduced by gathering data in non-laboratory settings.
Figure 1. A Conceptualization of Trust Behaviour
A General Statement of the Hypotheses

It is hypothesized that trust disposition is a significant determinant of trust behaviour. Figure 1, as well as previous conceptualizations and discussions of trust (viz., Kee and Knox, 1970; Stack, 1976), illustrate the importance of disposition to trust behaviour. There is some question, however, as to whether the ITS will prove to be an appropriate measure of this disposition.

It has been widely asserted that risk plays a role in trust decision-making. In these experiments, the effect of two different forms of risk (risk assessment and level of risk) on trust behaviour is investigated and by subjects' responses to one questionnaire item, some preliminary indication of the relationship between trust and risk-taking will be shown.

As was indicated in Figure 1, risk assessment derives from subjective perceptions of situational risk and from judgements about interpersonal variables (e.g., the trustworthiness of the trust agent, the number of people to be trusted and their identity, etc.). It is hypothesized that low risk assessments are associated with trusting behaviour; and, high risk assessments with distrusting behaviour.
Level of manipulated risk is expected to have a
generalizable effect on trust behaviour. That is, it is
hypothesized that increases in the independent variable
of risk will tend to decrease the frequency of behavioural
trust.

The third type of risk, namely risk-taking, is a var-
iable more often associated with situations of chance,
sometimes skill, and gaming than in the weighing of alter-
atives in a trust situation. Very often risk-taking
situations do not have the interpersonal interaction which
is such a critical variable in trust. In these experiments,
because of the limited fashion in which this aspect of risk
was tapped, only a tentative assertion of the manner in
which risk-taking and trust behaviour are associated can
be made. It is predicted that risk-taking will be signif-
icantly associated with trust behaviour.

There were, of course, further issues explored by the
series of experiments reported here. For example, it was
anticipated that, despite increases in level of risk,
there would nevertheless be people who trusted. Another
question to be examined was: Are the trust actions of
these individuals related to high dispositional trust?
How do low situational risk assessments affect trust behaviour?
Other questions were: How closely behavioural data corres-
ponded to subjects' verbal reporting of their motives for their behaviour; how risk assessment is related to dispositional trust as measured by the ITS; how much of trust behaviour can be accounted for by situation-specific factors? In the course of this dissertation, these issues will be addressed and a more specific statement of the above hypotheses made.
Method

There were many methodological parallels in the administration of Experiments I and II. Consequently, to avoid unnecessary repetition in describing these experiments, the methods of these first two experiments will be discussed together wherever possible. Experiment III was different in purpose and method from the first two experiments and it will be described separately.

Experiments I and II

Subjects. In Experiment I, subjects were 116 female students attending the University of Victoria, Victoria, British Columbia. They were recruited from users of the McPherson Library washroom. (The McPherson Library is the main library on campus and the washroom is located in the basement of the building.) If a woman entered the washroom alone carrying books, briefcase, knapsack, coat or other such belongings and then entered a toilet cubicle, she became a subject in the experiment. On this basis, 56 women participated in the low risk condition and 60 participated in the high risk condition. The low risk condition (or control) was run before the high risk condition to avoid carry-over effects of posting a warning sign (high risk).
In Experiment II, 121 female students in the lobby of the McPherson Library of the University of Victoria participated in the experiment. Women were selected on the basis of being alone and using the card catalogue, Xerox machine or other library facilities located near the lobby. Sixty women were in the low risk condition and 61 were in the high risk condition. The low risk condition was completed before the high risk condition was run.

(Part of the experimental procedure in Experiments I and II was the completion and return by mail of a questionnaire. High attrition rates are commonly found when questionnaires must be returned by mail; however, in the present experiments, completed data [trust behaviour, risk ratings, motives, and responses to the mail questionnaires] in Experiment I were obtained from 52 [93%] women in the low risk condition and 54 [90%] in the high risk condition. In Experiment II, the respective return rates were 50 [83%] and 60 [99%]. Responses were sufficiently high for meaningful analysis of the results.)

Procedure. Experiment I was completed over a two and a half week period with mail questionnaires returned several weeks beyond this period.

The site of the washroom is one floor below the library entrance. To reach the washroom, subjects cross through a
large foyer at the foot of the library stairs. The experimenter sat on a bench in the foyer in view of the washroom but out of the view of women entering the washroom.

The washroom has two doors approximately 15 feet apart. Between the two doors, there is a six-foot bench with a clothes rack above it. The washbasins and cubicles are further into the room. There are eight toilet cubicles and four washbasins with mirrors along facing walls of the room.

In the low risk condition, no additional warning signs were placed on the outer two washroom doors. In the high risk condition, large warning signs were prominently displayed on each of the doors. The signs (36 x 20 cm) were printed in Letraset on red art board and were similar in design to other signs displayed in the library. The signs read: "Do Not Leave Belongings Unattended. Several Articles Have Been Stolen."\(^{12}\)

The experimenter waited in the foyer for a minute after a potential subject had entered the washroom. The experimenter

\(^{12}\)It is interesting to note that while the experimenter's University of Victoria study was in progress, similar warning signs were placed in the Sedgewick Library at the University of British Columbia, presumably by the staff and not by another trust researcher. The posting of these signs demonstrates that the experimental manipulation used here had a great deal of realism.
then entered the washroom and observed whether the subject's personal belongings had been left on the bench between the washroom doors or taken into the toilet cubicle with the subject. From this observation, the experimenter recorded in a notebook the experimental behaviour as either trusting (belongings left on bench) or distrusting (belongings taken into the toilet cubicle).

As each subject left the washroom, the experimenter approached her and said:

Excuse me. I am doing a study on library security which is not commissioned by the Library or University but is being done with their knowledge. I wonder whether you could take a few minutes to answer a couple of questions.

If a subject agreed (only 8 out of 124 people [less than 7%] who were approached refused at this point), the experimenter continued either with the risk question or the motive question. (These two questions were counterbalanced to control for order effects.) The risk question was posed in words as close as possible to the following:

13 The Chief Librarian had been notified of the study and had given his approval with the proviso that the extent of the Library's and University's involvement be made clear to subjects. These experiments also received the approval of the University of British Columbia Committee on Research Involving Human Subjects.
In the women's washroom, there's a bench where people can leave their things while using the toilet cubicles. Keeping in mind who uses the washroom, how long you probably would leave your things unattended, how inconvenient it would be to have your things stolen and how likely it would be that things would be removed by someone else, how much risk do you think there is in leaving the things you are carrying on the bench in there? I'd like you to use this scale (show) to let me know which point along it describes your choice.

Subjects were then shown a white card (30 x 16 cm) with a five point scale printed on it. The end points of the scale were labelled in the following manner:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at All</td>
<td>Very Risky</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risky</td>
<td>Risky</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subjects' ratings were recorded by the experimenter in a notebook along with their previously noted trust behaviour and a code number.

At this point, subjects were asked to explain in their own words their motives for their behaviour. (Subjects gave permission for their responses to be tape recorded. The experimenter transcribed subjects' responses later.) Subjects were asked one of two questions depending upon which one was appropriate: "Why would you take your belongings (the appropriate article named) into a toilet cubicle with
you?" or "Why would you leave your belongings (named) on the bench while you were in a toilet cubicle?"
(Although some might construe these questions as invading privacy and expect that subjects might resent being investigated about their habits in the washroom, none of the subjects resorted to levity or hostility in answering.)

The final step of the procedure is the same for Experiments I and II and will be discussed later.

In Experiment II, the soliciting of subjects took approximately three weeks to complete. Mail questionnaires from subjects took an additional several weeks to be returned after distribution.

The experimental procedure took place in the busy lobby, card catalogue, and reference area of the McPherson Library at the University of Victoria. The experimenter approached likely subjects who were standing or working alone. The experimenter carried either a single, rather ordinary-looking book (low risk) or three expensive-appearing art books (high risk) along with a clip-board. A request, based as closely as possible on the following

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14 In experiments such as the ones outlined here where the experimenter performs the manipulation, there is, of course just cause in suspecting that experimenter bias may well have determined the outcome. This issue will be addressed in the Discussion.
wording, was made to the potential subject:

Hi! Could you please help me? I have an exam tomorrow and I need this book (these books) to study but I've left my card at home. Would you take this book (these books) out for me? I promise to return them.

Subjects were given an opportunity to agree with or to refuse the experimenter's request. A dichotomous rating of subjects' behaviour as either trusting (agreed to borrow book[s] for the experimenter) or distrusting (would not agree to borrow book[s] for the experimenter) was made.

The experimenter thanked the subject and told her that the request had been part of a study which the experimenter was doing on library security. (Once again, the role of the University and Library in this study was explained.) Subjects were asked for their further cooperation to answer a few questions and take a mail questionnaire home to complete. Observational data were recorded for subjects refusing to participate in the survey part of the study in order to determine whether these subjects were a biased subsample from the behaviourally trusting or distrusting groups. (Only 2 out of 121 subjects [less than 2%] refused to participate at this point.)

As had been done in Experiment I, risk ratings and the motive question were counterbalanced to test for order effects. Hence, one half of the subjects in each risk
condition were asked first for their ratings of the risk inherent in the experimenter's request in words phrased as closely as possible as the following:

Just now I asked you to take out this library book (these library books) on your card. Keeping in mind what difficulties I could have caused you by not returning this book (these books) and how likely it is that a person making this request actually wouldn't return the book (books) which she borrowed on your card, how much risk do you think there was (would have been)? I've got a scale here and I'd like you to show me which point on the scale you would choose.

The risk rating scale was identical to the one described above and used in Experiment I.

Subjects were asked to explain in their own words their motives in agreeing to or refusing the experimenter's request to borrow books on their library card. Unlike Experiment I, where subjects' responses to the motive question had been tape recorded, subjects' responses in Experiment II were transcribed by hand on cards. Tape recording in the second experiment had not been undertaken because of the logistics of handling recording equipment and large art books. Furthermore, because of the more public nature of the location of the experiment (in a busy lobby as opposed to an out-of-view location in the basement of the library), it was thought that tape-recording subjects would attract too much attention and arouse suspicion.
Hence, the less obtrusive method of writing down subjects' responses was chosen.

The procedure for Experiments I and II was the same from this point on. Subjects were given mail questionnaires (Appendices A and B) which carried a code number corresponding to the record of behavioural data and the risk ratings and responses to the motive question.

The experimenter stressed how important it was that she got a high questionnaire return rate in order to complete her study. To further encourage a substantial return rate, each subject was also told that from the returned, completed questionnaires, one person could be selected at random to receive her choice of either $25 cash or 50 Western Express Lottery tickets with a retail value of $50.

Subjects were asked for their names and telephone numbers so that a reminder call could be made if the questionnaire was not returned within two weeks.

Finally, subjects were informed that they would receive the results of the study and the name of the prize winner after the experiment had been completed. (This commitment to subjects was, of course, fulfilled.)

Measures. The following measures were obtained from subjects who completed all parts of the experiments including the mail survey:
a. Dichotomous trust-distrust assignment derived from the subject's actual behaviour inside the washroom or from subjects' response to the library card request.

b. Subjects' own risk assessment of the washroom or library card situation made along a five point scale as described previously. The end-points of the scale were labelled and showed (1) as "Not at All Risky" and (5) as "Very Risky".

c. An on-site, open-ended question about motives for subjects' trusting (or distrusting) action.

In Experiment I, subjects' responses were tape recorded (with their permission) and later transcribed by the experimenter. In Experiment II, the experimenter wrote down on the cards subjects' responses as closely to verbatim as practicable. Code numbers were used to identify subjects.

After the experiments had been administered, three independent judges were asked to classify subjects' motives as trust-related or not trust-related. For each experiment, judges were first read all of the motives given by subjects for the

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15 Measures b and c were counterbalanced for order.
trust behaviour. From these motives, judges decided among themselves guidelines for the two categories. (See Appendix C.)

The experimenter then read out each subject's reason for her behaviour (along with subject's code number). Judges independently classified each response. After all classifications had been done, judges read out their category for each subject. In any case where there was disagreement about the classification, the subject's motive was re-read and discussed until all judges agreed on classification. In this way, all subjects' motives were classified.

d. The Library Security Questionnaire (Appendix A) contained several measures:

i. "How necessary to Library security and the prevention of theft do you think the controlled exit is?" This question was answered along a five-point scale with the end points labelled (1) Not at all Necessary and (5) Extremely Necessary.

ii. "Have you ever had any personal belongings stolen in the Library?", "If there was no signs advising against leaving belongings unattended in carrels and if there were no shortage of carrels, would you leave your
books and coat in the carrels while you were away from the Library during lunch hour or while attending a class?" and "Should lockers be provided in the Library washrooms to leave coats and books while using the toilet cubicles?" These three questions were to be answered "Yes" or "No". Additional space was provided after the first two questions for comments which subjects might have.

e. Risk-taking question:

i. "If your name is selected to win the prize for participating in this study, would you prefer to receive cash or lottery tickets?" Subjects were asked to check the appropriate answer ("$25 cash" or "50 Western Express Lottery Tickets") in the space provided on the questionnaire.

f. Rotter's Interpersonal Trust Scale (Appendix B) which was labelled "General Opinion Survey". The scale has 40 items of which 15 are fillers. Items were scored along a five point scale upon which subjects indicated their agreement with each statement. The points on the scale were labelled accordingly: (1) Strongly agree,
The ITS was first introduced and reported by Rotter (1967).

Hypothoses and Analyses

**Hypothesis 1.** Dispositional trust scores will be significantly related to the experimental trust behaviour.

**Rationale.** Empirically, it has been shown that trust disposition, as measured by the ITS, is a significant predictor of trust behaviour. This relationship has sometimes been demonstrated in PDG studies (e.g., Schlenker, Helm, and Tedeschi, 1973) as well as in other behavioural situations (e.g., Wright et al., 1975). Significant correlations between the trust measures of Experiments I and II and the ITS will be further validation of Rotter's scale. Furthermore, positive findings will demonstrate the ability of the ITS to predict a wider range of trust behaviours.

The outcome of the hypothesis is not a foregone conclusion, however. Personality and social psychologists (e.g., Mischel,
1967; Proshansky and Seidenberg, 1965) have often remarked upon the tenuous relationship between disposition and behaviour or attitude and behaviour. From the conceptualization of trust behaviour outlined previously (p. 27), disposition is seen to be only one of the determinants of trust behaviour. At this juncture, the relative ability of disposition and risk assessment to predict trust behaviour in these situations is not known. A test of Hypothesis 1 will indicate how well the ITS correlates with the experimental measures studied in the present investigation. (Hypothesis 2 will address the question of how risk assessment relates to trust behaviour.)

Prediction from general attitudes to specific behaviour is always risky and highly dependent upon the suitability of the measure for the task. Clearly, however, Hypothesis 1 is a matter worthy of exploration.

Analysis. Point-biserial Correlation.
Hypotheses 2, 3, and 4 may be grouped together as they all deal with the relationship between different types of risk and trust behaviour. Specifically, the hypotheses are as follows:

Hypothesis 2. There will be significantly more trust behaviour in the low risk than the high risk condition.

Rationale. An essential component of a trust situation is the existence of vulnerability. If the situation offers little risk, then to trust is not as potentially hazardous as it would be when risk is high. Hence, when subjects feel themselves to be in little jeopardy, trusting responses will be more frequently made. When risk increases, trusting becomes a less attractive behavioural choice.

Level of manipulated risk is a twofold variable based upon the probability of negative outcome and the value (or utility) of the object at risk (Wallach and Kogan, 1967). In these experiments, level of risk is varied while other situational variables remain constant and are not systematically manipulated. Specifically,
in the high risk condition of Experiment I, a warning sign intended to increase subjects' expectation of a negative outcome was posted. On the other hand, in Experiment II, the increase in size and the number of library books which subjects were asked to borrow for the experimenter increased the value component of risk. From these experiments, it will be possible to examine empirically the direct effect of risk manipulation on trust behaviour and to test the hypothesis that as situational risk increases, fewer people elect trusting behaviour.

Changing level of risk was, moreover, a check of the experimenter's manipulation. Presumably, in the low risk condition, there should be lower risk assessments reported by subjects if the experimenter was successful in changing the situation along the dimension of risk.

Analysis: Chi-Square Analysis.
Hypothesis 3. Risk assessment will be significantly related to trust behaviours within both low and high risk conditions.

Rationale. From the conceptualization of trust described earlier risk assessment is derived from both impersonal (level of risk) and interpersonal variables. The second hypothesis deals with the relationship between objective risk and trust behaviour and the third hypothesis examines risk assessment and trust behaviour.

As is shown in the conceptualization of trust behaviour (p. 27), risk assessment is hypothesized to have two components: level of risk and interpersonal variables. Hence, risk assessment should be a more accurate behavioural predictor than level of risk alone. For example, even though level of manipulated risk is low, not all people will trust. There will be individual differences in the weighing of situational factors such as interpersonal variables. It is expected that there will be an inverse significant relationship between
risk assessment and trust behaviour in Experiments I and II.

Analysis: Point-biserial Correlation.

Hypothesis 4. Behaviourally trusting individuals will be significantly more likely to elect the higher risk-taking situation (i.e., lottery tickets) than behaviourally distrusting subjects.

Rationale. Experiments I and II focus primarily on risk assessment; however, the mail questionnaire contain one question which allows investigation of a different variable, risk-taking.

It will be recalled that all subjects in Experiments I and II were told that one subject whose name would be drawn at random from completed questionnaires would be paid for her participation in the experiments. The form of payment would be either $25 cash or 50 Western Express Lottery Tickets. Subjects were given these incentives to complete the questionnaire because these choices of prize represented different levels of risk-taking. Although the odds of winning involved in the prize and tickets are not exactly known, the lottery ticket choice represents acceptance
of higher risk-taking in the sense of gambling and vagaries of chance. Hypothesis 4 asserts that this type of risk-taking will show a significant relationship with trust behaviour.

An alternative explanation would be necessary if findings were negative: a conceptual difference between situations involving chance, luck or gambling and those situations involving trust would have to be adopted. A distinction between trusting and gambling has already been drawn in various theoretical papers on trust (e.g., Deutsch, 1958), and, hence, negative results between trust behaviour and risk-taking in the present experiments would offer some empirical support for the view that gambling is unrelated to trust.

Analysis. Chi-Square Analysis.
Experiment III

Subjects. Subjects in Experiment III were drawn from the respondents to the questionnaire which was employed in Experiments I and II. (It will be recalled that subjects in the first two experiments were requested to return mail questionnaires along with their names and telephone numbers. This information was requested in order to provide results of the experiment to subjects, to inform them whether or not they had won the prize, and to complete Experiment III.)

Three attempts were made to contact by phone the top third and bottom third scorers on the ITS from Experiments I and II. (This tactic replicated the procedure employed by Wright et al. [1975] in recruiting their subjects.) The total subject pool consisted of 158 female students at the University of Victoria, Victoria, British Columbia. One hundred and seventeen subjects were successfully reached by phone and included in the present study.

Procedure. Replicating the procedure of Wright et al., subjects were phoned by a female confederate. The confederate asked each person to be a subject in a psychology experiment. The words used by the confederate were (approximately): "Hello. Is this ____________? I'm calling to find out whether you can be a subject in a
psychology experiment at the University."

The trust measures, as used in the study of Wright et al., were the number and type of questions asked by subjects for more details about the experiment. Subjects' responses were tape recorded for later classification by an independent judge into the categories developed by Wright et al. (1975). Any questions asked by subjects were answered, as far as practicable, according to a pre-arranged sheet of possible questions and their answers. After subjects had finished asking questions, subjects were asked whether they were taking or had taken a psychology course.

Subjects who had agreed to come for an experiment were then told by the confederate that she had made a mistake. The confederate said:

Oh, no! I'm sorry. You don't have to come for the experiment after all. I just realized that I have got enough women and I should have been calling men. Thanks anyway.

Subjects were later de-briefed about the deception when they were mailed an explanation and brief summary of the results of Experiments I and II.

Measures. It will be recalled that from the mail questionnaire in Experiments I and II the experimenter had already obtained subjects' ITS scores and could classify
subjects into high and low trusters (top and bottom third ITS scorers) as had been done in Wright et al (1975).

From the telephone conversation with subjects, the following measures were obtained:

a. The number of questions asked by subjects in response to the confederate's request that the person be a subject in a psychology experiment.

b. The classification of the questions asked by subjects. An independent judge classified subjects' questions as logistical ("What time should I come?", "Where will the experiment be?", "Could you repeat the instructions?", etc.), suspicious ("What kind of experiment is it?", "Who are you?", "Who's the experimenter?", etc.), and, other ("May I bring a friend?", etc.). A complete list of the questions within each category as it appeared on the code sheets used by Wright (Note 4) is shown in Appendix D.

c. Whether subjects were, or had previously been, enrolled in a psychology course.

Since subjects had previously participated in Experiment I or II, the experimenter had the subjects' completed data from these experiments. Briefly, these additional measures included:
d. Subjects' trust behaviour in Experiment I or II as recorded on a dichotomous scale of trusting or distrusting.

e. Subjects' risk rating of the experimental situation in Experiment I or II as obtained from a five point scale.

f. Subjects' open-ended responses about their motives for behaviour in Experiments I or II.

g. Subjects' responses to the Library Security Questionnaire (Appendix A) including answers to the questions about having belongings stolen in the library, leaving possessions unattended in the carrels, the necessity of library security, the need for lockers in the washroom and subjects' choice of cash or lottery tickets if selected to receive a prize.

h. Subjects' scores on the ITS.

Hypotheses and Analyses

Hypothesis 1. High trusters will ask significantly fewer questions than low trusters.

Rationale. Wright et al. (1975) report success in showing that the ITS predicted behaviour on the trust measure, number of questions asked, in the unobtrusive experimental
situation investigated in their study. High trusters were operationally defined as persons comprising the top third of the ITS distribution of scores obtained by undergraduates and low trusters were persons comprising the bottom third of the ITS distribution.

Experiment III was patterned as closely as possible upon the procedure of Wright et al. Because the subject groups and the procedures of the two studies are similar, it is expected that Hypothesis 1 will be verified and that the present investigation will validate the ITS once again. The trust behaviours of subjects in Experiment III will be examined in conjunction with subjects' trust performance in Experiment I or II as an indication of behavioural consistency.

**Analysis.** Chi Square Analysis.

**Hypothesis 2.** High trusters will ask significantly fewer suspicious questions than low trusters.

**Rationale.** The number of suspicious questions asked was the second trust measure employed in
Wright et al. It is closely related to the other measure investigated in their paper. It is reasonable to expect that the ITS will predict behaviour in terms of the number of suspicious questions a person asks about a trust situation and thereby validate the Rotter scale and confirm the findings of Wright et al.

Analysis. Chi Square Analysis.

Hypothesis 3a. There will be a significant correlation between the trust behaviour in Experiment I (leaving belongings unattended on a bench in the washroom) and the number of questions asked.

Hypothesis 3b. There will be a significant correlation between the trust behaviour in Experiment I (leaving belongings unattended on a bench in the washroom) and the number of suspicious questions asked.

Hypothesis 4a. There will be a significant correlation between the trust behaviour in Experiment II (borrowing books for a stranger) and the number of questions asked.

Hypothesis 4b. There will be a significant correlation between the trust behaviour in Experiment II (borrowing books for a stranger) and the number of suspicious questions asked.
Rationale. Trust is commonly thought of as a disposition with behavioural implications. Dispositions are expected to demonstrate consistency and aid in prediction of a person's actions. As these hypotheses state, there are four opportunities to test the belief that trust behaviour in one situation will be related to behaviour in another situation.

In the case of the experimental trust measures, subjects will be providing the experimenter with data in two situations (Experiment I or II and Experiment III). It is expected that because most people will behave consistently with their dispositions, there will be significant correlations of trust behaviours in the various experimental situations.

Analysis. Point-biserial Correlations.

A Study to Validate the Experimental Measures

It was necessary to show that the three experimental trust situations were indeed significantly related to trust. To do so, a group of independent judges, who were nevertheless comparable to subjects in the original sample
(also undergraduates attending a nearby university), were asked to rate 10 situations (including the experimental ones) for degree of trust involvement. (Beforehand, it was thought that 7 of the 10 situations were in some way related to trust and 3 situations were not.) The trust situations employed in the three experiments were to various degrees intuitively related to trust, but this had not been empirically demonstrated. The validating study was designed to provide such empirical support.

Sixty-nine University of British Columbia undergraduates were presented with a list of 10 situations, 3 of these being the experimental ones. (See Table 1.) Subjects were asked to rate the situations on a five-point scale according to how much they agreed that the situation involved trust. The scale was labelled accordingly:

1. Strongly agree (that it does);
2. Mildly agree,
3. Agree and disagree equally,
4. Mildly disagree and,
5. Strongly disagree.

Table 1 shows the means and standard deviations for each of the 10 situations. When the means of the three experimental trust situations were compared to the mid-point (3) of the scale, all were rated to be significantly different from the mid-point in the direction of trust (Table 2).
The three experimental trust situations were rated differently in terms of the amount of trust each situation was judged to show. In Table 3, the frequency distribution of judges' ratings appears. It can be seen that Item 4 (Experiment I) and Item 9 (Experiment II) are unambiguously perceived as trust-involving situations. Item 3 (Experiment III) obtained a much weaker endorsement as a situation involving trust. The importance of these trust ratings by the validating group at the University of British Columbia on the interpretations of the risk and trust behaviour results which follow will be examined in the Discussion.

The results of this study serve as an important, independent validation of the appropriateness of the experimental measures of trust investigated in the present experiments.

Observations From the Three Trust Experiments

The parallel method and hypotheses of the first two experiments will indicate how the relationship between risk assessment and trust behaviour generalizes in two different real-life situations. If the results of Experiment II and Experiment I are mutually supportive, far greater confidence can be placed in the findings. Support found for the conceptual model of trust will encourage further research along these lines.
Table 1
The Means and Standard Deviations of Trust Ratings Assigned To Ten Behaviours by a Group of Independent Judges at the University of British Columbia

<table>
<thead>
<tr>
<th>Situation</th>
<th>M</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. You follow a bus driver's directions about where to find an address in a strange city.</td>
<td>2.09</td>
<td>.85</td>
</tr>
<tr>
<td>2. You take medicine as directed by a physician.</td>
<td>1.51</td>
<td>.83</td>
</tr>
<tr>
<td>3. You are phoned to be a subject in a psychology experiment and you don't ask questions about it.</td>
<td>2.64</td>
<td>1.15</td>
</tr>
<tr>
<td>4. You leave your books and coat on a bench in the library washroom while in a toilet cubicle.</td>
<td>1.96</td>
<td>.93</td>
</tr>
<tr>
<td>5. A person knocks on your door and asks to use your telephone. You decide to let them.</td>
<td>1.68</td>
<td>.80</td>
</tr>
<tr>
<td>6. You arrange to meet a friend in the library.</td>
<td>2.72</td>
<td>1.07</td>
</tr>
<tr>
<td>7. You type an essay for a friend.</td>
<td>3.55</td>
<td>1.20</td>
</tr>
<tr>
<td>8. You leave your bicycle unlocked while buying some milk at the store.</td>
<td>1.93</td>
<td>.85</td>
</tr>
<tr>
<td>9. You agree to take some art books out for a stranger on your library card.</td>
<td>1.52</td>
<td>.90</td>
</tr>
<tr>
<td>10. You hand in a questionnaire for an experiment which you have promised to complete.</td>
<td>3.03</td>
<td>1.10</td>
</tr>
</tbody>
</table>

Note: A low rating indicates that the judge agreed that the situation involved trust.

^ n = 69 in each case
Table 2

*t*-tests Showing the Differences in Means Between the Mid-Point And Three Experimental Trust Measures (Based Upon the Ratings Of the University of British Columbia Validating Judges)

<table>
<thead>
<tr>
<th>Comparison</th>
<th>M</th>
<th>S.D.</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situation 3</td>
<td>2.64</td>
<td>1.15</td>
<td>2.61*</td>
<td>136</td>
</tr>
<tr>
<td>vs Mid-point</td>
<td>3</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Situation 4</td>
<td>1.96</td>
<td>.93</td>
<td>9.34*</td>
<td>136</td>
</tr>
<tr>
<td>vs Mid-Point</td>
<td>3</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Situation 9</td>
<td>1.52</td>
<td>.90</td>
<td>13.79*</td>
<td>136</td>
</tr>
<tr>
<td>vs Mid-Point</td>
<td>3</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Situation 3 involved the trust measure upon which Experiment III was based.

Situation 4 involved the trust measure upon which Experiment I was based.

Situation 9 involved the trust measure upon which Experiment II was based.

*n = 69 for each comparison

*p<= .01
Table 3

A Frequency Table Showing the Differences in Rating Assignments
For the Three Experimental Trust Situations

<table>
<thead>
<tr>
<th>Experimental Trust Situation</th>
<th>Assigned Rating*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Item 3 (Being phoned to by a subject in a psychology experiment--Experiment III)</td>
<td>14</td>
</tr>
<tr>
<td>Item 4 (Leaving belongings on a washroom bench unattended--Experiment I)</td>
<td>23</td>
</tr>
<tr>
<td>Item 9 (Taking art books out on your library card for a stranger--Experiment II)</td>
<td>45</td>
</tr>
</tbody>
</table>

Note: A low rating indicates that the judge agreed that the situation involved trust.
Experiment III will provide indication of intra-subject behavioural consistency in trust actions since the experimenter will have data of subjects' trust behaviour in either Experiment I or II as well as trust behaviour in Experiment III. A test of behavioural consistency in different trust situations has hitherto not been reported in the literature of trust research.

Finally, from the three experiments, it will be possible to observe how well the ITS predicts behaviour in different situations. It may be the case that ITS prediction of behaviour is better in certain situations as a possible function of how closely individual ITS items relate to the particular trust behaviour investigated. Also, it may be found that the ITS yields good behavioural prediction only for extreme scorers and not for the middle range.

Hence, the three studies are complementary. Together these experiments increase the status of any significant results which may be found beyond that of "one-shot" studies. The results which follow indicate how well these studies fulfilled their aims.
Results

The results of the three experiments can be evaluated on two levels. First, do these experiments measure what they were designed to measure? Second, what are the outcomes of the major hypotheses and what subsidiary findings are there?

Results relating to the procedure and design are discussed for all three experiments followed in a second section by the substantive results.

Evaluation of the Experimental Procedures in Experiments I, II, and III

Subjects' reasons for their behaviour. It will be recalled from the discussion of the method of Experiments I and II that after the experimenter had recorded the subjects' behaviour on the dependent measure, subjects were asked to account for their trust behaviour (e.g., why did you agree to take out this book for me?). The purpose behind the experimenter's question was to examine subjects' own explanations for their trust behaviour.

16Krebs (1977) claims that obtaining subjects' introspections and motives about their behaviour establishes the "cognitive-motivational" meaning of their actions.
After the experiments were completed, three judges classified subjects' reasons as related or unrelated to trust (Appendix C) in the manner described in the Method.

In Experiment I, approximately 70% of subjects were classified as giving trust-related reasons for their behaviour. (In the low risk condition 59% of subjects gave trust-related reasons, while in the high risk condition 80% gave trust-related reasons).

In Experiment II, 90% of subjects were judged to have given trust-related reasons for their actions. (In the low risk condition, 85% of subjects gave trust-related reasons and in the high risk condition, 95% had given trust-related reasons.)

At the outset of the study, it was anticipated that data of the sub-sample of subjects who reported reasons for their behaviour judged to be related to trust would be analyzed separately. However, the direction and results of tests of significance in all cases were the same for the sub-sample as for the entire sample; thus, separate analyses will not be reported for the sub-sample.

The other means of confirming that trust was the primary variable under investigation in these experiments was provided by the validating study conducted at the University of British Columbia which was described previously. It will
recalled that all three experimental situations were rated in the trust direction and were found to be significantly different from the mid-point of the five-point scale (Table 2).

The order of the judges' ratings for the experimental situations from most clearly involving trust to less clearly involving trust was Experiment II (library books $M = 1.52$), Experiment I (washroom bench, $M = 1.96$), and Experiment III (telephone call, $M = 2.64$). Hence, the results of the University of British Columbia validating study support the contention that the three experimental situations did, indeed, involve trust, Experiments I and II perhaps more clearly than Experiment III.

**Participation rate.** The participation rate in these experiments was sufficiently high to presume that the effect of a self-selection bias in the subject groups was of little or no consequence.

In the washroom study, a total of eight people ($< 6\%$) refused to participate when they were first approached by the experimenter (after the behavioural measure of trust had been assessed). Of these eight people, half were behaviourally trusting and the other half were behaviourally distrusting.

In the library card study, only two subjects ($< 2\%$) refused to participate in the study. Seven other library
users said that they had left their library cards at home or did not have cards and could not take out the book(s) for the experimenter. Since such an excuse could conceivably be a "polite" refusal and actually a distrusting response, the experimenter questioned these subjects further. Two of the seven subjects admitted that they had made up this excuse in order to refuse the request. The other five subjects maintained that they had indeed left their cards at home or were not students or had lost their cards. The two subjects who admitted to being untruthful about their library card were labelled "distrusting" and included in the study, while the other five subjects were not.

In Experiment III, data on approximately 75% of the original list of top and bottom ITS scoring subjects from Experiments I and II were successfully contacted over the telephone by the confederate.

Return rate of questionnaires. The return rate of questionnaires was very high when compared to typical mail response rates. The average rate for both experiments was over 90%. That is, only 21 people out of 237 who initially took the questionnaires home failed to return them. Such a high rate gives confidence that the data obtained were not appreciably affected by extraneous selection factors such as volunteerism. Reasons for the high rate of return of the
questionnaire will be discussed in a later section.

Demand characteristics. Initially, there had been some concern that the asking of the motive question (e.g., "Why did you agree to take these books out for me?") would act as a subtle demand characteristic and affect subjects' risk assessments. By systematically altering the order of these questions, it could be statistically determined whether subjects' responses to one question affected responses to the other.

In half of the low risk conditions of both Experiments I and II, the risk assessment question was posed before the motivation question and in the other half of the low risk condition, the order of the questions was reversed. Tables 4 and 5 indicate that there was no significant effect for order when tested with two-tailed t-tests. On the strength of the results, data were collapsed over order in all subject analyses.

The reliability of the ITS. The final matter to be taken up in this section of results is the reliability of the Interpersonal Trust Scale. It was not possible to obtain certain types of reliability (such as test-retest reliability) for the scale in this particular study. The experiments took place towards the end of the academic year and, given the mobility of university students, an adequate response
Table 4

A Test for the Effect of Order on Risk Assessment Ratings in Experiment I

<table>
<thead>
<tr>
<th>Order</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>Two-tailed p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk-Motive</td>
<td>2.22</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Risk</td>
<td></td>
<td></td>
<td>.43</td>
<td>54</td>
<td>n.s.</td>
</tr>
<tr>
<td>Motive-Risk</td>
<td>2.12</td>
<td>.91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk-Motive</td>
<td>2.53</td>
<td>1.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Risk</td>
<td></td>
<td></td>
<td>1.35</td>
<td>58</td>
<td>n.s.</td>
</tr>
<tr>
<td>Motive-Risk</td>
<td>2.92</td>
<td>1.15</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 5

A Test for the Effect of Order on Risk Assessment Ratings in Experiment II

<table>
<thead>
<tr>
<th>Order</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>Two-tailed p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk-Motive</td>
<td>2.93</td>
<td>.85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Risk</td>
<td>.75</td>
<td>58</td>
<td>n.s.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motive-Risk</td>
<td>2.75</td>
<td>.88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk-Motive</td>
<td>3.02</td>
<td>.88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Risk</td>
<td>1.62</td>
<td>59</td>
<td>n.s.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motive-Risk</td>
<td>3.37</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
rate was not deemed obtainable. Rotter (1967) did give the range of test-retest reliability as between .56 and .68 when he first introduced the scale.

A split-half reliability coefficient (with the Spearman-Brown correction) was calculated from the data in the present investigation to test the internal consistency of the scale. Here it was found that the present sample of experimental subjects yielded a split-half coefficient of +.96, which is a significant \( p < .01 \) and acceptable level.

As a further test of reliability, the ITS was administered to a sample of Canadian university female undergraduates at the University of British Columbia. Table 6 shows the means and standard deviations for both the University of British Columbia group and the experimental subjects along with similar statistics reported by Rotter (Note 5), and Wright (Note 6).

Results of a \( t \)-test displayed in Table 7, between the University of British Columbia and the dissertation study group ITS scores showed no significant difference, \( t(203) = .55 \), n.s., two-tailed. It is concluded from the non-significant difference between the University of Victoria and the University of British Columbia samples that these two groups were providing relatively, and reasonably, consistent scores on the test.
Table 6

A Summary of Means and Standard Deviations\textsuperscript{a} for the Interpersonal Trust Scale Found in the Present Investigation, a University of British Columbia Comparison Group, the Study of Wright, Maggied, and Palmer (1975)\textsuperscript{b}, and by Rotter\textsuperscript{c}

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotter</td>
<td>67.20</td>
<td>10.60</td>
<td>756</td>
</tr>
<tr>
<td>(Sample collected in 1974)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wright, Maggied, and Palmer</td>
<td>65.15</td>
<td>9.20</td>
<td>322</td>
</tr>
<tr>
<td>(Sample collected in 1973)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charlesworth Dissertation</td>
<td>72.14</td>
<td>9.90</td>
<td>216</td>
</tr>
<tr>
<td>(Sample collected in 1978)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of British Columbia Validating Study</td>
<td>71.17</td>
<td>10.02</td>
<td>59</td>
</tr>
<tr>
<td>(Sample collected in 1979)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\textsuperscript{a} Means and standard deviations are for groups of female university students.

\textsuperscript{b} In their paper, the means and standard deviations for the ITS were reported for high and low trusters but not for the entire sample group taking the ITS. According to Wright (Note 6), the mean and standard deviation for the entire group was the same as that reported in an article by Wright and Sharp (1979).

\textsuperscript{c} The mean and standard deviation reported here was obtained from Rotter (Note 7).
Table 7
Significance Tests Between Means ITS Scores Derived from Different Studies

<table>
<thead>
<tr>
<th>Comparison</th>
<th>$t$</th>
<th>df</th>
<th>Two-tailed $p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlesworth vs. Wright, Magged, and Palmer</td>
<td>8.39</td>
<td>536</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>Rotter vs. Wright, Magged, and Palmer</td>
<td>3.16</td>
<td>756</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>Rotter vs. Charlesworth</td>
<td>6.04</td>
<td>916</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>Charlesworth vs. University of British Columbia Validation Sample</td>
<td>.55</td>
<td>203</td>
<td>n.s.</td>
</tr>
</tbody>
</table>
Table 7 also shows the multiple comparison of the means of ITS scores in sample groups obtained by Rotter from a sample tested in 1974 (Note 5), Wright et al. (Note 6), and Charlesworth (sample tested in February to April 1978).

Multiple t-tests were performed. It was found that the three comparisons of mean ITS scores were significantly different for the three sample groups even with \( \alpha \) at the .01 level to provide a very conservative test of significance. The importance of these significant results shown in Table 7 will be discussed in the next chapter.

From the foregoing assessment of the procedures and measures, no evidence was found to call the methodology into question.

Experiment I

The results which bear directly on the major experimental hypotheses will be stated first. Other findings of importance and interest will follow. The theoretical significance of all results will be discussed in a later chapter.

The Hypotheses

Hypothesis 1. The dichotomous trust measure (leaving possessions unattended on the bench in the washroom or
taking possessions into a toilet cubicle) was not significantly correlated with subjects' ITS scores. Hence, Hypothesis 1 was not supported. The point-biserial correlation coefficient between trust behaviour in Experiment I and subjects' ITS scores showed the low and non-significant correlation of +.10.

When each ITS item was correlated with the experimental trust behaviour, no individual ITS item showed a significant point-biserial correlation with the trust behaviour (Appendix E).

Hypothesis 2. By means of a Chi-square test, it was shown that there was significantly more trust behaviour in the low risk condition (n = 29) than in the high risk condition (n = 9) \( \chi^2(1) = 13.42, p < .01 \). These results supported Hypothesis 2. The experimental manipulation of risk affected the rate of trust behaviour over the two risk conditions.

Hypothesis 3. Table 8 displays the correlations between risk assessment and trust behaviour for the low and high risk condition. Both correlations reached conventional levels of significance. The overall point-biserial correlation (with risk levels collapsed) was also significant, \( r_{pb} = 39, n = 116 \).
Table 8

Point-Biserial Correlations Showing the Relationship Between Risk Assessment and Trust Behaviour in the Low Risk, and High Risk Conditions of Experiment I

<table>
<thead>
<tr>
<th>Correlation Between Risk Assessment and Trust Behaviour</th>
<th>n</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Risk</td>
<td>.23</td>
<td>56</td>
</tr>
<tr>
<td>High Risk</td>
<td>.47</td>
<td>60</td>
</tr>
</tbody>
</table>
There was a significant difference in the risk assessments made by trusting subjects and distrusting subjects in the high risk condition. The difference in the risk assessments of trusting and distrusting subjects in the low risk condition approached significance (Table 9). The mean risk assessment of distrusting subjects in the low risk condition was 2.36, which was greater than the mean risk rating for trusting subjects (1.96). This difference was not significant, \( t(54) = 1.76, \text{n.s., two-tailed} \). The corresponding risk assessments for trusting and distrusting subjects in the high risk condition were 1.56 and 2.93, respectively. This difference was significant, \( t(58) = 3.80, p < .01, \text{two tailed} \).

Hypothesis 4. The type of prize (cash or lottery tickets) elected by subjects was not significantly related to their trust behaviour in Experiment I, \( \chi^2(1) = .005, \text{n.s.} \). Of the trusting subjects in Experiment I, 20 elected the cash prize and 14 chose the lottery tickets.

17 Two-tailed t-tests were performed throughout this dissertation even though specific predictions about the direction of the results (and, hence, one-tailed tests) could be made. The two-tailed test has the advantage of being a more conservative test of significance. More confidence can be given to significant results obtained by this method than shown in one-tailed tests.
Table 9

$t$-tests of the Differences in Risk Assessments Made by Behaviourally Trusting and Distrusting Subjects in Low and High Risk Conditions For Experiment I

<table>
<thead>
<tr>
<th>Risk Assessment</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>Two-tailed p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Risk</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trusting</td>
<td>27</td>
<td>1.96</td>
<td>.76</td>
<td>1.76</td>
<td>54</td>
<td>&lt; .10</td>
</tr>
<tr>
<td>Distrusting</td>
<td>29</td>
<td>2.36</td>
<td>.93</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>High Risk</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trusting</td>
<td>9</td>
<td>1.56</td>
<td>.53</td>
<td>3.80</td>
<td>58</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>Distrusting</td>
<td>51</td>
<td>2.93</td>
<td>1.06</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Other Findings

The questionnaire which accompanied the ITS included three questions related to trust behaviours in the library. Chi-square analyses of responses to the three questions showed no significant association between behaviourally trusting and distrusting subjects.

Specifically, one question asked whether subjects' belongings had been previously stolen from the library, $\chi^2(1) = 1.66$, n.s.; another question asked whether subjects would leave their belongings unattended in the carrel, $\chi^2(1) = .49$, n.s.; and the third question dealt with whether or not subjects felt lockers should be installed in the washrooms (presumably to secure belongings while subjects were out of view), $\chi^2(1) = .06$, n.s.

A step-wise multiple regression equation was derived for trust behaviour to show the relative contribution of various independent variables (and the antecedent variable, ITS score) in predicting the behavioural criterion. The selection of predictors was on the basis of significant F values. The order of predictor variance was as shown in Table 10 with the best predictor, risk assessment, accounting for over 14% of the variance. The ITS was the third best predictor. It reduced error variance by only 1% conditional
Table 10

Multiple Regression Correlation Predicting Trust Behaviour in Experiment I from ITS Scores, Risk Assessment and Having Belongings Previously Stolen

<table>
<thead>
<tr>
<th>Variable</th>
<th>$R^2$ (Culminative Percentage of Variance Accounted for)</th>
<th>$R^2$ Change: (Change in Variance Accounted for)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Assessment</td>
<td>.144</td>
<td>.144</td>
</tr>
<tr>
<td>Stolen*</td>
<td>.177</td>
<td>.033</td>
</tr>
<tr>
<td>ITS</td>
<td>.183</td>
<td>.006</td>
</tr>
</tbody>
</table>

*The wording of the question upon which this variable is based was: "Have you ever had personal belongings stolen in the Library?"
upon the effects of the two preceding predictors. Some of the predictors selected by SPSS programming were not included in the table if the incremental contribution of these predictors was less than 1% of the accounted variance.

Experiment II

The results of Experiment II are consistent with those of Experiment I even though the trust measures were different. Hence, the significant relationships found in these experiments supports the notion that results can be generalized to other trust situations and that real, and not fortuitous, associations have been found.

The Hypotheses

Hypothesis 1. The point-biserial correlation between the overall ITS scores and the trust behaviour measured in Experiment II was .06, which was not significant. Hence, the first hypothesis is not supported.

Hypothesis 2. The results support the hypothesis that there was a significantly greater rate of behavioural trust in the low risk (n = 44) than the high risk (n = 32) condition, $\chi^2(1) = 4.78$, $p < .05$. As was the case in Experiment I, the risk manipulation was successful in affecting trust behaviour.
Hypothesis 3. There were significant point-biserial correlations found between risk assessment and trust behaviour in the low (.51) and high (.44) risk conditions. When risk conditions were collapsed, the overall point-biserial correlation between risk assessment and trust behaviour was .51 (sign., n = 121). Hence, Hypothesis 3 was supported.

Table 11 shows that in the low and high risk conditions, the risk assessments of behaviourally trusting and distrusting individuals was significantly different. In these experiments it was not possible to establish the direction of this difference. For example, it was not shown whether behaviourally trusting subjects made lower risk assessments or people making low risk assessments behaved trustingly.

Hypothesis 4. In Experiment II, as was the case in Experiment I, there was no significant difference in the type of prize selected by behaviourally trusting and distrusting subjects, $\chi^2(1) = 1.23$, n.s. Hence, Hypothesis 4 was not supported. Forty-five behaviourally trusting subjects chose the cash prize and 22 subjects chose the lottery tickets.
Table 11

t-tests of the Differences in Risk Assessments made by Behaviourally Trusting and Distrusting Subjects in Low and High Risk Conditions (Experiment II)

<table>
<thead>
<tr>
<th>Risk Assessment</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>Two-tailed p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Risk</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trusting</td>
<td>44</td>
<td>2.57</td>
<td>.72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.57</td>
<td>58</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>Distrusting</td>
<td>16</td>
<td>3.56</td>
<td>.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>High Risk</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trusting</td>
<td>32</td>
<td>2.83</td>
<td>.72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.08</td>
<td>59</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>Distrusting</td>
<td>29</td>
<td>3.62</td>
<td>.83</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Other Findings

Subjects' responses on the questionnaire data showed a similar pattern to that reported in Experiment I. In response to the question about having belongings previously stolen in the library (i.e., Have you ever had any personal belongings stolen while in the Library?), no significant association was found in the reported frequency between behaviourally trusting and distrusting subjects, $\chi^2(1) = 1.00$, n.s.

Chi-square analyses showed no significant relationship between trusting and distrusting subjects in their response to the question, "... would you leave your books and coat in the carrels while you were away from the library during lunch-hour or while attending a class?", $\chi^2(1) = .48$, n.s. Nor was there a significant difference between trusting and distrusting subjects in their response to the question about installing lockers in the washroom (i.e., Should lockers be provided in the Library washrooms to leave coats and books while using the toilet cubicles?).

When a step-wise multiple regression analysis was performed, the behavioural criterion had two major predictors. These were in order of selection: risk assessment and ITS. Table 12 shows that the best predictor, risk assessment, accounted for 26% of the predictable variance in the
Table 12

Multiple Regression Correlation Predicting Trust Behaviour in Experiment II From its Scores, Risk Assessments and Subject's Responses To Two Questionnaire Items

<table>
<thead>
<tr>
<th>Variable</th>
<th>$R^2$ (Culminative Percentage of Variance Accounted for)</th>
<th>$R^2$ Change (Change In Variance Accounted for)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Assessment</td>
<td>.256</td>
<td>.256</td>
</tr>
<tr>
<td>ITS</td>
<td>.264</td>
<td>.008</td>
</tr>
</tbody>
</table>
regression equation. The other predictor selected in the step-wise regression procedure made a trivial contribution (.01) in the accounting of variance after the effect of risk assessment was removed. There were other predictors selected on the basis of significant $F$ values but as these variables added less than 1% to the culminative percentage of variance, they are not shown in Table 12 nor discussed here.

**Experiment III**

Experiment III failed to replicate the findings reported by Wright, Maggied, and Palmer (1975).

The Hypotheses

**Hypothesis 1.** The findings of Wright et al. (1975) were not supported by the results of Experiment III. There was no significant difference found between the means for low ($\bar{M} = 2.19$) and high ($\bar{M} = 2.33$) trusters on the trust measure, total number of questions asked, $t(193) = .42$, n.s., two-tailed.

**Hypothesis 2.** Results failed to reject the null hypothesis and did not support the published findings of Wright et al. (1975). No significant difference was found between the means for low ($\bar{M} = .93$) and high ($\bar{M} = 1.02$)
trusters on the trust index, number of suspicious questions asked, \( t(103) = .44, \text{n.s.}, \text{two-tailed} \).

Hypotheses 3a, 3b, 4a, and 4b. No significant correlations were found between the trust measures in Experiment III and the trust measures in Experiments I and II. The point-biserial correlations between the trust measure in Experiment I and the total number of questions asked and the number of suspicious questions asked were .19 and .17, respectively (\( n = 56, \text{n.s.} \)). The corresponding correlations between the trust measure in Experiment II and the two trust measures in Experiment III were .01 and .04, respectively (\( n = 49, \text{n.s.} \)).

Other Findings

Because there were initial differences in the subject groups of Experiment III and the Wright et al. (1975) study, some statistical comparisons were necessary to test for possible effects of these differences on the dependent variables.

One difference was that in Wright et al., all subjects were taking a psychology course, while in the present experiment 60 out of 90 subjects asked were not enrolled in a psychology course. To test for the effect of psychology enrolment on the trust indices, \( t \)-tests were performed. On the trust index, number of questions asked, the mean for
subjects who had previously taken psychology was 2.22 questions (n = 36) and the mean for those who had not taken psychology was 2.47 questions (n = 60). This difference was not significant, t(94) = .65, n.s., two-tailed. On the trust index, number of suspicious questions asked, the corresponding means were .97 (n = 36) and 1.08 (n = 60). Again, this difference was not significant, t(94) = .47, n.s., two-tailed.

A t-test of the ITS scores of subjects in Experiment III who had previously taken a psychology course (M = 72.61) and those who had not (M = 73.32) showed no significant difference between groups, t(94) = .29, n.s., two-tailed.

Previous enrolment in psychology had no significant effect on subjects' agreement to participate in the experiment, X^2(1) = .01, n.s.

General Results From the Three Experiments

The ITS demonstrated low and non-significant correlation with five items on the mail questionnaire. The point-biserial correlations between the ITS and four of the questionnaire items were as follows: "Have you ever had any personal belongings stolen while in the Library?" (r_pb = .01, n = 212); "... would you leave your books and coat in the carrels while you were away from the Library
during lunch-hour or while attending a class?" \((r_{pb} = .02, n = 210)\); "Should lockers be provided in the Library washrooms to leave coats and books while using the toilet cubicles?" \((r_{pb} = -.12, n = 210)\); and, "... would you prefer to receive cash or lottery tickets?" \((r_{pb} = .11, n = 206)\). The Pearson product-moment correlation between the ITS and the fifth questionnaire item concerning the necessity of library security ("How necessary to Library security and the prevention of theft do you think the controlled exit is?") yielded a non-significant correlation of -.08 \((n = 210)\).

There was no significant correlation found between subjects' risk assessments in Experiments I and II and their ITS scores \((r_{pb} = .05, n = 216)\).

One of the unique opportunities provided in these dissertation studies was to obtain repeated behavioural measures from subjects. This was accomplished by selecting subjects for Experiment I or II who had previously taken part in either Experiment I or II. It was expected that subjects overall would reveal consistency in their trust behaviours. Hence, information about subjects obtained in Experiment III was added in a step-wise regression analysis predicting the criterion, trust behaviour in Experiment I or II. Tables 13 and 14 show the results of these regression analyses. It was found that there was only slight increase
Table 13

Multiple Regression Correlation Predicting Trust Behaviour in Experiment I From ITS Scores, Risk Assessment and the Trust Indices of Experiment III

<table>
<thead>
<tr>
<th>Variable</th>
<th>$R^2$ (Cumulative Percentage of Variance Accounted for)</th>
<th>$R^2$ Change (Change in Variance Accounted for)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Assessment</td>
<td>.20</td>
<td>.20</td>
</tr>
<tr>
<td>Total Number of Questions</td>
<td>.23</td>
<td>.03</td>
</tr>
<tr>
<td>Asked</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITS</td>
<td>.25</td>
<td>.02</td>
</tr>
</tbody>
</table>
Table 14

Multiple Regression Correlation Predicting Trust Behaviour in Experiment II From ITS Scores, Risk Assessments and the Trust Indices of Experiment III

<table>
<thead>
<tr>
<th>Risk Assessment</th>
<th>$R^2$ (Culminative Percentage of Variance Accounted for)</th>
<th>$R^2$ Change (Change in Variance Accounted for)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITS</td>
<td>.29</td>
<td>.004</td>
</tr>
<tr>
<td>Number of Suspicious Questions Asked</td>
<td>.29</td>
<td>.002</td>
</tr>
</tbody>
</table>
in the prediction of the criterion by the inclusion of subjects' trust behaviours in Experiment III after the effect of the best predictor (in both cases, risk assessment) was removed.

Findings which focussed on the refinement of the ITS and subsequent changes in the predictive ability of the scale on the experimental trust measures were also examined. The first refinement of the ITS was based upon a paper by Chun and Campbell (1974) discussed earlier, which showed that the ITS is a multidimensional instrument. Their suggestion was that trust studies ought to correlate the underlying factors of the ITS, rather than the global score for the scale, with observable trust behaviours. Table 15 shows the results of the correlation of the ITS factors as isolated by Chun and Campbell. (It will be recalled that the correlations between the trust behaviours in Experiment I or II and overall ITS scores had been .10 and .06, respectively.) From Table 15 it will be seen that correlating the experimental trust behaviours with the four ITS factors isolated by Chun and Campbell did not produce significant results.

A second method of ITS refinement was based upon a refinement suggested in a recent paper by Wright and Sharp (1979). These researchers examined the ITS in terms of
Table 15

Point-Biserial Correlation Coefficients Showing the Relationship Between the ITS Subscales Derived by Chun and Campbell (1974) and the Trust Behaviours in the Three Experiments

<table>
<thead>
<tr>
<th>Experiment I ( ^a ) (Leaving Possessions on a Washroom Bench)</th>
<th>Experiment II ( ^b ) (Letting a stranger use your library card)</th>
<th>Experiment III (Indices from Wright, Maggied, and Palmer)</th>
<th>Susp. Quest.</th>
<th>Total Quest.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skepticism</td>
<td>.09</td>
<td>.04</td>
<td>.05</td>
<td>.05</td>
</tr>
<tr>
<td>Exploitation</td>
<td>.06</td>
<td>.03</td>
<td>-.01</td>
<td>.06</td>
</tr>
<tr>
<td>Hypocrisy</td>
<td>.13</td>
<td>.10</td>
<td>-.04</td>
<td>-.04</td>
</tr>
<tr>
<td>Role Performance</td>
<td>.07</td>
<td>.08</td>
<td>.09</td>
<td>.04</td>
</tr>
</tbody>
</table>

\[N\] 116 3121 105 105

Note: None of the above correlations are significant.

\( ^a \) The correlation of the overall ITS with the trust behaviour in Experiment I had been +.10.

\( ^b \) The correlation of the overall ITS with the trust behaviour in Experiment II had been +.06.
content and grammatical sex bias. They found that even though the questionnaire items of the ITS are expressed by sex-neutral references (e.g., "many people", "one", etc.), 12 questionnaire items are nevertheless independently judged to refer to predominantly male referents (grammatical sex bias). Also, specifying the gender of supposedly neutral questionnaire items led to different responses. Wright and Sharp found that both males and females obtained higher trust scores on the ITS when items were rewritten in terms of women (content sex bias). These investigators suggested that whenever the ITS is used to investigate trust towards other women (as it was in these experiments), eight ITS items which they said dealt with "power" ought to be eliminated from the scale. In our society, power positions are typically held by males. When women respond to these ITS items, they are revealing their trust towards men rather than towards other women.

Following upon their suggestion, new ITS scores were calculated subtracting subjects' ratings on the eight "power" items. The point-biserial correlation of the revised ITS scores with trust behaviour in Experiment I was .10 (n.s., n = 105) and .06 in Experiment II (n.s., n = 108). The Pearson product-moment correlation between the revised ITS scores and the behaviour measures in Experiment III
was .10 (n.s., n = 105) for the measure, number of suspicious questions, and .09 for the total number of questions (n.s., n = 105).

In the case of the present investigation, the refinement of the ITS, either by the alterations suggested by Chun and Campbell or Wright and Sharp, did not lead to an improvement in the prediction of the trust behaviours.
Discussion

These three experiments provide four areas for discussion. First, because these experiments are innovative and novel means of studying real-life trust behaviour, it is necessary to show that the manipulations did, in fact, elicit trust rather than some other variable. Furthermore, it must be shown that the experimental design allows results to be interpreted in terms of trust.

Second, significant relationships have been found among level of manipulated risk, risk assessment, and trust behaviour. It is especially important that the experimental hypotheses defining the relationship between risk and trust were confirmed in two different situations. Prior to these experiments, the interrelationships of these variables had not been empirically examined. Referring to the conceptual model in Figure 1, it has now been empirically established that two factors represented in the model (risk assessment and level of risk) are related to trust behaviour. Furthermore, additional information has emerged from these experiments to modify the conceptualization previously outlined.

Third, another important result from these three experiments was the consistent failure of Rotter's Inter-
personal Trust Scale to show significant correlation as predicted with any of the investigated trust measures. These non-significant results persisted despite the application of two factor analytic refinements on the scale which were suggested in the literature (Chun and Campbell, 1974; Wright and Sharp, 1979). The ability of Rotter's scale to provide significant or meaningful behavioural prediction is called into question.

Fourth, this study failed to replicate the results of Wright, et al. (1975), and this difference in experimental outcome must be explained. Reasons are proposed for the unreliability of the results reported by Wright et al. Because their study had been thought to offer important behavioural validation of Rotter's trust scale, non-replication of their findings by Experiment III is damaging to the ITS as well as indicative that theirs may be an unreliable method of measuring behavioural trust.

The Efficacy of the Experimental Design

There were motives, other than trust, which might be put forth for subjects' behaviour in these experiments; however, these reasons can be discounted, if not dismissed, on several grounds. Specifically, in Experiment I, one might argue that subjects were "trusting" because it was
more convenient to leave belongings on a washroom bench or because it was their habit to do so. Furthermore, subjects might be thought to have been modelling another person's behaviour or they might have held the view that temptation ought not be put in the way of others. (These alternative motives would have been as relevant in the low risk as in the high risk condition.) However, subjects' own reports about their behaviour were reassuring; none of these explanations, when examined by three judges, appear to be more salient in subjects' decision-making than trust.

In Experiment II, motives such as altruism and compliance (with the experimenter's request) could be advanced to account for the observed experimental behaviour. Once again, judges' classification of subjects' self-reports of their own actions lend no credence that these alternatives were major determinants of the observed behaviour.

There were differences between the experiments, however. In Experiment I, approximately 70% of subjects' motives were judged to be related to trust. In Experiment II, over 90% of the motives fell into this category. Hence, in the one-to-one interpersonal interaction of Experiment II, trust was judged to be a more immediately relevant behavioural motive than it was in Experiment I. When there is a direct interaction between people in a situation with inherent
risk, trust becomes a more salient motive than when there is an interaction with people in general or an interaction with institutions.

The adequacy of the sampling in the experiments deserves examination and consideration. The high participation rate in recruiting subjects and the high return rate of mail questionnaires give confidence that there was no restrictive self-selection bias operating in the experiments.

The volunteer or participation rate was exceptionally high in Experiments I and II, perhaps, in part, because subjects had been enlisted in the library. Students may have been amenable to taking part in a survey presented as examining library security, a non-threatening and non-contentious issue, because they were using library facilities. Furthermore, the experimenter's approach in this unexpected setting may have facilitated subjects' cooperation and their perception that the survey's purpose was important and relevant.

The return rate for the mail questionnaire in both experiments was very high (91%) for this type of research technique. Part of the success in obtaining such a high questionnaire return rate may have been the chance of winning a substantial prize (one of the variables of experimental interest) offered to subjects for completed questionnaires.
Another reason for the high return rate may have been the personal interaction between the experimenter and subject. The experimenter's approach was a successful application of the "foot-in-the-door" technique. The experimenter obtained preliminary data from subjects (a small favour), arousing their interest and involvement, before handing out the questionnaire (a large favour).

Finally, when subjects accepted the questionnaires for completion, they were asked to promise to return them. As a further inducement to keep their promise, subjects were asked for their names and phone numbers in case a reminder call was necessary. Calls were made to subjects whose questionnaires were not returned within two weeks. The above reasons - a chance at a prize, the "foot-in-the-door" technique, and follow-up calls - helped produce 216 out of 237 completed returned questionnaires.

Another matter of concern in judging the efficacy of the experimental procedures is the reliability of the experimental measure, the ITS. The reliability of the ITS was high ($r_{xx} = .96$) as assessed by the split-half correlation. Furthermore, a comparison of a group of University of British Columbia female undergraduates with the experimental subjects at the University of Victoria showed consistency in mean ITS scores (Tables 6 and 7).
In conclusion, it is not unreasonable to infer that trust was, indeed, the variable under investigation. Three judges classifying subjects' motives (and a validating study of the experimental measures at the University of British Columbia) support such an assertion. Furthermore, the ITS was reliable in terms of its internal consistency and the consistency of the mean scores obtained from two similar sample groups. Finally, high participation and return rates relieve any reasonable doubt that an artifact in subject selection influenced the outcome.

Because the experimenter was also the administrator of Experiments I and II, the theoretical possibility of experimenter bias exists. However, appropriate precautions were taken against biasing subjects' responses. For example, care was taken to standardize the presentation and wording of the requests to subjects and the experimenter carefully and conscientiously avoided any cues to subjects about how they were to respond. Most importantly, the naturalistic setting of these experiments, the plausibility and "spontaneity" of the situation, and the apparently real risks involved, served to minimize the effect of demand characteristics.

Perhaps assistants, blind to the experimental hypotheses, should have administered the experimental manipulations,
particularly in Experiment II. However, such a measure would not have entirely disposed of the possibility of experimenter bias since it is generally admitted that assistants, as well as subjects, are incurable sleuths when it comes to hypothesizing experimental purposes.

As Orne (1970) has pointed out:

... it is futile to imagine an experiment that could be created without demand characteristics. One of the basic characteristics of the human being is that he will ascribe purpose and meaning even in the absence of purpose and meaning. (p. 11)

In short, because of the precautions taken and the plausible, naturalistic settings of the experiments, it is unlikely that experimenter bias or demand characteristics appreciably affected the outcome of these studies.

**Risk and Trust**

The results of Experiments I and II have demonstrated the importance of level of risk and risk assessment in influencing trust behaviour. Furthermore, the findings are suggestive, but not yet conclusive, of a difference between situations of trust and those of risk-taking and chance. In addition, support has been found for the conceptualization of trust with slight modification, introduced in Chapter I.
In the first two experiments, it was found that as the level of manipulated risk increased, the frequency of trust behaviour decreased significantly: risk assessment was significantly and inversely related to trust behaviour. The two risk variables, level of risk and risk assessment, were significantly and positively related to each other. In these experiments, level of risk was an independent, dichotomous variable, and risk assessment was a continuous, dependent variable.

This relationship between level of risk and trust behaviour has validated the experience of everyday life: increasing risk decreases trust. The posting of warning signs in a program such as "Neighbourhood Watch" is designed to deter thieves and also discourage unwarranted trust behaviour of others by reminding them of the attendant risks in such behaviour.

The conceptualization of trust described in the first chapter proposes that risk assessment precedes trust behaviour. In these field experiments, the experimental design and the recruitment of subjects did not allow for the clear establishment of this temporal order. It could be argued that because subjects gave their risk assessments after they had participated in the trust situation, risk assessment is merely a reactive measure affected by subjects'
need to appear rational and consistent and to justify their trust behaviour. However, a strong relationship between risk assessment and trust behaviour existed in Experiment I, even though the demand characteristics were less than they had been in Experiment II.

In Experiment I, subjects did not know that the experimenter had made an unobtrusive measure of their behaviour with respect to leaving belongings on the washroom bench. Hence, while risk assessment ratings may have been influenced by subjects' immediately preceding behaviour, it was not because subjects knew that the experimenter was apprised of their behaviour that they made the kind of ratings that they did. This evidence, of course, does not completely dispose of the problem of determining the order of effect of risk assessment and trust behaviour; but there is no doubt that a strong relationship does exist between these variables.

The third type of risk investigated in the present inquiry was risk-taking in a situation of chance and its effect on trust behaviour. It was asserted in the opening chapter of this paper that risk assessment and risk-taking were different variables, and, from the results, this assertion is supported. On the one hand, a significant relationship between risk assessment and trust behaviour
was found—in Experiment I the correlation was .39 (n = 116, p< .01), and in Experiment II the correlation was .51 (n = 121, p< .01)—while, on the other hand, what has been called "risk-taking" was shown to be independent of trust behaviour.

Subjects' choice of the lottery tickets over the cash prize was taken to reflect a higher level of risk-taking, in the conventional sense of gambling, than selecting the cash. It was hypothesized that behaviourally trusting subjects would elect the lottery tickets significantly more frequently than the behaviourally distrusting subjects. However, results did not support this hypothesis. More precise study of this relationship ought to be made.

The critical difference between risk-taking in gambling and situations of luck and chance and the risk-taking involved in trusting, no doubt, resides in the interpersonal aspects which are inherent in trust-decisions and of minimal or no relevance in game situations.

Risk assessment, as conceptualized in these experiments, includes the effect of these interpersonal variables, and hence shows significant relationship to trust behaviour. Risk-taking in the choice of prize (in this instance, either cash or lottery tickets), where the emphasis is primarily placed on the maximization of personal outcome,
does not indicate subjects' trust behaviour. Here the results from these experiments support the view that situations of chance and luck cannot be profitably extended to the more complex situations of interpersonal trust, and that trust behaviour does not relate to risk-taking in the conventional sense of gambling.

There are some interesting differences between Experiments I and II which deserve discussion and which suggest an area for future research. In these experiments, level of risk was manipulated in two different ways. In Experiment I, where the posting of a sign read, in part: "Several articles have been stolen," the probability of a negative outcome was changed. The sign encouraged the view that the users (or some user) of the washroom were (had been) untrustworthy. Hence, even though a subject might enter the washroom on two different occasions (when a sign was posted and when it was not) carrying the same articles (the same value/utility of object at stake), the subject's behaviour might be different on each occasion. The warning sign would increase assessments of the probability of a negative outcome.

In Experiment II, the experimenter made the same request of subjects. In one case, the request was made while carrying a single small book, and in another case,
while holding three large art books. Hence, the trustworthy/untrustworthy appearances of the experimenter was presumably the same over the risk condition (the probability of negative outcome was the same) although the value/utility aspect of risk was not. The number and size of books which subjects were asked to borrow for the experimenter changed.

The manipulation of these two aspects of risk (the probability of negative outcome in Experiment I and the value/utility component of the objects at stake in Experiment II) led to a similarly perceived difference in level of risk, and the effect of this difference in level of risk on trust behaviour was nearly the same in both experiments. A more systematic study of these components of risk with regard to their effect on trust might be undertaken at some later date.

Experiments I and II differed in another important way and this difference suggests the necessity of modifying the conceptualization of trust shown in Figure 1. Experiment I provided a situation in which trust of people in general was at issue. Experiment II was based upon a trust situation in which there was face-to-face contact between subjects and a stranger.

The major findings concerning the effect of risk assessment on trust behaviour remain the same in the two
experiments even though differences did exist—differences in trust agent (trust in a group of anonymous others vs. trust in a single unknown stimulus person) and the ascribed trustworthiness of the trust agent.

The two experimental situations were entirely different. In Experiment I, the rates of trust behaviour in the low and high risk condition were 48% and 15%, respectively. In Experiment II, the rates were 73% and 53%, respectively. It might be expected from the hypotheses and the conceptualization (Figure 1) that the risk assessments in Experiment II would be accordingly less than in Experiment I; however, such was not the case.

It is perhaps not too surprising that it is easier to trust a specific other (because of our confidence in ourselves as amateur psychologists?) than unknown others. Furthermore, in the face-to-face confrontation of Experiment II, behavioural trust rates may be higher than in Experiment I, because subjects face the additional pressures of the social desirability of trusting. The success of assertive training clinics indicates that many people find it difficult to refuse face-to-face appeals.

The higher risk assessments (and higher risk rates) in Experiment II than Experiment I are at first puzzling since it has been shown that risk assessment is significantly
and inversely related to trust behaviour. An explanation of this result may depend upon the perceived trustworthiness of the trust agent. Indeed, the experimenter's trustworthy appearance was spontaneously mentioned as a determining factor in subjects' behavioural choice in 28% of the cases in Experiment II.

What has been empirically demonstrated in the two experiments has been informally observed, and often reported, in the newspapers. Stories are frequently encountered about unsuspecting individuals (sometimes termed "marks" or "pigeons") being swindled and cheated by an unscrupulous person (called a "con-man") who has been trusted to the mark's detriment and regret. Often the "mark" acknowledges that he or she realized at the time the risk involved.

Because the "con-man" appeared so trustworthy, the mark overcame initial reservations and invested trust, often in spite of better judgement. In Experiment II, subjects enact the first chapter of these unhappy stories: they trust, despite the high risk which they recognize exists, because of the apparent trustworthiness of the experimenter.  

18 Happily for subjects, there are no sad endings to this experiment. However, the con-men are correct: You can't fool all of the people all of the time but you can fool most of them with a plausible tale and a trustworthy approach even when the stakes are high.
At this point, a modification of the proposed conceptualization of trust must be made. Risk assessment, although significantly related to trust behaviour, is also influenced by outside considerations which, at times, lowers the frequency of trust behaviour. The new schematization introduces a new level between risk assessment and trust behaviour (Figure 2). This level may be called "risk acceptance".

In the case of Experiment II, risk acceptance influences trust behaviour in the following way: even though a person might make a high risk assessment of situational variables (based upon existing level of risk and perceptions of interpersonal variables), the individual may decide to trust, nevertheless. That is, in this particular circumstance, the person might trust because of other mediating factors, such as anticipated disappointment of the other person or a wish to help a fellow student to pass her exams. Interpersonal variables not only are a component of risk assessment but also may lead one to accept greater risk (for a variety of reasons) than otherwise would be undertaken.

In a different context, this distinction between degree of risk and the acceptance of risk has been drawn before. Lowrance (1976) has written about societal, health and
Figure 2. A Modified Conceptualization of Trust Behaviour
occupational hazards and how they ought to be evaluated. He states that there are two different activities necessary in making judgements about safety. First, there is the "objective but probabilistic pursuit" of measuring risk, and second, the "personal and social value judgement" of assessing the acceptability of the risk. This distinction may also be relevant to trust decisions. Certainly, it ought to be explored further.

In Experiment I, risk acceptability may also have affected the trust behaviour of subjects. People may have trusted in the washroom study, despite high risk assessments, for a variety of reasons. For example, they may have thought that another person would not have time to steal their possessions during the brief period that articles would be on the bench out of view. Hence, whereas generally high risk assessments dictate distrusting behaviour, a person may be willing to accept greater risks in a particular situation (because of extenuating circumstances) and, therefore, trust. The revised model of trust proposed here clearly calls for empirical investigation.

The ITS: The Prediction of Trust Behaviour From A Dispositional Measure

In all three experiments, the ITS failed to show significant correlation with any of the trust measures. This
result was surprising because it had been expected that the ITS would be one of the means of validating the behavioural trust measures. However, the non-significance of the correlation between the ITS and the trust measures affects the credibility of the widely used trust scale, largely because other methods of validation did lend support to the behavioural measures. Moreover, it has now been shown that the ITS does not provide prediction in two previously unexplored trust situations (Experiments I and II) and in a replication of Wright et al. Hence, the status of the ITS as a behavioural predictor becomes suspect.

Many social psychology experiments have relied upon the ITS as a trust measure. As Allen (1973) has pointed out, social scientists feel "more comfortable with questionnaires and computer wizardry on their results than with behavioural expressions" (p. 216). There is high interest in the area of trust research, and, as Chun and Campbell (1974) observe, investigators, eager to embark on their studies and anxious to relate their findings to current literature use tools which are readily available. The body of literature employing the ITS has expanded and gives the scale a respectability (in terms of number of citations?19) which it may not deserve. The ITS, never on

19 Note that in some current articles (e.g., Endler, 1979 and Schaeffer and Sulyama, 1979), this measure, number
particularly solid ground, is reaching the point where an evaluation of its predictive ability must be made.

In a recent paper on the ITS, Rotter (Note 8) mentions several studies (some of them unpublished) which validate the trust scale. It is interesting to note that three of these studies (Hamsher, 1978; Steinke, 1975; and Wright, 1972) involved the correlation of ITS scores with some form of game behaviour. There are, however, difficulties with this type of validation. One immediately obvious difficulty is that results from game studies have not consistently supported the ITS. (See Singer and Singer, 1972.)

Another difficulty with the ITS is the transparency of its items, which makes it susceptible to demand characteristics. The scale is wide-ranging and can readily be answered in such a way as to conform to a stereotype of a trusting or distrusting person. Hence, in the studies mentioned by Rotter supporting his scale, it is important to note when the ITS was administered in relation to the measurement of game behaviour. (For example, if a person decided, for whatever reasons, to play aggressively and competitively, and then subsequently completed the ITS, it is plausible to predict on the basis of demand characteristics alone that the ITS responses would reveal a dis-

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of citations, has been taken as an index of eminence of social psychologists. The pitfalls are perhaps the same!
trusting attitude.) If the ITS were constructed in a more subtle way with some emphasis on subjects' behavioural reporting and less on beliefs and attitudes, the scale would be less susceptible to such influences.

An examination of ITS items shows that the scale taps widespread attitudes and beliefs about matters peripherally related to trust such as the world's future and the judiciary. In fact, an item by item examination of the scale shows that some items are particularly vulnerable to changes in public opinion. For example, "The United Nations will never be an effective force in keeping world peace"; "The judiciary is a place where we can all get unbiased treatment"; and, "Most elected public officials are really sincere in their campaign promises."; The first two items would be affected by current events (such as clashes in United Nations' peace-keeping zones or some publicized cause of a minority group) and the third item might depend upon proximity to voting day and one's political stripes. Although subjects' trust behaviour might be expected to vary somewhat according to the situation, a generalized scale of trust should be fairly stable. The inclusion of the items discussed here suggest that the scale is a weathervane of public attitude which makes it a precarious predictor of trust behaviour.
There have been suggestions made by Chun and Campbell (1974), Kaplan (1973), and Wright and Sharp (1979) that the predictive ability of the ITS could be improved by correlating the underlying dimensions, revealed by factor analysis, with trust behaviour rather than using a total ITS score. But neither of two factor analytic refinements employed in this study produced significant results.

The first method involved the correlation of the four factors derived by Chun and Campbell (1974) with trust behaviour. These factors were: Hypocrisy, Skepticism, Exploitation, and Role Performance. The point-biserial correlations between the overall ITS scores and trust behaviours in Experiments I and II had been +.10 and +.06, respectively, and when the four factors suggested by Chun and Campbell were individually correlated with trust behaviour, no appreciable increase in the size of the correlations resulted. The highest correlation was +.13 between the factor Hypocrisy and the trust behaviour in Experiment I (leaving possessions on a washroom bench).

The second method was based upon a recent paper by Wright and Sharp (1979). These researchers suggested that eight particular ITS items, some of which were mentioned above as dealing with the judiciary, politics or what they designated as "power," should be eliminated when testing
for female trust towards other women. Accordingly, ratings on these eight items were dropped from original ITS scores on these experiments and new point-biserial correlations calculated. Once again, this refinement on the ITS did not yield significant correlations.

While factor analytic techniques provide superficial improvements in scales, they do not go to the heart of the matter and give conceptual redefinitions. The problems of the ITS are apparently serious enough that simple scale refinement may not be a remedy. Later the lines of development a new trust scale might follow will be discussed.

Failure to Replicate the Study of Wright, Maggied, and Palmer

Although an attempt was made to follow the method of the Wright et al. study in Experiment III, some unavoidable obstacles were encountered. These difficulties, however, cannot fully account for the discrepancy in experimental outcome and may be entirely irrelevant.

One difference between the studies was in the characteristics of subjects participating in each study. In the study of Wright et al., all students participating in the telephone trust study were enrolled in a psychology course. In the present study, because students were recruited from the university library rather than from a
psychology class, not all students had taken one or more psychology courses. In order to test the effect of being a psychology student on the experimental trust variables, subjects in Experiment III were asked whether they had previously taken psychology courses. There were no significant differences in subjects' responses to this question and the number of suspicious questions asked, \( t(94) = .49 \), n.s., the total number of questions asked, \( t(94) = -.44 \), n.s., and the ITS scores, \( t(94) = .38 \), n.s.).

Another difference between the two studies was subjects' participation in Experiment I or II previous to their being in Experiment III. The effect of subjects' prior participation in one of the other experiments may have contributed to the fact that subjects in the Charlesworth study did ask more questions on average (\( M_L = 2.19 \) and \( M_H = 2.33 \) for low and high trusters, respectively) than in the Wright et al. study (\( M_L = 2.18 \) and \( M_H = 1.61 \) for low and high trusters). It will be seen from these figures that in the Charlesworth study high trusters asked more (but not significantly more) questions than did the low trusters, whereas, in Wright et al. the direction of this difference was reversed. That high trusters should ask more questions (i.e., be behaviourally distrusting) in the Charlesworth study on the trust measures is entirely
contrary to the findings of Wright et al. Such findings suggest that either the ITS or the trust measures themselves are unreliable and inappropriate.

There are four reasons that may account for the failure of Experiment III to obtain significant results. The first reason to be proposed is based upon the validating study at the University of British Columbia referred to previously.

It will be recalled from this validating study that judges rated the trust situation in Experiment III (the number of questions asked when called to be in an experiment) lower ($M = 2.64$), in terms of trust, than the situations of Experiments I or II ($M = 1.96$ and $M = 1.52$, respectively). The mean rating given to the trust behaviour of Experiment III is very close to the mid-point of the scale (3) even though the situation was rated as significantly different from the mid-point. This is not convincing evidence that the Wright et al. measures are directly related to trust. Looking at the comparative frequency of subjects' ratings (Table 3), it can also be seen that there was a much greater dispersion of scores across the scale. There was less agreement that Experiment III was, indeed, a trust situation. Subjects' ratings for the other two experimental situations, on the other hand, were concentrated in the high trust end of the scale.
A second reason for the non-significance of Experiment III may be that the ITS is not a good predictor of trust behaviour in specific situations such as in these experiments. The ITS was introduced as a measure of generalized trust, and hence may fail in the prediction of any one specific measure.

A third reason for the non-significance of Experiment III relates to the first one mentioned above, namely that trust measures designated by Wright et al. are not strong indices of trust. A close examination of the questions designated as suspicious by the coding system of Wright et al. (Appendix D) shows that most of the questions (e.g., "What kind of experiment is it?", "Who is this?", and "Am I going to get out on time?") could equally well have been prompted by curiosity, sociability, and information-seeking as they could by lack of trust.

A final reason for the discrepant experimental outcomes may be found in a paper by Wright and Sharp (1979). They maintain that the ITS provides "a conservative estimate of trust towards women" (p. 72) and that because of the content and grammatical sex bias of the scale, it may not be an appropriate measure for trust towards another female. Certainly the results of Experiment III indicate that the ITS was not a discriminating measure of the criterion trust behaviours introduced by Wright et al.
There is an interesting sidelight to the Wright et al. study which relates to the mean ITS scores, which they report for their subject group as 65.15. This mean is significantly different from that obtained by the subject group in Experiment III (74.14). This difference may be attributed to the different times at which the ITS was administered (1974 vs 1978)\(^2^0\) and to the differences in political climate which have been reported to influence mean ITS scores.\(^2^1\) It is particularly noteworthy that the ITS means of subjects in Experiment III were not significantly different from the mean ITS score of a group of University of British Columbia students. That is, the ITS scores of the British Columbia samples were stable. However, the ITS means of subjects reported in Wright et al. are significantly different from those reported by Rotter for the same time period. Subjects in the Wright et al. study were similar to the women in Rotter's standardization

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\(^{20}\)Rotter (Note 7) reports that the ITS reached a low point in 1972 (not specified) and has been steadily rising since then.

group since both studies employed female, eastern American university students. Given these basic similarities in samples, it is peculiar that mean ITS scores should be significantly different.

Wright et al. did replicate their study with two different sample groups and reported the same significant results with approximately the same magnitude of differences in the size of the effect. Experiment III could not. Such a result is disappointing. However, given the generality of the items composing the ITS, its record of behavioural prediction, the paper by Wright and Sharp (1979) that the ITS is perhaps not a reliable predictor for trust of women, and the judged relationship between the Wright et al. measures and trust (by the validating group at the University of British Columbia), it is more surprising that Wright et al. were able to report significant results in two different samples than that Experiment III could not replicate such results. The problem may not be that the Wright et al. study is a one (two?)- shot affair but that the effect which they found is not robust enough to survive change over time and location.
Interpersonal trust is one of the crucial bases of all social interaction. Therefore, it is of general interest to social scientists as well as to laymen. These three experiments have not provided all the answers to the questions which occupy trust researchers but, by dint of taking the study of trust outside the laboratory, these experiments have gone beyond game situations, questionnaires, and contrived situations in an already suspicious-laden atmosphere into the real world. Hence, apart from diminishing the effects of suspicion and demand characteristics inherent in many laboratory studies of trust, these field studies have investigated common trust experiences which have impact and direct application to everyday life.

Some of the important results from these experiments relate to the effectiveness of the ITS as a behavioural predictor of trust, the importance of disposition in deciding action in trust situations, an opportunity to test for behavioural consistency with regard to trust behaviour, and the empirically demonstrated effect of risk on trust. On the basis of these results a modification of a conceptualization of trust offered in the Introduction has been proposed.
Disposition, as measured by the ITS, demonstrated no predictive capability in any of the three experiments. Even the findings of Wright et al. (1975) could not be replicated. Dispositional trust must translate itself into behaviour if it is to be a useful psychological construct. A few published studies have offered validation of the ITS but the failure to validate three different trust behaviours, among them a previously published study, shows that the support for the ITS in terms of trust behaviour is weak. Wright and Sharp have stated that when trust by and in women is being investigated, as it was in these experiments, the ITS may be a poor predictor because of its content and grammatical sex bias. Clearly, further exploration of the ITS as a predictor of female trust ought to be made. All three experiments reported here did involve female subjects responding to a trust situation with another woman. This particular trust dyad, female-female, has been a long-neglected one in terms of research.

These results do not necessarily suggest that disposition has no role to play in trust decision-making. The conviction remains that there are trusting and distrusting individuals who behave in a relatively predictable and consistent manner (although behavioural consistency could not be demonstrated in the limited sampling of behaviour
shown in these experiments.) In fact, it will be recalled that multiple regression equations of the factors contributing to trust behaviours in Experiments I and II showed that approximately 70% of the variance could not be explained by the factors investigated here. Disposition as a generalized expectancy or attitude may account for some of this unexplained variance but the ITS does not appear to be the method to employ.\textsuperscript{22}

It may be desirable to develop a new dispositional trust scale which is situation-specific and which encourages subjects to focus on their trust behaviours. Such a scale might have greater success in behavioural prediction than Rotter's current scale which focusses upon trust attitudes. The consistency that subjects reveal in their behavioural choices on a situation-oriented trust questionnaire (despite changes in situational variables) would indicate subjects' dispositional level. Until an improvement in the measure is developed along these lines it may not be possible to answer questions about the comparative effects of disposition and situation on trust behaviour, and dis-

\textsuperscript{22}Naturally, not all researchers concur with this opinion. Wright and Sharp (1979) say: "We suggest that it is important to modify the ITS rather than abandon it for other trust scales because there is an extensive construct validation network of findings with the ITS that is more extensive than all the other scales combined" (p. 83). It will be recalled that Wright has had more success than this experimenter in validating the ITS (e.g., Wright and Kirmani, 1977; Wright et al., 1975).
appearing significant effects (such as in the case of Wright et al. and Experiment III) will plague the literature.

The experimental investigation of risk in its several forms with regard to trust behaviour has been an important contribution of these experiments. It has been shown that high situational risk deters trust behaviour. In these experiments, this relationship was demonstrated when level of risk was manipulated, first by increasing subjects' perceptions of a negative outcome and second by increasing the value/utility component of the object at stake. In a very objective and direct way, it has been shown that risk affects the frequency of trust behaviour and, hence, that level of risk is one of the components determining trust behaviour.

Risk assessment has been defined at the outset of these experiments as representing the subjective perceptions of level of risk with particular emphasis on the interpersonal variables inherent in the interpersonal trust situation. The results showed a strong correlation between risk assessment and trust behaviour, although at this point, it cannot be claimed with certainty that risk assessment does in fact precede trust behaviour as logic and the conceptualization of trust demand.

Finally, preliminary indications are that risk-taking in the conventional sense of chance, luck, and gambling plays
no role in trust behaviour. It seems that interpersonal variables, so crucial to matters of trust, are of peripheral interest in situations of gambling and chance where matters of odds and outcome are critical. Certainly, the effect of risk-taking in situations of chance and "risk-taking" in trust situations requires further exploration.

From the results of the effect of risk assessment and trust behaviour, a modification in the conceptualization of trust was proposed to include the variable, risk acceptance. A comparison of the results of Experiments I and II led to the conclusion that risk acceptance may be a major determinant which might further reduce error variance in the prediction of trust behaviour.

An incidental result of these experiments demonstrates the universal nature of interpersonal trust. Of the 240 subjects, not one of them detected that they were in an experiment until told that such had been the case. That the experiments escaped detection is not merely an earmark of their realistic design but also an indication that interpersonal trust situations are a common ingredient in the crucible of everyday life. Furthermore, it was noted during the administration of these experiments that participants, when informed about the experiments, exhibited a lively interest in the topic. Such keen reactions
on the part of subjects indicates a general need to know more about this important aspect of human activity.

While much is left to be answered about how and why people trust, these experiments have supplied some information about the underpinnings of this variable. It is unlikely, however, that philosophers or theologians who often ponder the nature of trust will be satisfied by this or other psychological examinations of the topic. Nevertheless, this dissertation has supplied some answers within the framework of a social scientific investigation. Within that framework, the information obtained herein helps in the unravelling of some of the complexities of interpersonal trust.
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APPENDIX A

General Instructions
Library Research Questionnaire
General Instructions

Thank you for agreeing to take part in my study. This survey is to determine the extent of misuse of Library facilities and services and whether there is need for additional Library security to prevent theft. This research is being done as part of an independent study. It is not being undertaken on behalf of the Library or the University but has their approval.

Completion of these two questionnaires should take no more than 20 minutes of your time. The first questionnaire includes questions as to whether additional security facilities are required in various areas of the Library. Please answer these questions by the categories provided and whenever these categories do not adequately cover your views, add additional comments.

The second questionnaire consists of 40 statements which you are to answer with a number between one and five to indicate how much you agree or disagree with each statement. (Full instructions are given with the statements.) This is a general opinion questionnaire which will be used to measure how honest you believe most people are.

To encourage people to complete these questionnaires, I am offering a choice of either $25.00 cash or 50 Western Express Lottery Tickets to a person whose name will be selected at random from the completed questionnaires which I receive in the mail. To be eligible for this prize, and also to receive a summary of the results of my study, please write your name, address, and phone number on the enclosed sheet. When the survey is completed, you will be contacted.

As in any research project conducted at the University, if at any time you feel that you do not want to participate, you are under no obligation to complete this study. Responses to this study are strictly confidential. Your help, however, is extremely invaluable in completing my work.
Library Research Questionnaire

1. Have you ever had any personal belongings stolen in the Library? Check the appropriate answer.
   Yes____  No____
   Additional Comments:____________________________________________________________________

2. If there were no signs advising against leaving belongings unattended in carrels and if there were no shortage of carrels, would you leave your books and coat in the carrels while you were away from the Library during lunch hour or while attending a class? Check the appropriate answer.
   Yes____  No____
   Additional Comments:____________________________________________________________________

3. How necessary to Library security and the prevention of theft do you think the controlled exit is? Circle the number along the scale below which best represents your answer.
   Not at all 1  2  3  4  5 Extremely necessary

4. Should lockers be provided in the Library washrooms to leave coats and books while using the toilet cubicles? Check the appropriate answer.
   Yes____  No____

5. If your name is selected to win the prize for participating in this study, would you prefer to receive cash or lottery tickets? Check the appropriate answer.
   $25.00 cash____  50 Western Express Lottery Tickets ____

In order to send you the results of my study (and to notify you if you win the prize), please complete below:
Name________________________________________ Address ________________________________
Phone No. ________________________________
APPENDIX B

General Opinion Survey
General Opinion Survey

This is a questionnaire to determine the attitudes and beliefs of different people on a variety of statements. Please answer the statements by giving as true a picture of your own beliefs as possible. Be sure to read each item carefully and show your beliefs by circling the appropriate number on your answer sheet.

If you strongly agree with an item, circle the number one. Circle number two if you mildly agree with the item. That is, circle number two if you think the item is generally more true than untrue according to your beliefs. Circle number three if you feel the item is about equally true as untrue. Circle number four if you mildly disagree with the item. That is, circle number four if you feel the item is more untrue than true. If you strongly disagree with an item, fill in the space numbered five.

1. Strongly agree
2. Mildly agree
3. Agree and disagree equally
4. Mildly disagree
5. Strongly disagree

1. Most people would rather live in a climate that is mild all year around than in one in which winters are cold.

2. Hypocrisy is on the increase in our society.

3. In dealing with strangers one is better off to be cautious until they have provided evidence that they are trustworthy.

4. This country has a dark future unless we can attract better people into politics.

5. Fear of social disgrace or punishment rather than conscience prevents most people from breaking the law.
6. Parents usually can be relied upon to keep their promises.

7. The advice of elders is often poor because the older person doesn't recognize how times have changed.

8. Using the Honour System of not have a teacher present during exams would probably result in increased cheating.

9. The United Nations will never be an effective force in keeping world peace.

10. Parents and teachers are likely to say what they believe themselves and not just what they think is good for the child to hear.

11. Most people can be counted on to do what they say they will do.

12. As evidenced by recent books and movies morality seems on the downgrade in this country.

13. The judiciary is a place where we can all get unbiased treatment.

14. It is safe to believe that in spite of what people say, most people are primarily interested in their own welfare.

15. The future seems very promising.

16. Most people would be horrified if they knew how much news the public hears and sees is distorted.

17. Seeking advice from several people is more likely to confuse than it is to help one.

18. Most elected public officials are really sincere in their campaign promises.

19. There is no simple way of deciding who is telling the truth.

20. This country has progressed to the point where we can reduce the amount of competitiveness encouraged by schools and parents.

21. Even though we have reports in newspapers, radio and television, it is hard to get objective accounts of public events.
22. It is more important that people achieve happiness than that they achieve greatness.

23. Most experts can be relied upon to tell the truth about the limits of their knowledge.

24. Most parents can be relied upon to carry out their threats of punishment.

25. One should not attack the political beliefs of other people.

26. In these competitive times one has to be alert or someone is likely to take advantage of you.

27. Children need to be given more guidance by teachers and parents than they now typically get.

28. Most rumors usually have a strong element of truth.

29. Many major national sport contests are fixed in one way or another.

30. A good leader molds the opinions of the group he is leading rather than merely following the wishes of the majority.

31. Most idealists are sincere and usually practice what they preach.

32. Most salesmen are honest in describing their products.

33. Education in this country is not really preparing young men and women to deal with the problems of the future.

34. Most students in school would not cheat even if they were sure of getting away with it.

35. The hordes of students now going to college are going to find it more difficult to find good jobs when they graduate than did the college graduates of the past.

36. Most repairmen will not overcharge even if they think you are ignorant of their specialty.

37. A large share of accident claims filed against insurance companies are phony.
38. One should not attack the religious beliefs of other people.

39. Most people answer public opinion polls honestly.

40. If we really knew what was going on in international politics, the public would have more reason to be frightened than they now seem to be.
APPENDIX C

Judges' Guidelines for Classifying Subjects' Motives In Experiments I and II into Trust-Related or Not Trust-Related Categories
Judges' Guidelines for Classifying Subjects' Motives in Experiments I and II into Trust-Related or Not Trust-Related Categories

Experiment I

Trust-Related Motives

A belief that no one would steal her things.

Subject states that she has valuables among her belongings.

Subject noticed the sign which made her think that she should take things in with her.

Subject said that the sign made her take things into the cubicle (and changed her usual behaviour).

Specific mention of trust.

The sign spontaneously mentioned first by subject.

Motives Unrelated to Trust

States that she always takes things in with her (a habit).

It's more convenient to take things in with her.

The sign didn't influence subject's behaviour.

Experiment II

Trust-Related Motives

You looked honest, sincere, etc.

You are a stranger.

I've done this before for someone with negative consequences.

In the same circumstances, I would expect someone to do it for me.

Motives Unrelated to Trust

You were writing an exam and it is important.

You needed it.

I wanted to help someone in need.

I can't say "no".
Experiment II (Continued)

Trust-Related Motives

I thought that you would return the book(s).

I would do the same for anyone.

Motives Unrelated to Trust

I see no reason to refuse.

Miscellaneous (depends on my mood).
APPENDIX D

Coding Sheet for the Classification of Subjects' Questions Used In The Study of Wright, Maggied, and Palmer (1975)
CODING SHEET FOR THE CLASSIFICATION OF SUBJECTS' QUESTIONS USED IN THE STUDY OF WRIGHT, MAGGIED, AND PALMER (1975)

**Suspicious Questions**

1. What kind of experiment is it?
2. Who is this?
3. Q's about the house--building--is this legitimate?
4. Who is this? (after being told above)
5. Who's the experimenter?
6. How did you get my name?
7. Why are you calling versus sign-up sheet?
8. Am I going to get out on time?

**Logistical Questions**

1. What time?
2. Where is it?
3. Could you repeat the instructions?

**Other Questions**

e.g., May I bring a friend?
APPENDIX E

| Part 1: Point-Biserial Correlation Coefficients Showing The Relationship between Subjects' Trust Behaviour in Experiment I and Responses to Individual ITS Items |
| Part 2: Point-Biserial Correlation Coefficient Showing the Relationship between Subjects' Trust Behaviour in Experiment II and Responses to Individual ITS Items |
Part I

Point-Biserial Correlation Coefficients Showing the Relationship between Subjects' Trust Behaviour in Experiment I and Responses to Individual ITS Items

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**Part 2**

*Point-Biserial Correlation Coefficients Showing the Relationship between Subjects' Trust Behaviour in Experiment II and Responses To Individual ITS Item*

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