VIOLENCE AGAINST INTIMATES: TOWARD A PROFILE OF THE WIFE ASSAULTER

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Abstract

Recent incidence statistics have confirmed the impressions of clinicians, transition house workers and police that wife assault is a widespread and serious social problem. The last decade has witnessed a flurry of theoretical papers, interview studies and broad survey research in the area. While these efforts have significantly advanced public awareness and knowledge about the problem, the majority of the research to date has suffered from methodological shortcomings such as lack of standardized measures, lack of comparison groups, and inattention to the offender. Since some evidence suggests that many of these men are violent in more than one relationship , the lack of knowledge about assaulter characteristics represents an important gap in the literature.

This research project attempted to test a number of clinically-derived hypotheses about the wife assaulter and his relationship by directly examining a sample of eighteen assaultive husbands. The responses of these men were compared to those of eighteen verbally aggressive, nonviolent men and eighteen nonaggressive men matched for age and socioeconomic status. Paper and pencil measures were used to assess conflict tactics, marital adjustment, childhood exposure to violence, general and spouse-specific assertive communication, emotional expressiveness, attitudes toward women, and need for power. The men's reactions to videotaped couple conflict scenarios which varied power dynamics and attempted intimacy movement, were

assessed via affect checklists and physiological measures (i.e. skin conductance, heart rate, respiration and pulse transit time). The men's reports of violence were corroborated by their wives.

The results showed a remarkable similarity among the three groups of men overall. Some potentially interesting differences emerged in terms of the relevance of abandonment fear as an instigation to wife assault and in terms of differences in perceptions of violence between husband and wife. The overall results were compared with those of several well-designed studies on child abuse which indicate that many of the assumed characteristics of abusive families are also shared by demographically similar nonabusive families. Suggestions for further substantive research are made based on the results of this project. Finally, a number of methodological recommendations are made including the need to develop a taxonomy of wife assaulters, the utility of collecting couple data, and the necessity for a broad-based approach to theory and measurement in the area.

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I. THE PROBLEM

Domestic violence has been virtually ignored as a research topic until relatively recently, though the phenomenon is not a new one. O'Brien's (1971) finding that there were no references to violence in the index of the Journal of Marriage and the Family from its inception in 1939 through 1970 illustrates this selective inattention. However, recently improved data collection techniques (Straus, 1979) have provided information suggesting that wife assault [1] is a major social problem.

A recent national survey of 2,143 couples in the U.S. (Straus, Gelles, & Steinmetz, 1980) indicated that about 16% had experienced at least one incident of violence in the past year (ranging from throwing something/slapping to using a gun). A full 28% had experienced at least one incident of this sort at some time during their marriage. An index of "wife-beating" devised by the authors to represent more severe forms of violence (kicking, biting, hitting with a fist, or worse) revealed that 3.8% of the wives had experienced this degree of violence in the past year and 5.3% had experienced it at some point in their marriage. Given the reluctance of domestic

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[1] The terms "wife assault" and "wife assaulter" were chosen after considerable deliberation and will be used throughout. It was decided that the commonly-used terms "wife battering" and "batterer" were inaccurate in many cases where less severe violence was involved and that terms such as "spouse abuse" were overly vague and euphemistic. The term "assault" also has a legal definition which more or less covers the range of behaviours to which we refer. "Wife" and "husband" will be used generically to refer to cohabiting women and men who are involved in an ongoing intimate relationship.

violence victims to report violence (Loving & Farmer, 1980; Schulman, 1979) and the exclusion of divorcees from this sample, one might safely double these figures and still feel comfortable about the accuracy of the estimate (Straus, 1977-78).

The data from this survey also indicated that once violence is used it is likely to be repeated. About one-half of those husbands who acknowledged an item on the "wife-beating" index were violent at least three times per year, while one-third were violent at least five times per year. The median frequency for overall violence was 2.4 times per year (Straus, 1977-78). Reports from transition houses document some cases where women are beaten weekly or even daily for extended periods of time (e.g., Pizzey, 1974). However, it should be realized that even one act of violence by a physically powerful husband may create strong threat value that can function to control the wife thereafter (Straus, Gelles, & Steinmetz, 1980).

Domestic violence does not always stop at assault. During the period 1961-1975, approximately 20% of homicides in Canada were committed by a spouse or common-law partner (Bell & Benjamin, 1976). The figures are similar in the U.S. (cf. Steinmetz, 1977-78). While husbands and wives appear to be equally likely to be the offender in these homicides (Steinmetz, 1977-78), extrapolations from older evidence (Wolfgang, 1957) suggest that wife-slayings involve more violence and account for a much greater proportion of all female homicides (41%) than do husband-slayings (which account for only 11% of all male

homicides). Moreover, it has been suggested that many husband-slayings are motivated by self-defense following repeated violence by the victim (Bourdouris, 1971; Hilberman, 1980; Straus, Gelles, & Steinmetz, 1980). The U.S. National Commission on the Causes and Prevention of Violence (1969) reported that among spouse murderers, wives were seven times more likely to kill in self-defense than were husbands.

Levinger (1966) in a study of divorce applicants provided data to dispel the myth that wife assault is confined to working-class males. He found that 22% of middle-class applicants and 40% of working-class applicants gave violence as a reason for divorce. This finding suggests that, while violence is more prevalent among working-class males, it spans socio-economic boundaries. It also lends support to reports from transition house workers that many of their residents are wives of prominent men in the community (Pizzey, 1974). Therefore, rather than positing a "subculture of violence," it may be more fruitful to look for etiological factors that are linked to but not exclusive to social class.

Incidence figures revealing wife assault as a pervasive and multi-class phenomenon take on added meaning when one considers the effects on the victim and other individuals. Hilberman and Munson (1977-78) studied 60 battered women and found a high incidence of "somatic complaints, conversion symptoms and psycho-physiologic reactions" with symptoms often connected to the site of assault on the body. Depression, anxiety, insomnia,

suicide attempts, and chronic use of tranquilizers or antidepressants were also reported to be common. Many of these women were characterized as being in a chronic state of stress from constant vigilance and would react to relatively mild stimuli (e.g., a slamming door) with strong fear. In Gayford's sample of 100 battered women (Gayford, 1975), 71 had symptoms that were treated with tranquilizers or antidepressants, 42 had attempted suicide, 46 had been referred to a psychiatrist at some point, and 21 had a diagnosis of depression. While the direction of causality between violence and psychopathology in these women had not been clearly established, it appears likely that in most cases the symptoms were a stress response to living in a threatening environment. Lenore Walker (1979) has invoked the concept of learned helplessness to describe the psychological impact of repeated violence on her sample of wives. This might help to explain the high incidence of depression and the failure of many women to break away from the assaultive relationship.

It has also been observed that the children of these couples suffer ill-effects. Gayford (1975) found that in over 50% of the cases assaultive husbands also beat their children. Hilberman and Munson (1977-78) identified child abuse in one-third of their sample. Both of these studies also revealed high incidences of psychophysiological, behavioural and other psychological problems in the children. Hilberman (1980) noted a differentiation of symptoms in older children, with boys exhibiting behavioural problems such as aggressiveness, and

girls reacting with anxiety and social withdrawal. This apparent role modeling is a most troublesome side-effect of parental violence.

Wife assault is not only deleterious to members of the assaulter's family; it is also highly dangerous for the police. Domestic disputes account for about one-fifth of police fatalities in the U.S. and about one-quarter of assaults against police officers (cf. Eisenberg & Micklow, 1977; Straus, Gelles & Steinmetz, 1980). Therefore, given the foregoing evidence, the problem may be accurately viewed as one of high incidence and high social cost.

Steinmetz (1977-78) has presented data indicating that husband assault occurs as frequently as wife assault, and consequently she argues that husband assault should also receive attention from researchers and treatment programs. In fact, it is not difficult to justify any aspect of domestic violence as worthy of study. However, Straus (1977-78) outlines a number of reasons why wife assault may be a more severe problem than husband assault and hence a priority for research. He cites evidence that violence by husbands may be under-reported more than violence by wives and that at least some portion of the wife's violence is a response to an initial attack by the husband. Data from his national survey indicate that husbands engage in more serious forms of violence (beating up, using a knife or gun) and tend to repeat these acts more often than women. Greater physical strength of the man means that the woman

may suffer more damage when beaten up and more fear of anticipated violence. A large number of wife assaults occur during pregnancy, creating a risk to the unborn child (Gelles, 1975). Finally, because of a variety of social and economic constraints, women may find it more difficult to leave the marriage in order to escape violence.

The availability of more accurate incidence statistics, combined with the progress of feminism, has led to an increasing recognition of the problem. This has sparked a flurry of research papers and theoretical articles on wife assault. However, the bulk of this research has consisted of interview studies with the women usually in transition houses, psychiatric clinics, or emergency wards (e.g. Pizzey, 1974; Gayford, 1975; Martin, 1976; Roy, 1977; Rounsaville, 1978; Walker, 1979) and broad survey research. Only four studies were found that used assaultive husbands as subjects. These were: two interview studies of men in prison for seriously assaulting or killing their wives (Scott, 1974; Faulk, 1974) and two recent studies, one by Rosenbaum and O'Leary (1981) and another by Subotnik (1983). The Subotnik study contrasted two types of assaulters using the Differential Personality Questionnaire (Tellegen) and then compared assaulters' scores to normative data for the questionnaire. While differentiating batterers is useful, comparisons with normative data obtained from college students are difficult to interpret given obvious differences between the groups in terms of age, social class and marital status. The Rosenbaum and O'Leary study represented a true methodological

advance in the area. They included a group of assaultive husbands who were receiving marital therapy and contrasted them to two matched samples of nonviolent married men using standardized measures. Unfortunately only a portion of the data relevant to the husband was obtained directly from the man himself. The wife was used as the informant for the remainder.

Dutton and Painter (1980) also collected data directly from a sample of wife assaulters. Their sample was solicited from a group of men who were attending court-directed group therapy sessions as a result of their violence. Despite various methodological shortcomings acknowledged by the authors, such as small sample size and lack of comparison groups, this project served as an important feasibility study for the present research.

The paucity of direct research on the wife assaulter represents a major obstacle to understanding the problem. The emphasis on the victim, rather than the assailant, in the research literature has been largely due to the reluctance of the wife assaulter to cooperate in treatment and research (Hilberman, 1980; Rosenbaum & O'Leary, 1981). Also, a prevailing policy emphasis on treatment of the victim through assistance in separation and reparative counseling rather than on prevention through treatment of the offender has not served to encourage research on the assaultive male. However, given Rounsaville's (1978) finding that 39% of wife assaulters were involved in more than one assaultive relationship, it is clear that merely to

help the victim while leaving the offender unchanged does a disservice to future victims. Therefore, more direct information is needed about the wife assaulter and about the dynamics of the assaultive relationship from his perspective in order to provide effective treatment for the male.

While the existing clinical and research literature allows a number of testable hypotheses to be raised, the research conducted to date suffers from: (1) inattention to the wife assaulters as subjects, (2) lack of comparison groups, and (3) lack of standardized measurement techniques (cf. Rosenbaum and O'Leary, 1981). The primary purpose of the present research was to test a number of relevant hypotheses regarding the wife assaulter by directly examining an offending population, using standardized or well-defined measurement techniques and appropriate comparison groups. Since this project represented one of the few attempts so far to systematically assess a sample of wife assaulters, a secondary product was information regarding the applicability of certain methodological techniques to an assaultive population.

II. THEORIES AND RESEARCH

A. SOCIOBIOLOGICAL THEORIES

Sociobiologists attempt to take Darwin's concept of evolution and expand it to explain social behaviour such as aggression (cf. Wilson, 1975). According to the theory, behavior is naturally selected over a long period of time to allow for optimal adaptation to the environment and maximization of the organism's contribution to the gene pool. However, these theories have difficulty explaining how uxoricide, which has occurred for centuries (Davidson, 1977), serves to maximize one's gene's pool (Dutton, 1981). Wilson (1975) hypothesizes that man reacts to external threat with sufficient hostility to overwhelm it by a large margin of error. However, one would expect this hostility to be directed toward the invading male (Lorenz, 1966), not against the wife as is the case with many jealous husbands (Whitehurst, 1971). Simeons (1962) argues that man is genetically predisposed to react to sexual threat with rage. However, as Dutton and Painter (1980) point out, what constitutes "threat" may be socially defined, the subsequent label attached to the physiological arousal (rage, anxiety, fear, hurt) by the individual may vary with social cues (cf. Schachter & Singer, 1962; Novaco, 1975) and the resulting behavior pattern depends to some extent on social constraints (cf. Berkowitz, 1971; Geen & Quanty 1977). Even Wilson (1975) agrees that the genesis of aggressive behavior is an interaction of : (1) a generic predisposition to aggress in some form, (2)

environmental requirements, and (3) historical trends in the culture. Therefore, sociobiological theories, on their own, are at best able to predict that man will respond with physiological arousal to what he perceives as sexual threat.

B. TRADITIONAL CLINICAL THEORIES

Clinicians have tended to posit individual psychopathology in the wife assaulter, the victim, or both, in order to explain spousal violence. The male has been labeled a sadistic, psychopathic personality (Pizzey, 1974), pathologically passive and dependent (Snell, Rosenwald, & Robey, 1964; Faulk, 1974), and potentially brain-damaged (Elliot, 1977). However, clinical syndromes may be less pervasive in these men than originally thought. Straus, Gelles, and Steinmetz (1980) speculate that only 10% of wife assaulters have a clinical syndrome severe enough to be labeled " mental illness," though they report no evidence to support their speculation. Scott (1974) argues on the basis of his clinical experience that sadism-masochism relationships (wherein mutual enjoyment of violence takes place) are rare among assaultive couples. In reference to the concept of psychopathy, many wife assaulters report intense feelings of guilt and remorse after a violent incident (Walker 1979), and a large portion (possibly a majority) of wife assaulters show no overt signs of antisocial behavior outside the home (Scott, 1974; Gayford, 1975; Rounsaville, 1978). In the absence of more thorough diagnostic evidence, these reports suggest caution in applying the label of "psychopath" (or antisocial personality) *a priori* to the wife assaulter. Finally, it is estimated that only

about 3% of wife assaulters have brain damage severe enough to account for their aggression (cf. MacLeod, 1980), though detection is problematic and well-designed studies have not been reported.

Systematic psychological assessment on a large sample of wife assaulters would be required to make definitive statements about the etiological significance of individual psychopathology. Likely, there is a subsample of this loosely defined group in which severe psychopathology is present. However, what information we do have suggests that while the psychological characteristics of the wife assaulter are important in combination with other factors, severe psychopathology is not present in most cases.

The wives have often been conceptualized as "masochistic" by clinicians (e.g., Schultz, 1960; Snell, Rosenwald, & Robey, 1964). This is likely due to Freud's influence on American clinical work (cf. Freud, 1924) and to the observed tendency of battered women to stay in the relationship despite the violence (Walker, 1979). Strong arguments have been made in recent years against the masochism hypothesis (Waites, 1977-78; Rounsaville, 1978). Firstly, women report that they don't like the violence and are definitely not sexually aroused by it (Gayford, 1975), as mythology in some circles suggests (London, 1977-78). In fact, the assaulter often uses violence as an avenue to force sex on an unwilling and disgusted wife (Gelles, 1977). Secondly, most women have not had a previous violent relationship

(Rounsaville, 1978), contrary to popular clinical mythology. Finally, more credible reasons (than enjoyment of suffering) have been suggested to explain why women might stay in a violent relationship. Lack of financial resources, fear for her life, fear for her children's safety, mistaken beliefs that the husband will change, self-blame due to uniqueness attributions and learned helplessness have all been suggested in this regard (cf. Waites, 1977-78; Dutton & Painter, 1980). Therefore, the traditional view of masochism as "enjoyment of suffering " may be discarded as an explanatory concept. Given its lack of empirical support, it begins to look suspiciously like another attempt to blame the victim. A broader kind of "masochism" in the sense of tolerance for unwanted physical injury due to distorted expectations and self-blame may be useful (Painter, 1981), though the concept would be freer of contamination without the masochism label.

Alcoholism in the husband has been another etiological hypothesis commmonly invoked by mental health practitioners. Alcohol is proposed to function as a kind of "superego solvent," lessening internalized inhibitions against violence and in effect temporarily altering the personality structure (Gelles, 1972). This hypothesis has received some support from a consistently strong association between wife assault and drinking found in interview studies with battered women (Gelles, 1972; Gayford, 1975; Roy, 1977; Rounsaville, 1978; Hilberman & Munson, 1977-78), wives of alcoholics (Scott, 1974) and broader survey populations (Coleman and Straus, 1979). Laboratory

evidence demonstrating heightened aggession in male subjects following alcohol ingestion is also consistent with this hypothesis (Boyatzis, 1974). However, the role of alcohol use as a primary cause of wife assault may be questioned for a number of reasons. For example, it has been reported that in cases where the husband is a frequent alcohol abuser, beatings may often occur when he is sober (Roy, 1977). Morton Bard, in two studies, found alcohol to be present in only 35% of domestic disputes where police intervened (Zacker & Bard, 1977), and that there was an inverse relationship between signs of alcohol intoxication at the scene and the actual occurrence of an assault (Bard & Zacker, 1974). This latter finding may suggest that intoxication acts as a cue for the victim to take preventive measures against violence such as calling the police.

A treatment project in Kingston, Ontario (Couples in Crisis, 1979) provided anecdotal evidence that counseling may eliminate violence while drinking problems remain. This finding supports the suggestion that drinking may simply create a "time out" period from responsibility for already planned violent action (Gelles, 1972; Coleman & Straus, 1979). In this sense, alcohol may allow the wife assaulter and his victim to justify his actions afterwards and avoid the stigma of "wife-beater." Once the basic causes of violence are dealt with in therapy, drinking may continue without necessarily leading to continued violence. Interview data from Gelles (1972) also suggests that drinking may simply be a common source of conflict between husband and wife (as when the drunken husband demands food and

sex at three o'clock in the morning) and that this drinking-related conflict precipitates violence in the same manner as other conflicts would. Another potential explanation for the relationship between alcohol use and wife assault is that both behaviors may represent attempts to achieve a desired goal such as a feeling of power (cf. McClelland, 1975). On the basis of current knowledge it seems most prudent to conceptualize alcohol use as a potential facilitator of wife assault whose mediating role is not completely understood at present. It should not be viewed as a primary cause in most cases and should not obscure the search for more basic causes.

It is abundantly clear from the literature on domestic violence that the phenomenon cannot be understood from a unidimensional perspective. A propos of this observation, Belsky (1980) has proposed a four-level model for studying child abuse that appears appropriate for guiding research in the area of wife assault. The model combines Bronfenbrenner's three divisions of ecological space (the macrosystem, the exosystem, and the microsystem) with Tinbergin's concept of ontogenic development. The macrosystem involves the over-riding cultural beliefs and values, the exosystem deals with the social subsystems in which the family is embedded, the microsystem covers what takes place in the immediate household (i.e., the dynamics of the relationship), and ontogenic development concerns the development of characteristics in the individual. Belsky suggests that a good research study should examine at least two of these levels to enable statements about their

interrelation. The focus of the proposed research will be at the microsystem and ontogenic levels, though research bearing on all levels will be reviewed in turn.

C. THE MACROSYSTEM--SOCIOLOGICAL THEORIES

Most of the research and theorizing at this level has been produced by sociologists and feminists. The basic tenet is that there are implicit cultural norms that condone and encourage wife assault. A number of writers give historical accounts of how violence against wives has been supported by and entrenched in the legal system for centuries (de Reincourt, 1974; Dobash & Dobash, 1977-78; Waites, 1977-78). Despite the liberalization of laws in this century, the belief that violence against one's wife is acceptable still appears to persist. Stark and McEvoy (1970), in a nationwide survey of American adults, found that 25% of men and 16% of women approved of slapping a wife's face "under the appropriate circumstances". Suprisingly, male approval increased with college education and higher income. Shotland and Straw (1976), in a inventive analogue study, found that 65% of their male and female subjects intervened if they thought a staged assault was between a man and a woman who were strangers, but only 19% intervened if they thought the assault was between man and wife. It appears, then, that in many men and women there remains a belief that violence in marriage is a private affair to be tolerated within limits that are wider than those governing the behaviour of unrelated citizens. Compounding the problem is a legal system whose implementation of laws emphasizes the sanctity of marriage over the individual rights

of marrried women (Jensen, 1977-78; Goldman, 1978).

Talcott Parsons and Murray Straus have been two major theorists who have approached the problem from a sociological percepective. Parsons (1947) hypothesized that in industrialized societies, where boys are separated from their fathers for much of the time, the mother becomes the primary role model. When, at a later age, the boy finds out that women are generally viewed as inferior to men in many ways, he rejects the female model and adopts a behaviour pattern that Parsons labeled "protest masculinity" (an excessive attempt to prove one's masculinity). This would include attempts to dominate women and perhaps to express violence toward them. Consistent with Parsons' theorizing is Rounsaville's (1978) finding that 45% of the violent husbands in his study had lost a father through death or separation before the age of fifteen, depriving them even further of a male role model.

Straus (1976) hypothesizes that males develop the attitude that it's alright to use force if resistence to their prevailing power position occurs. Acceptance of violence is thought to be learned during childhood through modeling of violence in the family and in society at large. Empirical findings have related the degree of violence witnessed in childhood to marital violence in adulthood (cf. Straus, Gelles, & Steinmetz, 1980) and to the approval of political violence in adulthood (Owens & Straus, 1975). Marriage is viewed as a unique battleground for the power struggle between the sexes and has even been called a

"hitting licence" by these theorists (Straus, Gelles, & Steinmetz, 1980). If Straus's theory is accurate, one potential side- effect of the Women's Movement, at least in the short run, will be an increase in wife assault as the challenge to the male power position increases (Whitehurst, 1971). In the long run, however, the removal of sex-role stereotypes that emphasize inequity should reduce violence (Straus, 1976). Straus and his colleagues (Straus, 1973; Gelles & Straus, 1979) have proposed a general systems approach to family violence in which socialization to violence in childhood, sex-role sterotyping and feedback loops in the family combine to create and perpetuate violence. While this sociological analysis has been instrumental in describing the general societal processes that nurture a high rate of violence in the family, the question of why some husbands assault their wives and others do not requires a more molecular analysis.

D. THE EXOSYSTEM

This level of analysis concerns the interplay between the family and the larger societal subsystems within which it is entrenched. Two lines of research have been generated at this level with respect to violence in the family. These concern the subsystems at work and the neighbourhood and, in particular, the effects of unemployment and social isolation.

Unemployment of the male has been consistently linked to child abuse (Gil, 1970) and wife assault (Gelles, 1972; Gayford, 1975; Prescott & Letko, 1977; Rounsaville, 1978). Moreover,

Steinmetz and Straus (1974) found that an increase in wife assault paralleled an increase in unemployment over a six-month period. Several possible explanations have been suggested for this relationship. One is that it produces financial stress in the family, which then promotes conflict due to frustration. Consistent with this explanation is a report by Roy (1977) that "money issues" were the most frequent cause of marital conflict in her sample of battered women. A second explanation is that employment may reduce the male's feeling of power which he may then attempt to restore through physical violence. This explanation is promising, and will be developed further in the next section. Finally, the increase in violence may simply be due to increased contact time between the unemployed husband and his wife. Consistent with this hypothesis is the finding that wife assault is more frequent on holidays when contact time is higher (Levens & Dutton, 1977). It seems reasonable to assume that all three factors may mediate this relationship to some extent. The over-riding point is that societal problems such as unemployment may impinge on the family so as to facilitate violence.

The relationship between the family and its neighbours is the second area that has received attention in the research literature. Specifically, it has been noticed that relative to nonviolent families, child-abusing families (Belsky, 1980) and families where wife assault occurs (Gelles, 1972) tend to be socially isolated. They report knowing fewer of their neighbours and having fewer social contacts than nonviolent families

(Gelles, 1972). Again, there is a number of possible explanations for this relationship. One is that isolated wives suffer more violence because they have no social support in times of stress, and nowhere to escape when violence is imminent. A second explanation is that isolation enhances the couple's mutual dependence, thus exaggerating any perceived threat to the man's control over the woman. Finally, it could be that social isolation is itself a product of the violent relationship. A jealous husband may strictly control outside contact, both partners may lack the skills necessary to build social contacts, and the woman's desire to hide the violence from others out of shame may contribute to their isolation. Longitudinal research would be required to sort out this question of temporal causation, though likely there is a bi-directional relationship.

Research findings at the macrosystem and exosystem levels suggest that norms for male dominance and tolerance of marital violence, combined with social isolation and external stressors such as unemployment, provide a fertile environment for wife assault. However, these levels of analysis still do not explain thoroughly why some men become violent under these conditions and others do not. It is unclear in many cases how the association between more general societal variables and violence in the individual couple is mediated. An analysis of the violent relationship and the individual characteristics of the wife assaulter is required in order to provide answers to these questions and to enable the planning of effective treatment on a

couple or individual basis. Therefore, the remainder of this review and the focus of the proposed research will emphasize the interaction of the relationship dynamics (microsystem) and the characteristics of the wife assaulter (ontogenic development). These two levels of analysis will be integrated under one heading and hypotheses to be tested will be included in the text.

E. MICROSYSTEM AND ONTOGENIC FACTORS--THE ASSAULTER AND HIS MARITAL RELATIONSHIP

1. POWER AND CONTROL

Clinicians have reported observing a strong need to control or dominate others in their assaultive male clients (Elbow, 1977; Ganley & Harris, 1978; Symonds, 1978; Weitzman & Dreen, 1982). However, there has been no reported attempt to systematically measure this "need" in an assaultive population. Winter (1973), in his work on the power motive, has developed a TAT measure of the need for power (nPower) that appears to be well-suited to fill the gap in this research area. He defines nPower generally as a concern about having impact on the behaviour or emotions of another person. Since the measure was developed, a number of behavioural correlates of high nPower have been uncovered that are relevant to wife assault.

Firstly, aggression has been found to correlate positively with nPower. In working-class men, high nPower is related to the frequency of arguments reported (McClelland, 1975) and with the frequency of yelling in traffic, destroying furniture or

glassware, and insulting clerks in stores (Winter, 1973; Boyatzis, 1973). In middle-class men, the association between overt aggression and nPower disappears, but a relationship betweem nPower and "prestige-seeking behaviour" (number of credit cards) is observed for both middle- and working-class men (Winter, 1973). McClelland (1975) speculates that social constraints and nonviolent learning history reduce overt expression of aggression and encourage more acceptable expressions of power in middle-class men. The difference in results between the classes could also reflect a reluctance in middle-class males to report overt agression. More relevant to the area of wife assault, it may be that the middle-class male who is high in nPower is more likely to express violence when sheltered in the privacy of his home and relatively free from social constraints (or "deindividuated"; cf. Zimbardo, 1969).

Secondly, a number of findings suggest that high nPower may be associated with the exploitation of women. High nPower men in one study were more sexually precocious, had more sexual experience, and preferred wives who were more dependent (Winter, 1973). They were also more likely to disclose details of their sex life (McClelland, 1975). Slavin (1972) found that high nPower men wrote more stories with "themes of feminine evil" (that is, themes that portrayed women as harmful, exploitive, and rejecting toward men). Winter, McClelland, and Stewart (1977), in a fourteen-year longitudinal study, found that nPower in college freshmen predicted whether or not their wives would have a career and the actual career level of their wives

fourteen years later. High nPower was also found to predict instability and dissatisfaction in dating relationships of college students (Stewart & Rubin, 1976) and in the marriages of working-class men (McClelland et al., 1972).

Finally, extensive research by McClelland and his colleagues (McClelland, Davis, Kalin, & Wanner, 1972) has shown that high nPower males tend to have more extensive drinking histories than low nPower men, and that drinking increases power imagery in men's fantasy reports.

Given clinical reports that describe wife assaulters as high in a need to control or be powerful and the observed relation between nPower and such variables as aggression, prestige-seeking, exploitation of women, marital instability, and alcohol use, it is reasonable to generate the following hypothesis: Wife assaulters should score higher on Winter's measure of nPower than comparison samples of nonviolent men.

2. RESPONSE POVERTY

One reason why wife assaulters might resort to physical violence in their interaction with their spouse is that they lack other influence skills with which to assert control (Goode, 1971; O'Brien, 1971; Rimm, Hill, Brown, & Stuart, 1974; Foy, Eisler, & Pinkston, 1975). In this respect, it would seem that verbal persuasiveness and the ability to recognize and express feelings should be crucial to the avoidance of violent strategies. Poor communication skills have been observed informally by clinicians to be a problem in males entering

marital therapy (Mornell, 1979) and in assaultive husbands (Ganley & Harris, 1978). Ganley and Harris (1978) describe their clients as having very poor communication skills, poor recognition of their emotional state, and as frequently confusing assertion and aggression. Komarovsky (1967) reported that 26% of the working-class wives (who are most frequently assaulted compared to wives from higher classes) she studied complained that their husbands were inarticulate and kept their feelings to themselves.

A number of interview studies with battered women indicate that these wives have greater occupational and educational status than their husbands in the majority of cases, contrary to the prevailing "marriage gradient" (O'Brien, 1971; Gelles, 1972; Rounsaville, 1978). This may imply that they are also more competent and persuasive communicators. In fact, Rounsaville's subjects rated themselves as more "verbally skillful" than their husbands in general. In a recent study, Rosenbaum and O'Leary (1981) measured overall assertiveness and spouse-specific assertiveness in assaultive husbands, nonviolent maritally discordant men, and happily married males. They found the assaultive group to be significantly less assertive than the happily-married males on both measures, but not significantly different from the nonviolent group. However, since these assaultive men were involved in conjoint marital therapy, they may have been less severely assaultive than typical samples in the literature where data are usually collected from women in transition houses about their husbands. One might expect even

poorer assertiveness skills in a more severe sample of assaulters. It would seem useful to replicate Rosenbaum and O'Leary's finding using a different sample of wife assaulters and also to expand the measurement procedure by including a measure of emotional expressiveness. Therefore, hypothesis number two states that wife assaulters will report less assertive communication and a poverty of emotional expression compared to non-assaultve males.

Social learning theory (Bandura, 1973) predicts that a behavioural deficit such as poor verbal skills may lead to a dysfunctional response pattern and that the nature of this response will depend on the individual's learning history as well as the perceived rewards and costs of the behaviour pattern. Hence, social learning theory predicts that prior exposure to physical violence as an effective and allowable form of interpersonal influence should be instrumental in the subsequent choice of this behavioural alternative. Bandura and Walters (1963) have labeled this process modeling.

Sociologists have also emphasized the link between prior exposure to violence and subsequent physical assault in their theorizing. Straus (1978) speculates that violent child-rearing practices (in the extreme, child-abuse) have a number of side-effects. Physical punishment of a child creates an association between love and violence, instills an image of violence as morally righteous ("it trains good"), and justifies the use of violence when the matter is "really important." In other words,

a normative legitimization of violence within the family context is established which may at later date under stressful conditions, allow the behaviour to be released more readily.

A substantial literature base supports these convergent theoretical predictions. Child-rearing practices in the family of origin are closely associated to the person's own child-rearing practices in adulthood (Steele & Pollock, 1968). The finding that child-abusers were themselves abused as children has been well documented (cf. Belsky, 1980). In the area of wife assault, interview studies with the victims have consistently revealed that a high proportion of their husbands were abused as children and/or witnessed violence between their parents (Gelles, 1972; Gayford, 1975; Roy, 1977; Prescott & Letko, 1977; Rounsaville, 1978; Ganley & Harris, 1978; Hilberman, 1980). These figures vary considerably, ranging from 30% to 82% of assaultive men with a "violent background." A smaller proportion of the wives (18-30%) described their own family background as violent (Gayford, 1975; Rounsaville, 1978).

While these studies clearly indicate a link between wife assault and violence in the family of origin, they are subject to a number of methodological shortcomings, as follows: (1) measures of violence are generally open-ended and ambiguous, (2) separate statistics are often not reported for child abuse and witnessing parent-parent violence and (3) no comparison groups are used to allow estimations of the deviance from nonviolent populations.

Rosenbaum and O'Leary (1981) overcame some of these problems by using comparison groups and by analyzing child abuse and parent-parent violence separately. They found a greater incidence of witnessing parent-parent violence in the assaultive group than in the comparison groups, but no significant difference in the incidence of child abuse (when they asked the men directly). This suggests that witnessing spousal violence in the family of origin may have greater etiological significance than experiencing abuse as a child. The present research attempted to replicate this finding of a link between wife assault and violence in the family of origin utilizing appropriate comparison groups and a more refined measurement instrument. Hypothesis number three states that there should be a greater reported incidence of parent-child violence and wife assault in the family of origin for wife assaulters than for non-assaultive comparison males.

3. INSTIGATION OF THE ASSAULT--RELATIONSHIP DYNAMICS

Crucial to the understanding of marital violence is the nature of the relationship dynamics involved and, in particular, the dynamics of the violence-eliciting interaction. Clinicians have tended to emphasize the concepts of power (Elbow, 1977; Faulk, 1977; Symonds, 1978) and intimacy (Mace, 1976; Elbow, 1977; Feldman, 1979; Weitzman & Dreen, 1982) in their analyses of marital conflict and marital violence.

In terms of the power dimension, sociologists and feminists have implicated societal norms for male dominance and the related hierarchical structure of the family in the genesis of family violence (Gelles, 1972; Martin, 1976; Straus, 1976). O'Brien (1971) and Goode (1971) have postulated a "status inconsistency" hypothesis in which violence is conceptualized as a last-ditch attempt by the male to restore his ascribed dominant status when it is threatened by his female partner. Violence is predicted to occur when the male's personal resources (e.g., economic, educational, interpersonal influence) are insufficient to enable him to live up to his "rightful status" as head of the household. This hypothesis has received substantial support in the literature on wife assault. For example, Rounsaville (1978) found 61% of his battered women to be superior to their husbands in job skills or education. Gelles (1972) found more marital violence in families where the wives had superior education and occupational status. In Gelles' study, assaultive husbands were also inferior occupationally in 82% of the cases. O'Brien (1971) studied status inconsistency and violence in 150 applicants for divorce. He found that violent husbands, when compared with nonviolent husbands, had started, but failed to complete, high school or college more often, were educationally inferior to their wives more often, were more likely to report income as a serious marital conflict and tended to be inferior occupationally to their fathers-in-law. These data suggest that, in many cases, the violent husband is deficient in achieved status characteristics and is not

living up to societal demands that he be competent, well-educated, and a good provider. Evidence cited previously indicated that violent men are also more likely to lack verbal skills. Consequently, these men seem to be left with few resources with which to exert influence on the family.

Studies of marital decision-making using Blood and Wolfe's (1960) index indicate that violence is most prevalent when the husband makes most of the decisions (Straus, Gelles, & Steinmetz, 1980) but has few interpersonal resources with which to legitimize this decision-making (Allen & Straus, 1980). Straus and his colleagues hypothesize that this decision-making power is maintained through violence in many cases. Wife-dominant households also showed high rates of violence (though not as high as husband-dominated households), and the authors speculate that this sample represents the passive, incompetent husband who does not share in decision-making, but assaults his wife in order to restore lost status (Straus, Gelles, & Steinmetz, 1980). Interestingly, couples who shared decisions equally were found to have the lowest rate of violence.

One possible interpretation of these data is that when there are extreme imbalances in family power (decision-making) in either direction, power is more likely to be a volatile issue, particularly when the male lacks legitimate personal resources. One might speculate further that power will gain even more importance as a conflict issue if the male has a particularly high personal desire for power.

Gelles (1972) has noted that a violent incident often occurs when the husband's power is directly challenged by the wife during a conflict situation. However, a group of wife assaulters has never been examined directly to see if they are more reactive to a situation where male power is being successfully challenged by a woman. The proposed research will attempt to address this question using a videotape analogue format.

Hypothesis number four states that wife assaulters should react with more anger to videotape scenes in which a man is losing an argument to a woman (female dominant) than when they witness scenes in which the man is winning (male dominant). Furthermore, the wife assaulters should show a greater anger reaction to these scenes than comparison males on average.

While the concept of power provides potentially useful insight into the process or structure of an assault eliciting conflict, it does not speak to the issue of content. That is, what content areas would be most likely to provoke an assault during a power struggle between a man and a woman?

A number of clinicians who work with angry and violent couples report problems with intimacy as central in the generation of conflict (Mace, 1976; Elbow, 1977; Weitzman & Dreen, 1982). Wife assaulters are described as being involved in intense, extremely dependent relationships in which they strongly fear losing the other person (Faulk, 1974; Ganley & Harris, 1978), while at the same time lacking the maturity and confidence necessary to achieve intimacy with their spouses

(Elbow, 1977). As a result, they are hypothesized to become extremely uncomfortable if the woman attempts to get too close or, on the other hand, if she attempts to become too independent.

There has been considerable attention in the social psychological literature to the development of intimacy in relationships (cf. Altman & Taylor, 1973; Rubin, 1973; Derlega & Chaikin, 1975; Wish, Deutsch & Kaplan, 1976; Huston & Levenger, 1978). However, most of the empirical research has been concerned with self disclosure between strangers, while relatively less attention has been focused on fluctuations of intimacy within the marital dyad. The concept of intimacy, loosely defined in the literature, appears to be comprised of two interrelated dimensions: (1) the degree of self-disclosure of personal material and (2) the uniqueness or exclusivity of the relationship. Therefore, one can speak of an increase in intimacy as involving a greater willingness to be openly self-disclosive with a person while excluding others from this arrangement. Conversely, a decrease in intimacy would imply a reduced sharing of personal material or a transferring of some of this personal contact to other relationships. Wish et al (1976) have used the term "socio-emotional distance" to represent this movement toward and away from another person. Theoretically, the degree of intimacy between two individuals will fluctuate roughly as a function of individual differences in comfort with intimacy, the reward/ cost structure of the relationship at a given point in time and the stage in the life

cycle of the relationship (Huston & Levenger 1978). Derlega and Chaikin (1975) point out the gender differences between men and women in their willingness to self-disclose intimate material. They suggest that such a difference might create a dynamic strain in a marital relationship wherein the woman attempts to push for more disclosure from her partner and/or seek other sources to fulfill her needs for intimacy.

Feldman (1979) has proposed that conflict, particularly violent conflict, may function to reduce feared intimacy and hence serve as a regulator when intimacy increases above a comfortable level. In support of this model are a number of studies indicating that wife assault often occurs during periods when socio-emotional distance is likely decreasing, such as during the first year of marriage or during a first pregnancy (Gelles, 1972; Eisenberg & Micklow, 1977: Martin, 1976; Rounsaville, 1978). While stress and frustration associated with these periods could be contributing to violent behaviour, [1] it seems likely that fear of increasing intimacy also may figure causally. Walker (1979) has noticed a cyclical pattern in many assaultive relationships consisting of tension build-up, violence, and "calm, loving respite." This pattern is notably consistent with Feldman's intimacy regulation model.

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[1] Marriages and pregnancies are often unwanted in violent relationships (Gayford, 1975).

In addition to evidence suggesting that violence functions to decrease intimacy, there exists substantial evidence that wife assaulters use violence to keep their wife in the relationship. A common feature of the assaultive relationship is intense jealousy on the part of the male. Ninety-five percent of the women interviewed by Hilberman and Munson (1977-78) reported "extreme jealousy" in their assaultive husbands. Studies by Rounsaville (1978) and Gayford (1979) yielded corresponding figures of 66% and 77% respectively. Ninety-four percent of Rounsaville's (1978) subjects listed jealousy as a topic that "frequently incited violence," while Roy's (1977) sample of 150 battered women reported jealousy to be second only to "money issues" as a conflict area leading to assault.

The husband's jealousy may frequently take on a delusional quality (cf. Ganley & Harris, 1978; Dutton, 1981) and may involve surveillance attempts, restrictions on the woman's behaviour, "third degree" verbal interrogation and acute sensitivity to any movements toward independent activity by the women (Gelles, 1972). Gayford (1975) provides evidence that sexual jealousy is unwarranted in most cases and that the husband is much more likely to have had extramarital liaisons. While sexual jealousy is common in these men, evidence from Rounsaville (1978) and Gelles (1972) indicates that jealousy and attempts to control often extend to preventing their wives from contact with female friends and from participation in other social activities. The common element appears to be a fear of losing exclusive access to their women and hence a loss of intimacy.

The finding in one study (Yllo & Straus, 1981) that violence was more common in cohabitating couples than married couples is more understandable when one considers that reduced "official" barriers to leaving a relationship may heighten fears of losing intimacy.

Hypothesis number four derives from evidence which suggests that wife assault will be likely to occur during a power struggle in which the man is losing via legitimate (verbal) channels of influence. The preceding evidence indicates that this power struggle may be most intensely felt by the male when the issue involves a change in socio-emotional distance away from an optimal status quo. In this case, fear of engulfment (or loss of autonomy) or fear of abandonment will intensify the man's arousal and subsequent attempts to control his wife (Feldman, 1979). Since the effects of these types of conflict issues on an assaultive population have never been directly assessed, the proposed research will attempt to do so via videotape analogue format.

Therefore, hypothesis number five states that wife assaulters should react with more anger to a videotaped conflict scene involving an abandonment or an engulfment issue than to a conflict not involving a move in socio-emotional distance (neutral scene). Furthermore, wife assaulters should react more strongly than comparison males on average to engulfment or abandonment issues.

Hypothesis four and hypothesis five will be crossed factorially in order to examine the potential interaction of the power and intimacy dimensions as represented in the videotaped scenes. These hypotheses are based on the assumption that certain marital interactions (i.e. uncontrollable attempts by the woman to change the level of intimacy) may serve to instigate an assault by generating threat-based arousal in the man which may then be expressed as anger. Patterson's (1976) model of an "optimal zone" for interpersonal spacing predicts that violations of this zone may produce physiological arousal which would lead to a positive or negative response depending on how the response was labelled by the person. Feldman's (1979) model makes a similar prediction regarding intimacy in the marital relationship after conceptualizing the process in terms of defensive anger masking unconscious anxiety. Clinical reports (Ganley, 1981; Novaco, 1976) suggest that wife assaulters may experience and express most forms of emotional arousal as anger in order to enhance subjective feelings of power and conform to a masculine image. Given that autonomic arousal is hypothesized to play an important role in generating threat-based anger and considering that social psychological studies of emotion have been criticized for not directly measuring arousal (cf. Leventhal, 1980), both autonomic arousal and self-report of affect were assessed in response to the videotape scenes.

4. WOMEN AS THE TARGET OF VIOLENCE

The literature does not present a clear and consistent pattern regarding the generality of the wife assaulter's violence. Reports of the ostensibly nonviolent judge or bank president who goes home and beats his wife abound in clinical writings (e.g., Pizzey 1974) and interview studies (Gelles, 1972). Faulk (1972), in a more systematic study of twenty-three men who had been imprisoned for seriously assaulting their wives, found that only three had a previous record for violent offences outside the home. On the other hand, 33% of the women interviewed by Gayford (1975) reported that their husbands had been to jail for violent offences, and 51% of Rounsaville's (1978) sample claimed that their husbands had been violent outside the home.

This variation across studies is likely due to differences in sampling and methodology. Faulk and Gayford also used a highly conservative measure of violence outside the home--imprisonment for violent offences--which would be likely to underestimate this type of violence. These shortcomings notwithstanding, there is enough anecdotal and interview evidence to suggest that the term "wife assaulter" may fall prey to a uniformity myth (Bergin, 1971) and may subsume (at least) a generally violent subgroup and a subgroup who restrict violence to the home.

Given the fact that at least some proportion of wife assaulters direct violence exclusively at their wives, an obviously important question is why? One possibility is that it is the unique interaction between a specific husband and wife that incites the violence. While likely true in some cases, data collected by Rounsaville (1978) showed that a substantial percentage of wife assaulters (39%) had been involved in a previous assaultive relationship. Therefore, one can assume that many of these men either possess certain characteristics that lead to violence in this situation or select women who help precipitate violence. A second possible explanation for spouse-specific assault is that there is something inherent in marriage that makes an assault more likely. Straus (1977-78) has suggested that high time at risk, high intensity of involvement, low chance of detection, and difficulty of escape may be factors that make the spouse a more likely target than a stranger. However, since these aspects are common to all marriages, it is clear that they would have to act in concert with other variables to facilitate violence. A third explanation which is widely held by sociologists and feminist writers (Martin, 1976; Straus, 1976; Straus, 1977-78; Dobash & Dobash, 1977; Gelles, 1979) is that violence towards wives is largely due to an adherence to societal norms supporting traditional patriarchal attitudes toward women and, in particular, wives.

Little empirical data had been gathered to support this assumption until Rosenbaum and O'Leary's (1981) study. These authors compared a sample of assaultive husbands and found the

assaultive sample to be significantly more conservative on the Spence-Helmreich Attitudes Toward Women Scale. It should be noted that the data on the husband's attitudes were obtained from the wives in this study, so the results should be interpreted with some caution.

Burt (1980), in her study of rape myths, has devised a number of short attitude scales that correlate strongly with acceptance of rape myths (which are, in turn, predictive of violent sexual assault). These scales assess a wider variety of relevant attitudes than represented in the Spence-Helmreich Scale. They measure (1) sex-role stereotyping, (2) adversarial sexual beliefs (mistrust of women), and (3) acceptance of interpersonal violence (mostly against women). She suggests that the first two of these attitude clusters may serve to target assault against women, and the latter cluster may then act as a releaser. Particularly interesting here is the adversarial sexual beliefs scale as the air of mistrust and guardedness toward women represented by this scale parallels clinical descriptions of wife assaulters (e.g., Boyd & Klingbell, 1979). Therefore, in order to strengthen and expand the empirical base bearing on the notion of traditional sex-role attitudes contributing to female-directed assaults, the present research compared wife assaulters and non-assaultive comparison males on Burt's three attitude scales. Hypothesis number six predicts that wife assaulters should score more highly than comparison males on measures of sex-role sterotyping, adversarial sexual beliefs, and acceptance of interpersonal violence.

III. METHOD

A. SUBJECTS

Three groups of men were compared in this study. They may be labeled for convenience as a physically aggressive group (PA), a verbally/symbolically aggressive group (VSA), and a non-aggressive group (NA). Each group contained eighteen men, for a total of fifty-four participants in all. The inclusion of the VSA group in the study derives largely from the findings and recommendations of Rosenbaum and O'Leary (1981). They concluded that a conflicted, though nonviolent, comparison group should be included in studies of wife assault to allow statements about marital violence *per se*, unconfounded by verbal marital conflict.

The PA group was comprised of men who were solicited from two therapy groups for violent men in Vancouver, B.C.: (1) The Assaultive Husband's Project [1] and the Redirecting Anger Group at Family Services of Greater Vancouver. [2] The men were attending these groups on a voluntary basis with the exception of three men who had been referred by the courts following a conviction for common assault against their wife. The men were

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[1] Funded jointly by the Solicitor-General of Canada and the British Columbia Ministry of the Attorney-General (Corrections Branch)

[2] Two men who were originally intended to be in the VSA group were placed in the PA group when their questionnaires indicated that they had been violent with their wives during the past year.

solicited by the student investigator who attended some of the therapy sessions. Participation was completely voluntary and the project was described as "a study on how men deal with conflict in their marriage". The explanation of the research in more general terms as a study of "dealing with conflict" rather than a study of wife assault was suggested by David Winter (Winter, personal communication, September, 1981) as a way of mitigating potential differences in demand characteristics across comparison groups. The men were promised personalized feedback based on their test responses and this appeared to be their major motivation for participation. The minimum criterion for membership in the PA group was at least one incident of spousal violence in the last year as self-reported on the Conflict Tactics Scale physical aggression subscale (Straus, 1979). In fact, all the PA men had engaged in a least one act from Straus' "wife-beating" items on that subscale and most of the men reported considerably more violence. CTS scores for all three comparison groups as rated by the husband and wife appear in Table 1. One way ANOVAS followed by Newman-Keuls post hoc comparisons were performed on the data and the results appear in the table.

The VSA group consisted of married males who scored at least ten points on the verbal aggression subscale of the CTS (approximately the eightieth percentile or above for U.S. men in a nationwide survey; Straus. 1979), but who reported little or

Table 1
Means and Standard Deviations for Husband's Conflict Tactics as Rated by Husbands and Wifes*°

Husband's Ratings	PA (N=18)	VSA (N=18)	NA (N=18)	F	P
Reasoning	7.89(3.27) [1 2]	9.61(2.45) [2]	7.00(3.14) [1]	3.58	.035
Verbal Agg.	20.89(4.34) [1]	15.67(4.69) [2]	3.78(2.05) [3]	92.28	.000
Physical Agg.	9.72(7.98) [1]	0.67(0.91) [2]	0.22(0.55) [2]	23.98	.000

Wife's Ratings	PA (N=17)	VSA (N=18)	NA (N=17)	F	P
Reasoning	7.65(4.40) [1]	7.72(3.34) [1]	7.47(3.08) [1]	0.23	.977
Verbal Agg.	25.35(5.72) [1]	13.78(6.00) [2]	5.71(4.48) [3]	55.80	.000
Physical Agg.	16.59(10.45) [1]	0.94(1.16) [2]	0.29(0.59) [2]	40.24	.000

* Since one PA wife and one NA wife refused to fill out CTS forms the n=17 for these two groups on the wives ratings and therefore husband/wife figures are not directly comparable.

° Since Means in a given row having dissimilar letters were found to differ significantly using the Newman-Keuls procedure ($p<.01$ with exception of Husband's ratings for Reasoning where $p<.05$).

no violence on the physical aggression subscale. [3] These men (as well as men from the other groups) were asked to have their wives fill out the CTS to corroborate their self- reported lack of physical aggression. The men were solicited through family and marital therapists in the Vancouver area (thirteen men; see Appendix A for letter to therapists) and via newspaper advertisements (five men). [4] Most of these men reported themselves as being dissatisfied in their marriage. The study was again described as "a study on how men deal with conflict in their marriage". Men were promised feedback and $25.00 ($10.00 for session one and $15.00 for session two) in exchange for their participation.

The NA group consisted of married males who scored seven points or less on the verbal aggression subscale of the CTS (the sixty-fifth percentile or below for U.S. men in a nationwide survey; Straus, 1979), who also reported little or no physical violence (applying the same criteria for physical aggression as outlined for the VSA group). In other words, the NA group consisted of men who reported relatively little overt conflict

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[3] While the initial intent was to only accept men into the VSA group if they reported no physical aggression, this proved unworkable due to the high correlation between verbal aggression and physical aggression (Straus, 1973). Therefore, minor incidents of violence were allowed (pushing, shoving & grabbing) as long as these were infrequent and the woman reported no injury or fear of the violence.

[4] The advertisements consisted of (1) the ad in Appendix B which was placed in the Vancouver Sun and (2) a plea for participants following a brief article in the Vancouver Province which described the project in general terms as a study of how men deal with conflict in marriage.

in their marriage or who dealt with conflict largely through rational discussion. These men were also required to have their wives corroborate their reports of little or no physical aggression. NA men were solicited via advertisements placed in the Vancouver Sun and in Vancouver laundromats (see Appendix C). The men were offered $25.00 ($10.00 for session one and $15.00 for session two) and feedback in exchange for their participation.

The VSA and NA groups were roughly balanced with the PA group for age and socioeconomic status using the index of social status developed by Myers and Bean (1968). Given that men in the PA group were generally young and of lower socioeconomic status, balancing was acheived by an initial telephone screening whereby only the youngest and lowest socioeconomic status men were chosen as candidates for the VSA and NA groups. This resulted in fifty- seven men who were interested in the project not being selected for participation. Men were also not selected for the NA group if they reported having had marital counselling in the past. Five men were rejected from the VSA group following the initial testing session (two were violent, three scored below ten on the verbal aggression scale) and eight men were rejected from the NA group (two men were violent and six men scored above seven on the verbal aggression scale).

The modal educational level of the men in the project was high school; occupationally the mode was skilled labourer. The average age was about thirty years old. The VSA men were not

only verbally aggressive but were on average maritally distressed, while the NA men were happily married by their own report. Table 2 summarizes some demographic and descriptive data regarding the three groups of men including their scores on Spanier's Dyadic Adjustment Scale (Spanier, 1976). One-way ANOVAS were performed on these variables to determine if there were any significant differences among the means. Newman-Keuls multiple comparisons followed significant ANOVAS to examine pairwise differences among the groups.

B. GENERAL PROCEDURE

The participants were required to attend two individual testing sessions, each lasting approximately two hours. Both sessions took place under the supervision of the student investigator. The men had the option of having session one at the university or in their own home. Session two was held in a psychophysiological laboratory at the university.

The first testing session involved a very short description of the study to the subject followed by the signing of the consent form (see Appendix D). The man was told that it was important for him to be as honest and accurate as possible in completing the questionnaires as this would affect the quality of the information obtained in the study and hence the quality of the feedback he would receive. The men then completed a battery of paper and pencil tests containing selection criteria information, descriptive information and questions bearing on some of the experimental hypotheses. The investigator remained

Table 2
Descriptive Information
Means, Standard Deviations and Results

	PA	VSA	NA	F	P
Age	31.61(5.38)	32.83(6.13)	31.94(7.73)	.171	.844
Education	4.33(1.03)	4.06(1.11)	3.72(0.58)	1.93	.156
Occupation	4.94(1.06)	4.44(1.42)	4.89(0.90)	1.03	.366
Socioec. Status	51.83(9.55)	48.00(12.50)	48.61(8.40)	0.72	.492
Years married	6.19(3.89)	8.56(4.34)	9.11(6.82)	1.61	.210
N of Children	1.50(1.30)	1.50(0.79)	1.39(1.24)	0.06	.944
N of Drinks/Week	12.61(14.02)	5.39(5.52)	5.67(8.17)	3.08	.055
Marital Adjustment*	90.17(23.77)	89.78(13.51)	120.56(10.88)	19.45	.001

*Scores on the Dyadic Adjustment Scale (Spanier, 1976) completed by the men. Spanier (1976) provides means and standard deviations of 114.8(17.8) for married couples and 70.7(23.8) for divorced couples on this scale. Newman-Keuls pairwise comparisons (df=2,51) indicated that the PA and VSA group differed significantly from the NA group ($p<.01$) while they did not differ significantly from each other.

present during the testing to answer any questions about the tests and the tests were given in the same order to all the participants.

While the participant was completing the tests, the CTS (administered early in the battery) was scored to determine whether the man had met the selection criteria for his group. If the criteria were met, an appointment was arranged for the second session. Otherwise, the man was paid $10.00 and informed he would only be participating in one session. This was generally not problematic as all men were informed upon initial contact that they might participate in either one or two sessions depending upon the demands of the research. All participants, whether they were involved in both sessions or only one session, were contacted by telephone within four weeks and given feedback based on their questionnaire responses. Most of the men reported this to be quite interesting and indeed, the feedback appeared to be the prime motivation for participation in all three groups.

The second testing session involved the videotape analogue component of the research. The procedure for this component is described in section D.

C. PAPER AND PENCIL MEASURES

1. The Thematic Apperception Test (TAT) of nPower (scoring system, Winter, 1973) provided a test of hypothesis number one. The TAT has been widely used by Winter and his colleagues to measure power motivation in both university and non-university

male populations (cf. Winter, 1973; McClelland, 1975; Stewart & Rubin, 1976; Winter, McClelland, & Stewart, 1977; Winter & Stewart, 1978; McClelland, 1979). This research has provided a substantial degree of construct validation for Winter's power measure (see Winter & Stewart, 1978, for a discussion of the construct). The measure has also been shown to have higher test-retest reliability than that typically found for TAT motives (Winter & Stewart, 1977).

Winter defines the power motive generally as a concern for "having impact on the behaviour or emotions of another person" Winter, 1973). The nPower measure was derived empirically from several experiments designed to arouse the power motive in subjects. This approach closely followed the McClelland-Atkinson research strategy used to develop the nAchievement scoring system (Winter, 1973). Because the scoring system is based on several different kinds of power manipulations (as opposed to a single manipulation), it represents an improvement over older scoring systems. Briefly, the scoring system allows power imagery to be scored from a TAT story that includes references to (1) strong assertive action, (2) actions that induce strong emotions in others, and/or (3) a concern about the reputation of an actor. If power imagery is scored for a story, ten subcategories of power imagery may also be scored, so that a maximum score of eleven per story may be achieved (yielding a total score between zero and fifty-five for a given participant). Winter's scoring manual is written in great detail and provides practice stories with expert scoring and

explanation of scoring decisions. Winter (1973) maintains that the scoring procedure may be learned with about 15 hours of practice in order to obtain interscorer reliability of .85.

Participants were required to write stories in response to five pictures. In order of presentation, they are (1) a ship's captain talking to a man, (2) a couple drinking at a bar with a guitarist in the background, (3) two women scientists in a laboratory, (4) a boxer, and (5) a woman looking askance at a man who is standing in the background. The stimulus pictures were selected on the basis of their demonstrated ability to elicit power imagery. Moreover, based upon a suggestion by David Winter (Winter, personal communication, September 1981), the pictures were selected to present a variety of gender relationsips (i.e., male-male, male-female, female-female). The TAT was presented before any other tests to reduce the potential effects of other testing on TAT interpretations. The men were told, "This is a test of imaginative picture interpretation. Please look at each picture in turn and use your imagination to make up a dramatic story about the characters in the picture. There are five pictures in all and you will have five minutes per picture. You may use the questions on the sheet provided to guide your story." Subsequently, the pictures were presented on cards to the man one at a time for ten minutes and he was given a sheet on which to write his story. The sheet contained the following questions spaced over its length: (1) What is happening? Who are the people? (2) What has led up to this situation? That is, what has happened in the past? (3) What is

being thought? What is wanted? By whom? (4) What will happen? What will be done?" (Winter, 1973).

The stories were scored for power imagery by a research assistant blind to group membership of the participant who had been trained on materials precoded by experts (cf. Winter, 1973). The research assistant demonstrated an agreement with expert scoring of rho= .87 on a series of sixty test stories with category agreement on power imagery=.93. A second judge who had also demonstrated scoring proficiency on sixty precoded test stories (rho= .85; Catergory Agreement on power imagery= .95) scored a randomly selected sample of thirty stories in order to establish interrater agreement on stories written by the men in this study. These two raters showed an agreement of rho= .86, with Category Agreement on power imagery= .93. [5]

2. A demographic data form was administered next (Appendix E). It contained questions about the participant's age, education, income, marital status and history, and drug use.

3. The Conflict Tactic Scale (CTS) -- Form N (Straus, 1979) was used to obtain information about the various conflict resolution strategies in the participant's marriage during the past year. This information was used to assign men to the comparison groups. The CTS consists of eighteen items describing

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[5] Pearson product-moment correlation coefficients also calculated for rater one, rater two and interrater agreement yielded results similar to the Spearman coefficients presented above (r=.88; r=.84; r=.83 respectively).

various ways of handling interpersonal conflict (see Appendix F). The items range in order of presentation from those involving reasoning (items a, b, and c) through to verbal and symbolic aggression (items e,f,g,i,j and k) and finally to various forms of physical aggression (items l to s). [6] Raw scores representing frequency ranges vary from 0 ("never") to 6 ("more than 20 times") for each item. Total scores for each subscale (reasoning, verbal/symbolic aggression, physical aggression) are derived by summing the raw scores for the items in that subscale. The CTS may be used to assess conflict tactics between any two family members by simply altering the instructions slightly. Straus (1979) provided data from a nationwide survey of 2,143 U.S. households bearing on the psychometric properties of the test. Factor analysis performed on the data yielded factors that coincided roughly with the theoretical grouping of the items into three subscales. Internal consistency was found to be good for the verbal/symbolic aggression (alpha coefficient=.80) and the physical aggression subscales (alpha coefficient=.83), but somewhat poorer for the reasoning subscale because of its smaller number of items (alpha coefficient=.50)

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[6] Item h ("cried") does not belong to any of the scales, but was added by Straus (1979) because respondents commonly wish to report this response. Item d, which belongs to an older form of the CTS was added, but not used in the present analyses. Item e was slightly altered by adding the term "yelled".

Some validity data are available on the CTS. Straus (1974) found moderate to high correlations (.33 to .64) between students' CTS reports of verbal and physical aggression between their parents and direct CTS reports from the parents about this aggression. This is impressive in light of the fact that correlations between different family members' reports of aggression are generally fairly low (Bulcroft & Straus, 1975). Further validity is evidenced by a consistency between violence rates derived from CTS administation and those produced by in-depth interview studies (Gelles, 1972). In addition, CTS data have been repeatedly consistent with theoretical predictions about family violence (cf. Straus, 1979). The largest problem in assessing conflict tactics in the family is likely the under-reporting of aggressive tactics due to social embarrassment. Straus has attempted to mitigate this problem in the design of the CTS by (1) presenting the instrument to the repondent in the context of family disagreements "which all families experience" and by (2) ordering the items so that the respondent has an opportunity to present first the "correct" tactics he or she has used to resolve conflict before having to acknowledge more coercive tactics. At present, the CTS is the only well-standardized method of measuring conflict tactics in the family.

4. The Dyadic Adjustment Scale (DAS) (Spanier, 1976) is a 32-item scale designed to assess marital adjustment. The DAS may be broken down into four separate subscales: consensus, satisfaction, cohesion, and affectional expression. Data presented by Spanier (1976) indicate high levels of reliability

and validity for the instrument as a whole and for its subscales. The purpose of the DAS in the proposed research is to provide a standardized estimate of marital adjustment for descriptive purposes.

5. Violence in the Family of Origin. Information bearing on hypothesis three was obtained from two versions of the Conflict Tactics Scale-Form N (Straus, 1979, see Appendix G). The physical aggression subscales were used to obtain an estimate from the participant of the degree of parent-parent and parent- respondent violence occurring in a typical year of the man's childhood. Violence emmanating from both parents was taken into account when estimating total exposure to violence. The item "spanked" was added because of its common usage and because some theorists beleive that this form of hitting may contribute to later violence (Straus, Gelles & Steinmetz, 1980). The participant was also asked if he felt he had been "physically abused" by his parents as a child.

6. The Rathus Assertiveness Schedule (RAS) (Rathus, 1973) was used to obtain self-reports of assertive behaviour in the three groups of men bearing on hypothesis number two. The RAS is a thirty-item inventory covering a wide range of assertive behaviour (see Appendix H). Rathus (1973) has demonstrated that the RAS has moderate to high reliability and validates well against peer reports of actual behaviour and other self-reported behaviour.

7. Spouse-Specific Assertiveness Scale (SSAS). Rosenbaum and O'Leary (1981) modified items from Alberti and Emmons to assess assertiveness specific to interactions with the marital partner since no instrument existed of the purpose at the time. However, since the authors were somewhat dissatisfied with this approach (Rosenbaum, personal communication , September, 1981), Curley and O'Leary (1980) constructed a new scale to measure spouse-specific assertiveness. The scale consists of twenty-nine items, eighteen of which comprise an assertiveness subscale and nine of which comprise an aggression subscale (see Appendix I). The authors provide data indicating that the subscales have good internal consistency and were able to demonstrate predicted differences between abused and nonabused wives in terms of assertiveness. This assertiveness subscale will provide information relevant to hypothesis two.

8. The Test of Emotional Style (TES) developed by Allen and Hamsher (1974) was also used to test hypothesis number two (that wife-assaulters will report less emotional expressivenss). The TES contains 75 force-choice items distributed among three subscales: reponsiveness (20 items), orientation (30 items), and expressivenss (25 items). Responsivensss items assess covert experience of emotion, orientation items refect attitudes (positive or negative) toward emotional expression, and expressiveness items assess the frequency and intensity of actual overt emotional expression (see Appendix J). The expressivenss subscale was used to test hypothesis two. The scale contains reference to four basic emotions: anger, fear,

sadness, and joy.

Allen and Hamsher (1974) present data indicating that all three subscales have high internal consistency. They also attempted to validate the TES against self-reports of emotional responding in an experimental interview situation and peer ratings of emotional styles. The expressiveness and responsivenss subscales showed significant correlations with experimental emotional responding and peer reports of expressiveness, while the orientation subscale was not significantly correlated with these ratings nor with peer ratings of orientation. Overall, the expressiveness subscale appears to be strongest subscale psychometrically. All forced-choice items were selected and matched so as to minimize the effects of social desirability. Allen and Hamsher (1974) demonstrate that the subscales are in fact unrelated to scores on the Marlowe-Crowne Social Desirability Scale. The TES appears to be the only multi-dimensional self-report measure of emotionality available at present.

9. Burt's Attitude Scales (Burt, 1980) were used to test hypothesis number six. The scales measure sex-role stereotyping (9 items), adversarial sexual beliefs (10 items), and acceptance of interpersonal violence toward women (6 items). The first two scales show high internal consistency, while the acceptance of violence scale is less adequate in this respect (Burt, 1980). Burt (1980) presents data from a large survey indicating strong relationships between these scales and rape myth acceptance in

males, and argues for their role in targeting and releasing violent assault. The scales will be scored on a six point scale ranging from strongly agree (score five) to strongly disagree (score zero) and will be embedded in the 33-item Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960).

10. The Marlowe-Crowne Social Desirability Scale (SDS) (Crowne & Marlowe, 1960) is a 33-item scale designed to assess the need to respond in a culturally sanctioned manner. The SDS consists of self-descriptive statements that are culturally sanctioned but improbable. The scale has good reliability and correlates well with other measures of social desirability (Crowne & Marlowe, 1960). The purpose of the SDS in the present research was to provide a background in which to embed Burt's attitude scales while at the same time obtaining an estimate of the participant's concern with impression management. While some research has suggested that aggressive individuals are lower on "need for approval" (as measured by the SDS) than nonaggressive individuals (cf. Novaco, 1975), it was also likely that the PA group might have attempted to "image manage" during testing. If so, it is possible that the result of these oppositional influences could have affected responses to the self-report measures. The SDS score enabled comparison across subject groups on this dimension that served as a backgound for data interpretation. While the SDS was originally designed as a true-false scale, it was modified to a six-point Lickert scale in order to match Burt's scales. The items of the two scales were randomly mixed together. Scores on the SDS range from zero to 165. The

instrument is balanced for reduction of response sets. Appendix K contains the SDS and Burt scales.

D. THE VIDEOTAPE ANALOGUE STUDY

This component of the project provided a test of hypotheses four and five, which constitute predictions regarding the emotional impact on wife-assaulters of power and intimacy factors in conflict situations. The general strategy was to present the participant with a series of videotaped scenes depicting verbal conflict between a man and a woman, encourage him to imagine himself actually being in the man's shoes, and obtain measures of physiological arousal and reported affect. This analogue format was derived to some extent from our observations in therapy groups for wife assaulters that these men often reported experiencing anger during "guided fantasies" of conflict situations with their wife. The use of videotape was appealing in that the image could be presented vividly, while providing a relatively standard conflict scenario across participants. It also allowed the roles of both parties in the conflict to be manipulated, whereas such an aim would have been difficult or impossible using a role-play technique. Notwithstanding the advantage of the videotape format, it has rarely been utilized to study reactions to conflict. Therefore, this represented an opportunity to try out a novel methodological approach in this area.

1. Design. The videotape component employed a 3x2x3 factorial design (see Appendix L) with three levels of subjects (PA, VSA, NA), two levels of power (male-dominant, female-dominant), and three levels of attempted intimacy change (abandonment, engulfment, neutral). Power and intimacy change were manipulated by varying the videotaped scene. Therefore, there were six different videotaped scenes, one for each power x intimacy combination. The power variable was varied between subjects, while the intimacy variable was a within-subjects variable. [7] Specifically, the participants in each group (PA, VSA, NA) were randomly assigned to viewing either male dominant scenes or female dominant scenes. Each participant then viewed three videotapes, each depicting a different intimacy condition. The order of presentation was counterbalanced (see Appendix M).

2. Videotaped Scenes The scenes were between 5.5 and 7.5 minutes in duration. They all involved the same man and woman arguing heatedly over an issue. The subjects were told that the man and woman were a couple who had been involved in an "in-depth" study of marriage at the university and who had allowed a camera crew access to their home over a period of several months (see Appendix N for instructions). In fact, the couple were professional actors. [8]

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[7] The power variable was chosen as a between-subjects variable because it would appear less realistic if the actors were to switch from dominant to submissive for a given viewer than to be merely arguing over different issues for a given viewer. In addition, since there are only two power conditions, this approach allows for a more efficient use of participants.

Relative power was manipulated by having either the man or the woman in the scene dominate the argument verbally. Family interaction researchers (cf. Mishler & Waxler, 1968; Jacob, 1975) have specified a number of discrete behaviours that seem to constitute verbal dominance. These were employed here to manipulate relative power. Specifically, the powerful person was instructed to have a greater total talking time, interrupt his or her partner (successfully) more often and to get their way in the end. In the male dominant scenes, the man displayed this verbal prowess while the woman appeared cowed and submissive. In the female dominant scenes, their roles were reversed.

Attempted intimacy movement was manipulated by varying the issue discussed during the conflict. There were three issues, one for abandonment (woman attempting to move away from the man), engulfment (women attempting to move closer to the man), and the neutral (no attempted movement) condition. It was decided to have the woman instigate this movement in the tapes (rather than the man) because the dynamic of interest here was the man's attempt to control the woman's behaviour, not the other way around. The specifics of the abandonment and engulfment issues were selected on the basis of clinical experience as well as descriptions in the literature of actions by battered women that appear to anger their husbands.

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[8] A study by Dutton (1979) indicated that greater physiological arousal occurred in response to a videotaped scene if the viewer believed the scene was real than if he believed they were acting.

Specifically, the abandonment issue involved the woman stating that she wished to become more independent, spend more time with her friends (i.e. go away for a weekend with them), and join a women's group. The engulfment issue involved an argument in which the woman complained that the man didn't spend enough time communicating his thoughts and feelings to her. Finally, the neutral scene involved an issue that is common to most couples, but did not a priori involve a change in intimacy. The couple argued over whether they would spend their vacation camping (the man) or in San Francisco (the woman). All the tapes were constructed so that the severity of conflict increased over the first part of the tape, peaking around the middle and tailing off towards the end finally resulting in acquiesence by the"non-dominant person". The conflict was purely verbal; there was no physical contact between the man and woman in the scenes.

The videotapes were pre-tested on twelve men in their late twenties who were currently involved in an intimate relationship with a woman. The pre-test was conducted in order to "fine tune" the physiological measurement procedure and to obtain some preliminary ratings on the tapes in terms of the manipulations. Six men viewed the female dominant tapes and six viewed the male dominant tapes. Pre-test data is summarized in Appendix O. Essentially, the pre-test indicated that the tapes were seen as highly realistic and highly conflictual and produced a moderate degree of anger and anxiety as reported by the twelve men. The men's ratings on the power and intimacy dimensions indicated that the tapes were perceived as expected on these dimensions.

One exception to this was that the abandonment tapes (particularly male dominant-abandonment tape) were seen as closer to neutral than anticipated and in fact were not seen as significantly different from the neutral tapes. However, it was reasoned that assaultive men who had been seen in clinical settings to be "hypersensitive" to abandonment cues, would perceive a greater reduction of intimacy in these tapes. Since no assaultive men were available for pre-testing, it was decided to proceed with the experiment proper using the six pretested tapes.

3. Dependent measures: a) Self-report measures of perceived affect were obtained immediately after each videotape scene. While a number of standardized measures of affective state are available (e.g. Zuckerman, Lubin, Vogel & Valerius, 1974; Izard, 1974), these instruments were considered too lengthy or too broad-based for the present purposes. Therefore, two scales used by Russell and Mehrabian (1974) to measure anger and anxiety were used. Each scale consisted of three adjectives which tap feelings of anger (anger, hostile, aggressive) and anxiety (tense, nervous, anxious). The scales had the advantage of being short, while providing some breadth in the coverage of the two emotional state. The anger scale provided the primary test of hypotheses four and five. However, ratings on the anxiety scale were also analysed to see whether the men differed on this alternate subjective emotional state. A list of fourteen other adjectives describing affective state were selected from an extensive list compiled by Russell and Mehrabian (1979) and

included in the form given to the men following each scene (see Appendix P for the full list). These items were included primarily as a background on which to place the anger and anxiety items and will not be discussed in the dissertation.

The adjective list was presented to the men using a nine-point semantic differential format with the adjective at one pole and its negation at the other. About half the items were inverted so as to reduce the influence of response set. Each man completed the checklist twice after each scene. The first administration requested a rating of his feelings while "while watching" scene and the second administration requested an estimate of his feelings "had he actually been in the situation in real life". Scores on the first administration likely reflect some combination of the relevance of the scene's stimulus characteristics for the man plus his ability to "get into" the scene and experience emotion. The second administration represents a more cognitive report of his typical emotional response in a situation of that kind. Both are of interest in the present research.

In addition to their ratings of affect, the men also rated each scene on a nine-point scale for realism and severity of conflict and on a seven-point scale for dominance and attempted intimacy movement (see Appendix Q). The latter two ratings provided manipulation checks for the power and intimacy factors.

b) Physiological measures. Lang's (1971) analysis of emotional reactions as three interdependent, but distinct response modes (verbal, visceral, motor) suggests that the monitoring of autonomic arousal during exposure to emotional stimuli is a crucial adjunct to verbal ratings in the assessment of emotional responding. The conception of a "fight or flight" response characterized by general arousal of the sympathetic nervous system (Cannon, 1927) has been embraced by researchers studying emotional reactions (Hasset, 1978) and is central to some influential theories of emotion (e.g. Schachter & Singer, 1962). However, a number of studies conducted over the last thirty years have successfully demonstrated differential patterns of autonomic arousal for such emotions as fear and anger (Ax, 1953; Funkenstein, King & Drolette, 1954; Schachter, 1957; Weerts & Roberts, 1976; Schwartz, Weinberger & Singer, 1981) which presumably reflect adaptive preparatory responses for differential action (Obrist, 1976; Schwartz et al, 1981). While the results of these studies suggest that under certain circumstances it is possible to differentiate "fight and flight" emotions physiologically, it should be clear that many physiological similarities exist among these different emotional responses which reflect activation of the sympathetic nervous system in response to threat. Furthermore, there is currently no reliable, unobtrusive method for measuring one key differentiating variable, diastolic blood pressure. Therefore, the approach taken here was to select measures of autonomic activity which had been shown in past research to be responsive

to emotional stimuli and that could be measured unobtrusively. Five measures were selected on this basis: (1) rate of skin conductance responding, (2) mean tonic skin conductance level, (3) heart rate, (4) pulse transit time (an estimate of systolic blood pressure) and (5) respiration. A detailed rationale and description of measurement for each variable is presented next.

The term electrodermal activity (EDA) stands for a general class of physiological measures that have been used extensively in psychological research to measure sympathetic arousal in response to emotion-eliciting stimuli (Venables and Christie, 1980). Electrodermal measures reflect the activity of the eccrine sweat glands which are innervated exclusively by sympathetic, cholinergic fibres. Consequently, EDA has been frequently interpreted as a measure of emotional arousal by behavioural scientists.

Studies have demonstrated increases in phasic EDA (for example, number of skin conductance responses or galvanic skin reponses) following shock-threat manipulations (Szpiler & Epstein, 1976; Bundy & Mangan, 1979), perceived psychological threat (Katkin, 1965; Kilpatrick, 1972), stressful films (Geen & Rakosky, 1976; Goleman & Schwartz, 1976) and anger provocations (Ax, 1933; Schachter, 1957). In addition, Novaco (1975) was able to produce a decrease in the rate of galvanic skin responses in provoked anger clients using a modified stress inocculation treatment program. Similar results have been found for tonic EDA or skin conductance level (Taylor & Epstein, 1967; Szpiler &

Epstein, 1976; Bundy & Mangan, 1979; Frodi & Lamb, 1980). While some investigators believe that phasic EDA may be a more sensitive indicator of emotional arousal (Kilpatrick, 1972), other reviewers have concluded that phasic and tonic measures tend to covary fairly closely (Venables & Christie, 1980) and that some of the measured variation may be the result of differential effects of skin hydration on the two types of measure (Bundy & Managan, 1979).

Given evidence that both phasic and tonic measures of EDA respond to emotional arousal manipulations along with indications that these measures are not interchangeable, both measures were used in the present research. Since skin conductance measures appear to be more amenable to parametic statistical procedures than measures of skin resistance (Hassett, 1978; Venables & Christie, 1980), two measures of skin conductance were utilized: rate of skin conductance responding (SCR) and mean skin conductance level (SCL).

The third measure, heart rate, is a complex response which is affected sympathetically via adrenergic fibres originating in the spinal cord and parasympathetically via cholinergic fibres originating in the vagus nerve (Siddle and Turpin, 1980). While heart rate has traditionally been viewed as a general measure of arousal (Schwartz et.al., 1981), it is now clear that under some circumstances there may be "directional fractionation" of physiological reponses in which reductions in heart rate may occur following stimulation (Lacey, 1967; Lacey & Lacey, 1980).

Increases in heart rate following exposure to emotional stimuli may indicate defensive reactions to the material (Lacey, 1967) or may simply be reflective of metabolic demands arising in the experimental situation (Obrist, Langer, Grignolo, Light, & McCubbin, 1980).

Notwithstanding the apparent complexity of cardiovascular reponding, a number of studies have demonstrated increased heart rate in subjects following exposure to emotion-inducing stimuli. Heart rate has been found to increase following stressful or anger-provoking deceptions (Ax, 1953; Funkenstein et al, 1954; Schachter, 1957), relevant fear-inducing slides (Hare, 1973, Klorman, Wiesenfeld & Austin, 1975), self-initiated emotional imagery (Schwartz, 1971; Schwartz et.al., 1981) and emotional imagery stimulated by individualized audiotapes (Weerts and Roberts, 1976). More recently, Frodi and Lamb (1980) found greater increases in the heart rate of abusive mothers relative to nonabusive mothers while they watched videotapes of a baby crying. In addition to it's demonstrated responsiveness to emotional stimuli, tonic heart rate is relatively easy to measure in a continuous and unobtrusive fashion.

Systolic blood pressure is a commonly used measure of emotional arousal. It has been shown to be responsive to anger and anxiety reactions induced by provocation and stress manipulations (Ax, 1953; Funkenstein et al, 1954), frustration manipulations (Hokanson, 1961; Hokanson & Shelter, 1961) and imagery techniques (Weerts & Roberts, 1976; Schwartz et.al.,

1981). Novaco (1975) has also demonstrated decreases in systolic blood pressure in his anger clients following treatments. In recent years, Steptoe and his colleagues (Gribbin, Steptoe & Sleight, 1976; Steptoe, 1980) have introduced pulse transit time (PTT) as a nonintusive, indirect measure of blood pressure. PTT was originally defined as the time it took for a pulse wave to travel between brachial and radial locations on the artery and was shown to correlate highly with mean arterial pressure (Gribbin et al, 1976). Due to measurement difficulties with this procedure (such as movement artifact), PTT has more recently been measured as the time between the r-wave of the EKG and a peripheral pulse wave. Measured in this fashion, changes in PTT have been found to correlate most highly with changes in systolic blood pressure (Obrist, Light, McCribbin, Hutcheson & Hoffer, 1979; Allen, Schneider, Davidson, Winchester & Taylor, 1981; Newlin 1981; Lane, Greenstadt, Shapiro, & Rubinstein, 1983; Pollack & Obrist, 1983). Allen et.al. (1981) have shown that the use of combined PTT scores based upon ten consecutive beats improves correlations even further. PTT is not an obsolute measure of blood pressure; however, it is useful for assessing changes in blood pressure over time (Steptoe, 1980).

Since the breathing pattern of the subject may have a powerful effect on other measures of autonomic arousal (Stern, Ray & Davis, 1980), respiration was also recorded. Respiration rate was calculated and analyzed primarily to provide information about potential artifactual increases in other measures, but also because there exists some evidence that

respiration rate may increase under highly emotional conditions (Ax, 1953).

4. Apparatus and Quantification of Physiological Data. Physiological measurements were recorded using a Beckman Type R Dynagraph. Paper speed was 5 mm/sec. except during periods where pulse transit time was being assessed in which case the paper speed was increased to 100 mm/sec. Skin conductance values were obtained via two silver/silver chloride electrodes placed on the second phalanx of the index and second finger of the non-dominant hand. The surface area of the electrode contact with the skin was .78 cm^2. The electrode paste used was a mixture of one part physiological saline and two parts unibase (see Fowles, Christie, Edelberg, Grings, & Lykken, 1981). A Beckman Skin Conductance Coupler enabled both SCR and SCL to be recorded on one polygraph channel. Pen sensitivity was held constant at .1 MV/mm. Rate of responding (SCR) was calculated by counting deflections greater than .05 micromhos and dividing by the number of minutes in the sample unit. Mean SCL was determined by taking measurements at 15 second intervals during testing and averaging the obtained values for the sample unit. Room temperature was maintained relatively constant at 24-27°C throughout the testing.

EKG was recorded from two silver/silver chloride electrodes placed on the right collarbone and left ribcage. Redux electrode paste was used to abrade the skin under the placement site and also served as the transmission medium. The EKG impulses were

fed through a Beckman Voltage/Pulse/Pressure Coupler and output on one channel of the polygraph. Heart rate was established by counting the r-wave spikes for each measurement period and dividing by the number of minutes to yield beats per minute (bpm).

PTT was estimated by scoring the distance in millimeters between the peak of the EKG r-wave and the peak of the pulse wave detected by a photocell plethysmograph with a light emitting diode placed on the thumb of the non-dominant hand. The photocell was held in place by a piece of padded Velcro which also served to shield it from external light sources. Vasomotor signals were then channeled through a Beckman Photocell Coupler and were output on the polygraph channel adjacent to the EKG output. Each PTT score was the average of the ten consecutive beats closest to the end of the measurement period. Measurements were taken just before the start of each scene and during the last 15 seconds of each scene resulting in a before and after score for each scene.

Respiration data were obtained via a strain gauge transducer fastened around the mid-section of the man. A Beckman Voltage/Pulse/Pressure Coupler was used in the measurement. Respiration rate was calculated by counting the number of inhalations and dividing by time to yield an estimate of rate in cycles per minute.

Each scene was divided into three equal segments to yield three SCR,SCL, heart rate and respiration scores for each scene. All polygraph records were then scored by a research assistant who was blind to experimental conditions. The research assistant was trained in scoring the five measures using photocopied excerpts from the polygraph data. One scene and one baseline (selected randomly) from ten randomly chosen records were scored by a second rater in order to establish interrater reliabilities for the five measures. The Pearson reliability coefficients were uniformly high (all exceeding .98) and appear in Table 3.

Irregular or unusual responses on the respiration channel (perhaps representing coughing) were not used to adjust or eliminate coinciding phasic responses on other channels as it was reasoned that both responses could potentially reflect an emotional reaction and useful information might be lost. Rather, respiration was analyzed along with other more primary measures and the overall pattern of breathing used to help interpret the results.

5. Procedure. The participant was met by the investigator and taken to the testing room. He was asked to wash his hands with soap and water before beginning in an attempt to standardize this factor across participants (as recommended by Fowles et al, 1981). The physiological recording equipment was briefly explained to the man to help allay any anxiety about the procedure. Subsequently, the man was seated in a shielded room containing the videotape viewer and electrodes for physiological

Table 3
Pearson Interrater Reliability Coefficients for Physiological Measures

	Scene	Baseline	Overall
Skin Conductance Responding	.99	.99	.99
Skin Conductance Level	.99	.99	.99
Heart Rate	.99	.99	.99
Respiration	.99	.98	.99
	Before	End	Overall
Pulse Transit Time	.99	.99	.99

recording. While the electrodes were being attached, the man was told that he would be viewing several videotaped scenes of a couple involved in verbal conflict and that he would be given more detailed instructions in the answer booklet. Once the man was hooked up to the recording equipment he was asked to complete the list of twenty affect adjectives with instructions to rate "how you are feeling right now". This served as an indication of feelings the man was bringing into the session and/or feelings that were being aroused by the testing situation. He was also given the answer booklet and asked to read the instructions (see Appendix N). The instructions described what was about to happen, encouraged the man to imagine himself in the male's position and included some statements about what the man might experience while watching the tape. The latter instructional component involved an attempt to improve responsivity to the scenes by providing some indication that certain physiological responses might be expected to occur. This follows the general principle underlying the work of Lang and his colleagues (Lang, 1979; Kozak, 1977) that training people to pay attention to response aspects of an image increases the reported vividness of the image as well as subsequent physiological reactivity.

Calibration of the physiological recording equipment was performed while the participant completed the checklist and read the instructions. Following calibration, the participant was asked to relax for five minutes in the dimly lit room while physiological baseline measures were taken. Immediately

following the baseline the first scene was presented, followed by questionnaire completion, a two minute rest period, the next scene, and so on. After the man had completed the questionnaire for the third scene, he was asked to relax once again for five minutes with the room dimly lit in order to obtain a second physiological baseline reading. All scenes were presented on a twenty-inch RCA color television. The man viewed the scenes in a darkened room at a distance of approximately three feet from the screen. The volume of the television was preset in order to roughly equate the volume of sound across conditions.

Following the final baseline, the man was detached from the recording equipment and a brief post-experimental interview was conducted to obtain information about the man's impressions of the tape and his awareness of experimental hypotheses (see Appendix R for a list of questions asked). Men in the PA group were also asked some questions about violence in past relationships, violence outside the home, assault convictions and so on (see Appendix S). All men were given a copy of the Conflict Tactics Scale with a stamped, return envelope to give to their wives to fill out "independently". Fifty-two out of fifty- four wives returned the form completed (following repeated requests in several cases). VSA and NA men were paid and all men were told that they would be contacted within four weeks to receive their feedback.

IV. RESULTS

The results obtained from the paper and pencil measures (bearing on hypotheses one, two, three and six) will be discussed first followed by results from the videotape analogue study (bearing on hypotheses four and five) and finally by other results of interest. Given the large number of variables examined in the study and a consequent concern for holding Type I error rate down, the general approach to data analysis was to employ multivariate techniques on groups of variables (Gabriel and Hopkins, 1974). If significant, these analyses were followed up by univariate analyses of variance (ANOVAs) using the Bonferonni method of correcting alpha for experiment-wise error (cf. Harris, 1975) in order to assess more specifically how the groups differed. Newman-Keuls multiple comparisons were performed on pairs of means as a follow-up procedure to significant ANOVAs (cf. Kirk, 1968).

A. QUESTIONNAIRE DATA

Means and standard deviations for the nine variables derived from the questionnaires given in session one are presented in Table 4 (ie. nPower, [1] two childhood violence

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[1] nPower scores are the sum of a participant's scores for the five stories. Since a significant positive correlation ($r=.28; p<.02$) was found between nPower and story length, the scores were length-corrected using a procedure outlined by Winter (1980) which yields scores that are unrelated to protocol length (through the use of part correlation). These are the scores which appear in Table 4 and will be used in subsequent analyses. The scores have been standardized, multiplied by 10, and 50 has been added to eliminate negative numbers.

Table 4
Means and Standard Deviations for Paper and Pencil Measures

	PA	VSA	NA
nPower[1] (0-55)	8.17(4.87)	7.27(6.00)	8.27(4.30)
Length-corrected nPower	50.78(8.78)	48.93(11.99)	50.29(9.43)
Emotional Expresiveness (0-25)	11.89(7.20)	11.20(6.60)	10.44(5.93)
Parent-Parent Violence (0-108)[2]	6.72(14.43)	5.44(12.37)	2.50(5.21)
Parent-Respondent Violence (0-108)[2]	12.72(13.26)	11.78(6.19)	7.83(6.54)
Rathus Assertiveness Schedule (10-190)[3]	99.06(29.80)	110.17(28.09)	115.00(22.78)
Spouse-specific Assertiveness (46-181)[3]	106.44(14.00)	108.61(21.93)	119.39(12.17)
Sex-role stereotyping (0-45)	18.22(7.74)	16.10(7.00)	17.56(7.07)
Adversarial Sexual beliefs(0-45)	17.61(8.05)	12.60(8.30)	14.11(7.12)
Acceptance of Violence (0-30)	8.72(4.61)	5.83(4.19)	6.72(3.81)
Marlowe-Crowne Social Desirability Scale (0-165)	78.83(22.40)	80.94(19.30)	91.50(15.55)

[1]Numbers in brackets represent range of scores possible
[2]Sum of violence ratings for father and mother
[3]A constant of 100 was added to individual assertiveness scores in order to remove negative numbers.

scores, Test of Emotional Styles-expressiveness score; two assertiveness scores and scores on Burt's three attitude scales). While each of these variables was of interest theoretically, it was decided to reduce these variables to a smaller number of molar variables through a process of logical combination in order to increase the power of the multivariate test vis-a-vis the available sample size (cf. Overall & Klett, 1972). Therefore, a one-way multivariate analysis of variance (MANOVA) was performed on the following five variables: length-corrected nPower, emotional expressiveness, combined assertiveness (Rathus Assertiveness Scale score plus spouse-specific assertiveness score), combined childhood violence (parent-parent CTS scores plus parent-respondent CTS score) and combined attitudes toward women (sum of three Burt scales). Combinations were made by standardizing the scores for the component variables and summing them for each man. The MANOVA performed on these data indicated that there were no significant differences among the three groups on this linear combination of variables (Wilks Lambda(10,92)=.757; p=.191) This analysis advises against proceeding to individual univariate ANOVAs and hence, more molecular analysis of the variables will not be reported here. However, the reader may be wondering whether the process of molar analysis might have obscured some theoretically interesting differences on some of the nine individual measures or perhaps even components of these measures (e.g. father's violence vs. mother's violence). Hence, the reader is referred to Appendix T for more detailed information regarding the

questionnaire data. It should be made clear that though the means are in the predicted direction in many cases, even when very liberal statistical procedures are applied to these data (i.e. univariate ANOVAs on a large number of molecular variables) the general finding is that the groups do not differ signifcantly.

Also presented in Table 4 are means and standard deviations for the men's scores on the Marlowe-Crowne Social Desirability Scale (SDS). While the NA group appeared to score slightly higher than the other two groups (i.e. greater socially desirable responding), a one-way ANOVA did not reveal any significant differences on this measure. The PA group scored lowest on social desirability, contrary to the hypothesis that they may have been attempting to "image manage".

B. VIDEOTAPE ANALOGUE DATA

The approach to analyzing the dependent measures in this portion of the research closely followed that outlined above. Repeated measures MANOVAs were performed on logically combined groups of variables, followed by Bonferroni-adjusted univariate ANOVAs and Newman-Keuls post-hoc comparisons (given statistical significance in the preceding analyses). Since these analyses all involved at least one repeated measures factor, a sphericity test was performed for each repeated measures factor of the univariate ANOVAs to test the assumption of symmetry (i.e. that the orthogonal polynomials for any within factor were independent and had equal variance (cf. Anderson, 1958; Dixon,

Brown, Engleman, Frane, Hill, Fennrich and Joporek, 1981). If the sphericity test was significant, adjustments were made to the within-factor degrees of freedom via a procedure outlined by Greenhouse and Geisser (1959). One physiological measure (Pulse Transit Time) was analyzed separately using an analysis of covariance because the measurement procedure differed from that used with the other physiological variables. Finally, the four measures that provided descriptive information (realism, conflict) and manipulation checks (dominance, intimacy) on the tapes were analyzed separately using Bonferroni-adjusted univariate ANOVAs rather than an overall MANOVA because there were differing theoretical predictions about group differences for the various measures. These data will be presented first, followed by measures of emotional arousal and finally other relevant information regarding the videotape study.

Conflict, realism, dominance and attempted intimacy movement ratings. Means and standard deviations for the men's ratings on degree of conflict in the tapes are presented in Table 5. ANOVA results for these two ratings are found in Table 6. An alpha level of .05 was set for the family of ratings (conflict, realism, dominance, and intimacy), thereby making the alpha level for any one variable .05/4=.0125 (cf. Kirk, 1968). The information in Table 5 and Table 6 indicates that overall, the participants found the tapes to contain a moderate to high degree of conflict with no significant differences in perception across the three groups of men. While male-dominant tapes tended to be viewed as somewhat more conflictual, this difference fell

Table 5
Means and Standard Deviations for Conflict Ratings

Group	Dominance	Intimacy Condition A	E	N
PA	Male Dominance	7.78(1.09)	5.67(2.18)	6.67(1.94)
	Female Dominance	7.00(2.00)	6.22(2.59)	5.33(1.80)
VSA	Male Dominance	7.67(1.73)	6.78(2.65)	6.67(1.50)
	Female Dominance	5.67(1.09)	4.67(2.06)	5.22(2.11)
NA	Male Dominance	6.44(1.67)	6.00(1.62)	6.22(2.17)
	Female Dominance	7.11(1.50)	4.78(2.49)	6.22(2.17)

Scale range = 1-9.

Table 6
Analysis of Variance Results for Conflict Ratings

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	P	GGP[1]
Mean	6284.45	1	6284.45	988.91	.0000	
Group	3.79	2	1.90	0.30	.7435	
Dominance	29.39	1	29.39	4.62	.0366	
Group x Dominance	21.00	2	10.50	1.65	.2023	
Error	305.04	48	6.35			
Intimacy	45.23	2	22.62	8.79	.0003	.0008
Intimacy x Group	5.25	4	1.31	0.51	.7286	.6919
Intimacy x Dominance	0.44	2	0.22	0.09	.9173	.8813
Intimacy x Group x Dominance	17.44	4	4.36	1.70	.1574	.1707
Error	246.96	96	2.57			

Sphericity test p=.0024

Greenhouse-Geisser epsilon factor=.8157

[1] GGP=Greenhouse Geisser Probability

short of significance at the adjusted alpha level. Finally, a rather large difference was found for intimacy conditions in terms of perceived conflict which remained following Greenhouse-Geisser adjustment. Newman-Keuls comparisons indicated that the combined abandonment scenes were rated as significantly more conflictual than the neutral ($p<.05$) and engulfment scenes ($p<.01$) which did not significantly differ from one another.

Means and standard deviations and ANOVA results for realism ratings are presented in Tables 7 and 8. Overall, the men tended to see the tapes as moderately to highly realistic. No significant group differences were found on this rating, though mean ratings descended from the PA to the VSA to the NA group. The only significant difference on this rating was a main effect for intimacy condition. Post-hoc comparisons revealed that (overall) the engulfment scene was viewed as significantly more realistic than the other two scenes ($p<.01$) which did not differ significantly from one another.

Means and standard deviations for the men's ratings of dominance are presented in Table 9 and corresponding ANOVA results appear in Table 10. There were no significant overall differences among the three groups in their ratings of dominance in the tapes. There was a large main effect for the dominance condition which corresponded to predictions (i.e. the male-dominant tapes were rated as more male dominant that the female dominant tapes). The cell means all departed appreciably from the "equal dominance" rating of four with the exception of one

Table 7
Means and Standard Deviations for Realism Ratings

Group	Dominance	Intimacy Condition A	E	N
PA	Male Dominance	7.56(0.89)	7.44(1.67)	6.89(1.54)
	Female Dominance	5.22(3.46)	7.44(2.51)	6.56(2.51)
VSA	Male Dominance	5.67(2.96)	7.44(2.51)	5.11(1.96)
	Female Dominance	6.89(1.13)	7.56(1.42)	6.33(2.06)
NA	Male Dominance	4.78(2.91)	5.22(2.35)	4.11(2.85)
	Female Dominance	6.33(2.17)	7.11(1.54)	5.33(2.45)

Scale range = 1-9.

Table 8
Analysis of Variance Results for Realism Ratings

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	P
Mean	6384.50	1	6384.50	642.91	.0000
Group	54.70	2	27.35	2.75	.0737
Dominance	10.38	1	10.38	1.04	.3118
Group x Dominance	42.75	2	21.38	2.15	.1273
Error	476.67	48	9.93		
Intimacy	50.04	2	25.02	9.25	.0002
Intimacy x Group	9.15	4	2.29	0.85	.5000
Intimacy x Dominance	2.60	2	1.30	0.48	.6194
Intimacy x Group x Dominance	16.43	4	4.11	1.52	.2030
Error	259.78	96	2.71		

Sphericity test p=.1458

Table 9
Means and Standard Deviations for Dominance Ratings

Group	Dominance	Intimacy Condition A	E	N
PA	Male Dominance	6.11(1.05)	5.11(1.36)	5.78(1.30)
	Female Dominance	1.22(0.44)	1.89(1.05)	2.67(1.12)
VSA	Male Dominance	6.11(1.36)	4.33(1.58)	5.56(1.67)
	Female Dominance	2.00(1.58)	2.67(1.44)	2.33(1.41)
NA	Male Dominance	6.00(0.50)	5.22(1.09)	6.00(0.87)
	Female Dominance	2.56(1.81)	2.89(1.45)	2.67(1.22)

Scale range = 1-9.

Table 10
Analysis of Variance Results for Dominance Ratings

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	P	GGP[1]
Mean	2528.40	1	2528.40	746.08	.0000	
Group	6.01	2	3.01	0.89	.4185	
Dominance	430.22	1	430.22	126.95	.0000	
Group x Dominance	4.70	2	2.35	0.69	.5045	
Error	162.67	48	3.39			
Intimacy	6.46	2	3.23	4.03	.0208	.0264
Intimacy x Group	2.58	4	0.65	0.81	.5247	.5098
Intimacy x Dominance	20.48	2	10.24	12.79	.0000	.0000
Intimacy x Group x Dominance	5.59	4	1.40	1.75	.1463	.1562
Error	76.89	96	0.80			

Sphericity test p=.0194

Greenhouse-Geisser epsilon factor=.8662

[1] GGP=Greenhouse-Geisser Probability

mean (VSA group/male dominant/engulfment tape). A significant interaction between the intimacy and dominance factors held following Greenhouse-Geisser adjustment. Tests of simple main effects (cf. Kirk, 1968) were subsequently carried out and the results are presented in Table 11. Alpha level was set on a "per family" basis at .0125, resulting in criterion alpha levels of .0125/3=.004 for tests on dominance at each level of intimacy and .0125/2=.006 for intimacy at each level of dominance. Results indicated that the two dominance conditions were significantly different in the expected direction for each level of the intimacy condition, thereby validating the manipulation more specifically. A significant overall effect across intimacy conditions for male dominant tapes was followed up with Newman-Keul's post-hoc comparisons. These comparisons indicated that the engulfment tape was seen as significantly less male-dominant than the other two tapes ($p<.01$) which did not significantly differ from one another. In summary, the dominance manipulation generally worked as anticipated with male dominant tapes differing from female-dominant tapes over combined intimacy conditions and also at each individual level of the intimacy factor. The man appeared less dominant in the male-dominant, engulfment tape than in other male dominant tapes.

Means and standard deviations for ratings of attempted intimacy movement in the tapes are presented in Table 12 with corresponding ANOVA results in Table 13. There were no significant main effects for the group or dominance factors and no significant interaction effects. There was a large

Table 11
Test of Simple Main Effects for Dominance Ratings

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
Dominance at Abandonment	232.30	1	232.30	139.9**
Dominance at Engulfment	78.24	1	78.24	47.1**
Dominance at Neutral	140.17	1	140.17	84.4**
Error	239.56	144	1.66	
Intimacy at Male Dominant	20.54	2	10.27	12.82**
Intimacy at Female Dominant	6.40	2	3.20	3.99*
Error	76.89	96	0.80	

**p<.001

*NS.

Table 12
Means and Standard Deviations for Attempted Intimacy Movement Ratings

Group	Dominance	Intimacy Condition A	E	N
PA	Male Dominance	4.33(1.12)	1.67(0.87)	4.33(1.00)
	Female Dominance	5.11(1.05)	2.33(1.50)	4.33(1.12)
VSA	Male Dominance	4.00(1.22)	1.89(0.33)	3.78(0.67)
	Female Dominance	4.44(1.51)	2.11(0.78)	3.89(1.05)
NA	Male Dominance	4.56(0.73)	2.11(0.60)	4.44(1.01)
	Female Dominance	4.89(1.05)	2.00(0.71)	4.44(1.33)

Scale range = 1-7 (4=no intimacy movement)

Table 13
Analysis of Variance Results for Attempted Intimacy Movement Ratings

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	P
Mean	2090.89	1	2090.89	1230.60	.0000
Group	4.78	2	2.39	1.41	.2550
Dominance	2.99	1	2.99	1.76	.1911
Group x Dominance	1.12	2	0.56	0.33	.7201
Error	81.56	48	1.70		
Intimacy	204.04	2	102.02	139.47	.0000
Intimacy x Group	2.07	4	0.52	0.71	.5878
Intimacy x Dominance	1.57	2	0.78	1.07	.3465
Intimacy x Group x Dominance	0.77	4	0.19	0.26	.9019
Error	70.22	96	0.73		

Sphericity test p=.2470

main effect for intimacy condition as anticipated. Newman-Keuls pairwise comparisons [2] indicated that the engulfment scenes were rated as significantly more "moving towards" than the other two scenes ($p<.01$) and that the abandonment scenes were rated as significantly more "moving away" than the neutral scenes ($p<.05$) as expected. However, observation of the means suggests that the combined abandonment scenes were rated more closely to neutral (or no attempted movement) than was anticipated. This was particularly true for the male-dominant, abandonment scene. Though the PA group had the highest mean rating of "moving away" in response to the female-dominant abandonment tape, no statistical differences among the groups of men were found on these ratings. In summary, the ratings of attempted intimacy movement confirm that the manipulation was generally successful. However, the abandonment tapes were perceived as closer to neutral than expected and this appeared to be true for all groups of men.

Emotional response to the videotapes. Table 14 contains the means and standard deviations for four physiological measures (SCR, SCL, heart rate and respiration) collapsed over thirds of scenes for simplification. The two baseline readings are also presented in this table. A two-way MANOVA was performed on each

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[2] Though *a priori* hypotheses regarding differences among the means were postulated for this variable, pairwise comparisons were desired. Since Newman-Keul's post-hoc comparisons tend to be more powerful than Dunn's procedure when the number of means is small and the number of comparisons large, this procedure was used (Kirk, 1968).

Table 14
Means and Standard Deviations for SCR, SCL, Heart Rate and Respiration Collapsed Over Thirds of Scenes

SCR

Group	Domin.	Baselines 1	Baselines 2	Intimacy Condition A	Intimacy Condition E	Intimacy Condition N
PA	Male	2.44(2.21)	2.53(2.80)	2.28(2.18)	2.42(2.31)	2.63(2.99)
	Female	3.96(2.33)	2.87(2.48)	4.48(2.75)	3.26(1.85)	3.34(2.24)
VSA	Male	1.29(0.82)	1.62(1.83)	1.33(0.93)	1.20(0.68)	1.92(1.32)
	Female	3.67(2.14)	1.96(1.29)	3.42(2.33)	3.59(2.16)	2.90(1.86)
NA	Male	2.73(1.96)	2.89(1.80)	3.29(1.36)	3.14(1.78)	2.39(1.17)
	Female	2.22(2.07)	2.29(2.24)	2.30(2.25)	2.49(2.53)	1.86(2.70)

SCL

Group	Domin.	Baselines 1	Baselines 2	Intimacy Condition A	Intimacy Condition E	Intimacy Condition N
PA	Male	3.72(1.43)	3.74(1.71)	3.62(1.52)	3.61(1.61)	3.66(1.59)
	Female	4.80(2.92)	4.89(3.19)	4.92(2.84)	4.72(2.92)	4.64(2.81)
VSA	Male	3.48(1.42)	3.36(1.09)	3.33(1.21)	3.10(0.97)	3.45(1.16)
	Female	3.77(0.99)	3.72(0.88)	3.85(0.89)	3.97(1.03)	3.87(1.00)
NA	Male	3.85(0.53)	3.95(0.51)	3.89(0.52)	4.08(0.76)	3.85(0.53)
	Female	3.71(1.70)	4.21(2.59)	3.94(2.11)	4.39(2.70)	3.90(2.23)

Table 14 (cont'd)

Heart Rate

Group	Domin.	Baselines 1	Baselines 2	Intimacy Condition A	Intimacy Condition E	Intimacy Condition N
PA	Male	79.1(11.9)	75.5(10.3)	77.1(11.8)	74.8(6.4)	76.0(10.7)
	Female	81.6(11.5)	79.4(12.4)	79.2(12.5)	81.2(12.7)	79.0(11.9)
VSA	Male	76.7(12.1)	75.6(13.6)	75.9(12.0)	76.8(12.7)	76.9(11.9)
	Female	70.9(10.5)	70.4(10.5)	71.6(11.7)	69.7(9.7)	71.3(10.7)
NA	Male	84.1(12.5)	83.7(12.9)	82.4(12.8)	80.8(12.6)	81.0(13.4)
	Female	71.6(9.0)	71.2(10.0)	72.1(9.7)	71.9(10.2)	70.3(9.3)

Respiration

Group	Domin.	Baselines 1	Baselines 2	Intimacy Condition A	Intimacy Condition E	Intimacy Condition N
PA	Male	16.7(3.0)	15.7(3.5)	18.3(2.9)	18.0(3.0)	18.1(2.6)
	Female	15.3(4.2)	14.4(3.9)	18.3(4.5)	18.7(4.4)	17.9(3.7)
VSA	Male	13.7(4.7)	13.6(4.3)	17.6(3.9)	18.1(3.3)	18.0(3.9)
	Female	16.4(2.9)	15.5(3.3)	19.3(3.1)	19.4(3.0)	19.5(3.0)
NA	Male	14.7(7.6)	13.8(3.1)	17.9(3.2)	18.3(3.4)	18.3(3.2)
	Female	15.2(3.7)	15.6(2.7)	19.5(1.2)	19.4(2.0)	19.6(1.2)

set of baseline measures (baseline one and baseline two) to test for any differences in physiological responding prior to and following exposure to the videotape. These results are listed in Table 15. There were no significant main effects or interactions in these analyses. However, in the analysis of baseline one, the dominance factor approached significance, likely reflecting the somewhat lower rate of skin conductance responding and higher heart rate in men who watched the male-dominant tapes. Interestingly, there was no overall significant difference among the three groups of men in terms of their resting arousal level as represented by this linear combination of physiological measures.

Turning to the analysis of physiological arousal data during exposure to the videotapes, Table 16 lists the results of the four-way MANOVA with repeated measures on two factors (intimacy and time) used to analyze the data. [3] The only significant effects were a main effect for the time factor (that is, thirds of each scene) and an interaction between time and dominance conditions. Univariate ANOVAs were carried out to examine these signifcant MANOVA effects more closely. A main effect for the time factor was found for SCR (Greenhouse-Geisser epsilon factor=.815; $F(1.6,78)=35.45$; $p<.0001$) and SCL (Greenhouse-Geisser epsilon factor=.595; $F(1.2,57)=55.66$;

[3] A more fine-grained analysis of the men's peak responding was also undertaken separately for SCR, SCL and heart rate by selecting the third of each scene which produced the highest responding in a given man. Since this approach did not alter the pattern of results, only the major analysis is reported here.

Table 15
Multivariate Analysis of Variance Results for SRC, SRL, Heart Rate and Respiration Rate - Baseline One and Baseline Two

Baseline One

Source	Wilks Lambda	Approx F	Hypothesis Degrees of Freedom	Error Degrees of Freedom	P
Group	.89973	.61	8	90	.767
Dominance	.82575	2.37	4	45	.066
Group x Dominance	.77494	1.53	8	90	.158

Baseline Two

Source	Wilks Lambda	Approx F	Hypothesis Degrees of Freedom	Error Degrees of Freedom	P
Group	.92822	.43	8	90	.902
Dominance	.88479	1.46	4	45	.229
Group x Dominance	.84425	.99	8	90	.446

Table 16
Multivariate Analysis of Variance Results for SCR, SCL, Heart Rate and Respiration

Source	Wilks Lambda	Approx F	Hypothesis Degrees of Freedom	Error Degrees of Freedom	P
Group	.93134	.41	8	90	.914
Dominance	.85504	1.91	4	45	.126
Group x Dominance	.79909	1.34	8	90	.237
Intimacy	.82811	1.06	8	41	.407
Intimacy x Group	.65010	1.23	16	82	.263
Intimacy x Dominance	.81586	1.16	8	41	.348
Intimacy x Group x Dominance	.69957	1.00	16	82	.463
Time	.31607	11.09	8	41	.000
Time x Group	.66050	1.18	16	82	.301
Time x Dominance	.69680	2.23	8	41	.045
Time x Group x x Dominance	.72927	0.87	16	82	.598
Time x Intimacy	.63885	1.17	16	33	.342
Time x Intimacy x Group	.49841	0.86	32	66	.676
Time x Intimacy x Dominance	.65590	1.08	16	33	.408
Time x Intimacy x Group x Dominance	.45240	1.00	32	66	.481

$p<.0001$). Newman-Keuls pairwise comparisons demonstrated that for both measures all pairs of means differed significantly ($p<.01$) indicating a linear decrease in skin conductance responding and skin conductance level over the course of the scenes. The time x dominance interaction was signficant for heart rate only (Greenhouse-Geisser epsilon factor=.892; $F(1.8,86)=5.34$; $p<.009$). Analysis of simple main effects for this interaction term yielded one significant F ratio, for time across the female-dominant tapes ($F(2,96)=6.51$;$p<.01$). Newman-Keuls comparisons revealed one significant pairwise comparison, between the first and middle third of the female-dominant tapes ($p<.05$). While this finding implies that overall, heart rates tended to increase from the first to the second portion of the female-dominant tapes, the mean increase was only about one beat per minute and therefore is of little practical interest.

The Pulse Transit Time (PTT) variable was analyzed separately because the measurement procedure allowed for only one value per scene. Of interest was the relative change in PTT over the course of the various scenes. However, since analysis of change scores has been shown to be statistically problematic (cf. Cronbach and Furby, 1970), an analysis of covariance (ANCOVA) procedure was employed using the PTT measurement at the end of the scene as the dependent measure and the PTT measurement preceding the scene as the covariate. The means and standard deviations for the variate and covariate PTT measures are presented in Table 17. The ANCOVA results and adjusted means appear in Table 18. Tests of regression slope parallelism were

Table 17
Means and Standard Deviations for Before Scene and End of Scene PTT Measurements*

Group	Dominance		Intimacy Condition A	E	N
PA	Male Dominance	Before	29.64(2.71)	28.72(2.44)	29.22(2.65)
		End	29.33(2.32)	28.61(2.77)	29.10(2.35)
	Female Dominance	Before	28.43(1.70)	28.22(1.71)	28.26(1.90)
		End	28.52(1.82)	28.20(1.91)	28.14(1.71)
VSA	Male Dominance	Before	28.78(0.72)	28.47(1.26)	28.56(1.53)
		End	28.35(1.50)	28.04(1.42)	28.63(1.67)
	Female Dominance	Before	30.88(2.78)	30.67(2.15)	30.54(1.90)
		End	30.00(1.73)	30.50(1.95)	30.57(1.76)
NA	Male Dominance	Before	28.26(3.08)	28.16(3.35)	28.72(2.69)
		End	28.26(1.98)	28.00(2.72)	28.36(2.99)
	Female Dominance	Before	30.01(2.34)	29.47(1.98)	29.47(1.59)
		End	29.34(1.97)	29.10(2.23)	29.20(1.66)

*Measurements are in millimeters between peak of EKG r-wave and peak of pulse wave on polygraph paper which was moving at a rate of 100mm/sec during measurement. Therefore, 30 millimeters=300milliseconds.

Table 18
Analysis of Covariance Results and Adjusted Means for PTT Data

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	P
Group	0.78	2	0.39	0.21	.8117
Dominance	0.10	1	0.10	0.05	.8157
Group x Dominance	0.54	2	0.27	0.15	.8648
Covariate	479.29	1	479.29	256.82	.0000
Error	87.71	47	1.87		
Intimacy	1.51	2	0.76	1.45	.2405
Intimacy x Group	2.71	4	0.68	1.29	.2782
Intimacy x Dominance	1.32	2	0.66	1.26	.2878
Intimacy x Group x Dominance	0.71	4	0.18	0.34	.8518
Covariate	1.75	1	1.75	3.35	.0703
Error	49.72	95	0.52		

Sphericity test p=.2998

Group	Dominance	Intimacy Condition A	E	N
PA	Male Dominance	29.01	28.88	29.05
	Female Dominance	28.97	28.79	28.71
VSA	Male Dominance	28.59	28.58	29.01
	Female Dominance	28.88	29.52	29.67
NA	Male Dominance	28.82	28.63	28.62
	Female Dominance	28.78	28.89	28.99

performed on each level of the within subjects factor and were found to be nonsignifcant. While homogeniety of regression slopes was not tested across levels of the within-subjects factor, a review by Glass, Peckham and Sanders (1972) suggests that violation of the assumption is not likely to increase the probability of a Type I error. The ANCOVA yielded no significant main effects in the adjusted means suggesting that no differential changes in blood pressure occurred across groups or videotape conditions.

Self-report measures of anger ("while watching the scene" and "had you actually been in the situation in real life") and anxiety ("while watching the scene" and "had you actually been in the situation in real life") in response to the tapes were analyzed using two separate MANOVAs. Means and standard deviations for these measures and pre-rating scores are presented in Table 19 (anger) and Table 20 (anxiety). Two-way ANOVAs were performed on the two pre-rating scores (see Table 21 for results). MANOVA results for anger ratings are presented in Table 22 and Table 23 respectively. Analyses of pre-ratings revealed that men who were assigned to see the male-dominant tapes rated themselves as significantly more angry and anxious prior to testing than did the men who were assigned to see female-dominant tapes. There were no group differences or interaction effects on pre-rated anger or anxiety. Since the men were randomly assigned to dominance conditions, these differences for the dominance condition appear to reflect chance differences in random assignment which should be taken into

Table 19
Means and Standard Deviations for Anger Ratings

Anger - While Watching Scenes

Group	Dominance	Prerating	Intimacy Condition A	Intimacy Condition E	Intimacy Condition N
PA	Male	6.00(4.53)	13.00(6.58)	10.33(6.98)	13.44(6.71)
	Female	5.22(2.95)	15.22(8.35)	11.00(6.19)	12.67(8.08)
VSA	Male	8.22(4.02)	15.78(7.00)	13.11(6.97)	14.78(7.48)
	Female	5.11(2.37)	14.78(7.14)	12.67(7.75)	11.78(8.59)
NA	Male	5.78(2.49)	12.22(6.55)	11.11(1.83)	10.67(5.03)
	Female	3.78(1.20)	8.33(4.33)	6.11(3.22)	6.67(3.97)

Anger - Had You Been In the Situation

Group	Dominance	Intimacy Condition A	Intimacy Condition E	Intimacy Condition N
PA	Male	21.00(5.12)	16.22(7.50)	21.11(5.30)
	Female	21.00(5.03)	16.44(7.55)	18.33(4.85)
VSA	Male	17.11(7.24)	18.44(4.75)	19.56(3.97)
	Female	14.44(8.25)	14.33(6.93)	16.11(6.45)
NA	Male	12.33(7.25)	17.22(5.31)	18.67(6.31)
	Female	10.89(8.36)	10.22(7.23)	12.89(7.59)

Table 20
Means and Standard Deviations for Anxiety Ratings

Anxiety - While Watching Scenes

Group	Dominance	Prerating	Intimacy Condition A	Intimacy Condition E	Intimacy Condition N
PA	Male	14.67(6.89)	13.89(7.03)	11.78(5.21)	16.22(6.51)
	Female	11.88(5.11)	18.89(8.51)	13.56(5.13)	15.33(8.80)
VSA	Male	12.44(6.71)	17.22(6.34)	16.78(7.14)	17.78(6.53)
	Female	10.44(4.39)	15.22(6.70)	14.78(5.31)	15.11(7.15)
NA	Male	14.11(4.70)	13.22(6.69)	13.89(5.58)	14.67(6.25)
	Female	7.11(3.41)	13.67(5.10)	9.89(6.25)	8.44(5.36)

Anxiety - Had You Been In the Situation

Group	Dominance	Intimacy Condition A	Intimacy Condition E	Intimacy Condition N
PA	Male	22.11(3.55)	18.11(5.80)	22.33(2.74)
	Female	21.56(6.71)	19.56(6.21)	19.67(6.60)
VSA	Male	20.22(5.70)	21.78(1.92)	20.56(2.40)
	Female	16.78(6.69)	17.56(6.27)	18.11(6.15)
NA	Male	14.22(7.53)	20.22(5.24)	19.89(6.11)
	Female	14.89(7.03)	14.89(6.17)	15.78(6.59)

Table 21
Analysis of Variance Results for Pre-ratings of Anger and Anxiety

Anger

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	P
Mean	1745.35	1	1745.35	178.59	.000
Group	32.26	2	16.13	1.65	.203
Dominance	52.02	1	52.02	5.32	.025
Group x Dominance	12.26	2	6.13	0.63	.538
Error	469.11	48	9.77		

Anxiety

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	P
Mean	7490.67	1	7490.67	261.85	.000
Group	67.00	2	33.50	1.17	.319
Dominance	208.07	1	208.07	7.27	.010
Group x Dominance	65.15	2	32.57	1.14	.329
Error	1373.11	48	28.01		

Table 22
Multivariate Analysis of Variance Results for Anger Ratings

Source	Wilks Lambda	Approx F	Hypothesis Degrees of Freedom	Error Degrees of Freedom	P
Group	.76952	3.29	4	94	.014
Dominance	.91026	2.32	2	47	.110
Group x Dominance	.95506	.55	4	94	.702
Intimacy	.66494	5.67	4	45	.001
Intimacy x Group	.81429	1.22	8	90	.298
Intimacy x Dominance	.93654	.76	4	45	.555
Intimacy x Group x Group	.93323	.40	8	90	.920

Table 23
Multivariate Analysis of Variance Results for Anxiety Ratings

Source	Wilks Lambda	Approx F	Hypothesis Degrees of Freedom	Error Degrees of Freedom	P
Group	.82824	2.32	4	94	.062
Dominance	.93346	1.68	2	47	.198
Group x Dominance	.94704	.65	4	94	.630
Intimacy	.86186	1.80	4	45	.145
Intimacy x Group	.80898	1.26	8	90	.276
Intimacy x Dominance	.86605	1.74	4	45	.158
Intimacy x Group x Dominance	.85672	0.90	8	90	.517

account when interpreting any subsequent difference on the dominance factor. MANOVAs on anger ratings in response to the scenes revealed a main effect for groups and a main effect for intimacy condition. Univariate ANOVAs conducted on the two anger measures yielded different significant effects (alpha level=.05/2=.025) for the two measures. There was a significant difference for the intimacy factor in reported anger while watching the tapes ($F(2,96)=5.45$; $p<.006$). [4] Newman-Keuls comparisons indicated that the abandonment scenes produced considerably greater reported anger than did the neutral or engulfment scenes ($p<.05$) which did not differ significantly from one another. The group factor failed to reach significance on this measure at the adjusted alpha level ($F(2,48)=3.25$; $p<.05$). However, a main effect among groups was found for anger the men anticipated feeling "had they been in the situation" ($F(2,48)=4.94$; $p<.02$). Anticipated anger was highest in the PA group ($\bar{X}=19.02$), second highest in the VSA group ($\bar{X}=16.67$) and lowest in the NA group ($\bar{X}=13.70$). Newman-Keuls comparisons revealed that only the two extreme groups (i.e. PA and NA) differed significantly ($p<.01$). The intimacy factor was not significant on this anger measure. MANOVA results for anxiety ratings showed no significant main effects or interaction effects. Therefore, no further analysis was undertaken.

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[4] Sphericity test $p=.1286$

To summarize the men's self-reports of emotion in response to the videotapes, there were no significant differences in reports of anxiety, but there were some differences in their anger ratings. Specifically, the PA group tended to rate the most anticipated anger ("had they been in the situation") though they only differed significantly from the NA group in this respect. In addition, the abandonment scenes aroused significantly more self-reported anger in the men while they watched the tapes than did the other two scenes. This finding was not exclusive to any particular group of men or dominance condition.

Two additonal questions relevant to the foregoing videotape study deserve some attention. They are 1) what evidence is there that the men were able to experience some emotion in response to the videotapes and 2) to what extent were measures of emotion interrelated? With respect to the first question examination of the self-report data in Table 19 and Table 20 suggests that on the average there was a slight increase in reported anxiety and a substantial increase in reported anger from baseline period to the videotape-viewing periods. The men appeared to be moderately anxious prior to viewing the videotapes likely due to apprehension about the upcoming experiment. Examination of the physiological data in Table 14 suggests on the surface that there was little or no difference in arousal levels between baseline periods and viewing periods. However, the men tended to move around and breath more erratically during baseline periods (despite instructions to relax), whereas they tended to sit

still and breath regularly while watching the videotape scenes. These differences in movement and respiration may have produced different levels of "somatically-linked" skin conductance and heart rate responses in the baseline and viewing periods, thereby masking potential increases due to emotional reactivity. Given the available data, the most accurate conclusion would seem to be that on the average there was a moderate increase in self-reported anger and at best a mild increase in physiological arousal in reponse to the tapes. The variation between the physiological and self-report modalities in responsiveness to emotion-eliciting stimuli has been well-documented (cf. Lang, 1971; Hodgson & Rachman, 1974; Borkovec, Weerts & Bernstein, 1977; Lang, 1977; Rachman, 1978) and relates to the second question of interest here. Table 24 and Table 25 contain correlation matrices for physiological and self-report measurements. The only two strong correlations among measures are between the two measures of skin conductance and between self-reports of anger and anxiety. There were weak positive correlations among heart rate, respiration and the skin conductance measures, but low or in some cases negative correlations across the physiological and self-report modalities.

Post-experimental data. The only easily quantifiable information obtained in the post-experimental interview relevant to the videotapes had to do with the relevance of the scenes to the man's own relationship. Table 26 contains a table of proportions derived from the men's responses regarding which (if

Table 24
Pearson Correlations Among Physiological Measures for Baseline One, Baseline Two (Collapsed Over Groups)*

	SCR1	SCL1	HR1	Resp1	SCR2	SCL2	HR2	Resp2
SCR1								
SCL1	.54[1]							
HR1	.18	.13						
Resp1	.10	.05	.14					
SCR2	.59[1]	.41[1]	.10	.15				
SCL2	.40[1]	.87[1]	.13	.10	.54[1]			
HR2	.21	.21	.91[1]	.14	.15	.23[2]		
Resp2	-.09	-.06	.17	.67[1]	.00	.02	.09	

1. $p<.001$
2. $p<.05$
* n=54

Table 25
Pearson Correlations Among Physiological and Self-Report Measures While Watching Videotapes (Collapsed Over Group and Scenes)*

	SCR	SCL	HR	Resp	Anger	Anxiety
SCR						
SCL	.61[1]					
HR	.22	.15				
Resp	.09	.15	.21			
Anger	-.09	-.19	.04	-.05		
Anxiety	-.05	-.13	.06	-.04	.73[1]	

1. $p<.01$
* $n=54$

Table 26
Relevance of Intimacy Issues to the Men's Relationships

	Abandonment		Engulfment		Neutral		
PA	13	(72%)	10	(56%)	8	(44%)	31
VSA	7	(39%)	13	(72%)	10	(56%)	30
NA	4	(29%)	10	(56%)	0	(0%)	14
	24		33		18		

any) of the intimacy scenes represented a problem issue in their own relationship. An overall chi-square test was performed on the 3x3 contingency table (cf. McNemar, 1969) and was found to be significant ($\chi^2(4)=36.13$; $p<.001$). Subsequently, three analyses of variance of proportions were conducted - one for each intimacy condition - following a procedure outlined by Marascuilo (1966). This procedure allows for post-hoc comparisons to examine differences between pairs of proportions following a significant overall test. Two of the three overall chi-square analyses were significant, one for abandonment ($\chi^2(2)=12.28$; $p<.003$) and one for the neutral issue ($\chi^2(2)=14.00$; $p<.001$). Post-hoc comparisons for the abandonment issue indicated significant differences between the PA and NA groups ($\chi^2=12.05$; $p<.002$), but not between the other pairs of groups. Comparisons for the neutral issue indicated significant differences between the PA and NA groups ($\chi^2=14.40$; $p<.001$) and between the VSA and NA groups ($\chi^2=22.50$; $p<.001$). The raw figures for the abandonment issue are of particular interest as they appear to come the closest to being able to differentiate the PA group from the other two groups.

Two other pieces of information are relevant to the videotape procedure. Firstly, 74% of the men were convinced that the couple on the videotape were a real couple, 26% had "some doubt" and 100% reported they were able to "get involved" in the films regardless of whether they felt they were a real couple or not. Secondly, none of the men were able to generate accurate guesses about the experimental manipulation when asked to do so

following the testing.

C. HUSBAND VERSUS WIFE RATINGS OF VIOLENCE

One interesting side effect of obtaining violence ratings from the husband and wife was an opportunity to compare these ratings for the PA group. The data and related analyses presented in Table 27 were obtained by eliminating the scores for the one PA man whose wife refused to complete the CTS, so that the means for husbands and wives would be directly comparable. The means in Table 27 suggest a tendency for assaultive men to report less violence for themselves than their wives report for them and a similar tendency for the women to report less violence for themselves than their husbands report. Neither difference in means reached statistical significance, though ratings on husband's violence approached significance.

D. MISCELLANEOUS INFORMATION REGARDING VIOLENT BEHAVIOUR OF PA MEN

A brief interview with the PA men following testing in session two yielded the following descriptive information. All of the men but one reported having been violent at least one other time in their relationship beside the incident that led them into therapy. The first assault occurred before the couple were married or living together in 39% of the cases and during the first year of marriage or cohabitation in another 33%. Therefore, 72% of the men had been violent within the first year of marriage or cohabitation. A full 61% of the men had been violent in a previous relationship, while 72% of the men accepted all or part of the blame for their violence, 22% felt

Table 27
Means, Standard Deviations and Analysis of Results for Husband and Wife CTS - Physical Aggression Scores

	Husband's Rating (n=17)	Wife's Rating (n=17)	t	P
Husband's violence	10.18(7.99)	16.59(10.45)	2.01	.053
Wife's violence	5.94(5.51)	3.29(3.67)	1.62	.114

their wives were equally to blame and one man blamed his wife more than himself.

In terms of violence outside the home, 22% percent reported at least one fist fight in the past year, 67% percent reported fighting at least once since high school. About 22% had been charged with assualt by a person other than their wife and 17% had been charged by their wife.

V. DISCUSSION

This section comprises two areas of discussion. The first concerns the interpretation of the results just presented and specific suggestions for further study. The second part is a more general discussion of methodology and research direction in the area of wife assault based upon experience gained from this initial controlled investigation.

Specific discussion can and will be put forth bearing upon each hypothesis examined in the project. However, the most striking feature of these data when taken collectively is the remarkable similarity in responding between wife assaulters and the two comparison groups. This is particularly surprising given that measures were selected to reflect the most theoretically-compelling factors deduced from current clinical knowledge and uncontrolled research. While this apparent similarity between assaultive and unassaultive husbands is surprising given strong clinical belief to the contrary, the finding is consistent with recent controlled research in the child abuse area. Since research in this area is several years ahead of that on wife assault, there have already been a number of well-controlled studies. The general finding from this work has been that when comparison groups are carefully matched (particularly for socioeconomic status), few of the expected differences emerge between abusive and nonabusive parents (e.g. Gaines, Sandgrund, Green & Power, 1978; Kinard & Klerman, 1980; Starr, 1982) and between abused and nonabused children (e.g. Elmer, 1977; Burgess

& Conger, 1978; Starr, 1982; Wolfe & Mosk, 1983). A striking example of this phenomenon was an extensive study conducted by Starr (1982) in which ninety-two child-abusing families and ninety-seven nonabusing families matched for socioeconomic status and some child characteristics were compared on a multitude of theoretically relevant psychometric, observational and archival measures. After failing to reduce the resultant 249 variables successfully through factor analysis, he performed univariate analyses which yielded only twenty-six p values in excess of .05. He concluded that the similarities between his groups far outweighed the differences. Other reviewers in the field have reached similar conclusions (e.g. Toro, 1982; Wolfe, 1983).

These data obtained from the child abuse field along with the present findings suggest a number of important points. Firstly, it is essential to be cautious in drawing general conclusions about the causes of wife assault based solely upon clincical observations as information so obtained may be more indicative of demographic membership than violence liklihood per se. This does not preclude inferences about individual clients based on an intensive and integrated analysis of the person by an experienced clinician. It does preclude the generalization of these inferences to other clients. A related point involves the need to include adequate comparison groups in research on wife assault. A bare minimum must be one nonviolent comparison group matched for socioeconomic status and age. Comparing the questionnaire responses of assaultive populations with normative

data obtained from unmatched populations (e.g. Subotnik, 1983) creates serious interpretation problems and could potentially lead to fallacious and misleading conclusions. Finally, the absence of observed differences among matched groups may reflect the insensitivity of measurement techniques to more subtle differences that do exist. Thus, the need to progress from global hypothesis-testing to more refined analysis and measurement - a usual direction of movement for any new research area - is reinforced by the current hiatus between clinical theory and controlled research. Some suggestions for refinement are contained in the specific analysis of the results covered below.

Among the questionnaire measures administered to the men, the assertiveness scales appeared to show the largest differences between the groups. The assaulters were the lowest in overall assertiveness (though not significantly so). In terms of spouse-specific assertiveness the assaulters and VSA men were about equal in being less assertive than NA men (again, the differences were not significant statistically). The fact that spouse-specific assertiveness scores approached significance suggests the utility of choosing measures which tap responses specific to the relevant context. Further, the confusion between aggressiveness and assertiveness found in general assertiveness scales (including the Rathus to some extent) was less evident on O'Leary's spouse-specific scale, possibly improving precision in measuring the construct. While Rosenbaum & O'Leary (1981) found significant differences in assertiveness between assaulters and

nonassaulters and the present study did not, the mean differences found here are to some extent consistent with their overall findings of reduced assertiveness in assaultive males. The large variances in assertiveness within the three groups indicate that both violent and nonviolent men may be highly assertive or highly nonassertive, implying more complex mediation of the assertiveness-violence link. Examining the man's assertiveness relative to his wife's assertiveness or focusing on "blind spots" in his verbal abilities (e.g. expression of specific emotions or dealing with key issues) may help explain this relationship. For example, a man may be highly verbal and able to stand up for his rights, but feel helpless when his wife refuses to stay in the "rational mode" during an argument.

The measure of emotional expressiveness yielded more unequivocal results. There were no differences among the groups on this measure (even when anger items were removed) indicating that, on the whole, assaulters do not inhibit emotional expression more than nonassaulters according to their own ratings. Important validating evidence for this finding would be ratings of the men's emotional responsiveness by significant others (e.g. their wives). It may be that some men believe they express emotions freely and are unaware of actual emotional constriction. It is also possible that the crucial factor may be a general difference in emotional expressiveness between husbands and wives. Interview data (e.g. Komarovsky, 1967) and some controlled research (e.g. Allen & Haccoun, 1976) support

the notion of gender differences in emotional expression. If men in general have difficulty expressing sex role inappropriate emotions such as fear, sadness and hurt, this may produce tension in the relationship (as the woman feels cut off from the man's true feelings) which might then be dealt with differentially in assaultive and nonassaultive relationships. In sum, hypothesis two which predicted poorer verbal skills among assaulters was not conclusively supported by the data. Mean differences in the right direction and approaching statistical significance provide tentative support for the importance of assertive communication specific to the spousal relationship. However, large within-group variance suggests that high assertiveness is not necessarily contraindicative of violent responding. No evidence was found for "poverty of emotional expression" in assaulters relative to comparison men.

The men's reports of violence in the family of origin did not support the hypothesis that assaulters witness more spouse abuse or are abused more themselves as children than are nonviolent men. While mean CTS ratings of spouse abuse and child abuse were higher for the assaultive group (especially compared to the NA group), the variance in ratings was large. Only three assaulters admitted to having been abused as children when asked directly. Two men in each of the other groups acknowledged abuse. Using the CTS ratings as a guide, estimates of child abuse varied from twenty to seventy-eight percent depending on the criterion used to define abuse. However, the percentages did not vary appreciably across the groups. Similarily, about

twenty-eight percent of the men in each group witnessed spouse abuse (as defined by reporting a slap or worse in a typical year in their childhood). The major features of these data are that (1) there were no substantial differences among the groups in terms of reported exposure to childhood violence, (2) that it is possible to be assaultive without having experienced extreme violence in the family of origin and (3) it is possible to remain nonassaultive despite exposure to extreme violence in the family of origin. These results have important implications for how early exposure to violence is assessed and for theorizing about the link between prior learning and wife assault. The first implication has to do primarily with the man's ability to recall traumatic violent incidents in his childhood. There is reason to believe that men may not only minimize and deny their own violence, but may also minimize the abuse they have witnessed as children (cf. Ganley, 1981). Gully, Pepping & Dengerink (1982) using the CTS found that college males recalled less marital violence between their parents than did college females. [1] Rosenbaum & O'Leary (1981) found significant differences in reported child abuse between assaulters and nonassaulters when the wife was the informant, but not when the husband was the informant. These studies indicate that some information about the assaulter's prior exposure to violence may be missed if he is the sole informant and highlight the utility

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[1] Recollection of parent-parent violence did not relate significantly to current violence outside the home in this study.

of secondary informants (such as the wife) in collecting this information.

The heterogeneity in exposure to violent childhood models has serious implications for how we conceptualize a learning-based model of wife assault. It is clear that the "violence begets violence" hypothesis needs to be refined beyond the current generalization that wife assaulters come from highly abusive backgrounds. It may not be the degree of violence in the family of origin per se that is the most powerful determinant of future violence as much as the degree of reinforcement or the degree of inappropriate (i.e. noncontingent) punishment received for violent behaviour as a child (cf. Patterson, 1982) and the manner in which the child interprets the violence he experiences. While most children are reinforced for violent behaviour through the mass media, direct reinforcement can have very powerful effects on aggressive behaviour (cf. Bandura, 1977). Recent clinical experience (Ganley, 1981) suggests that there is a subgroup of assaulters who have come from essentially nonviolent homes, but who have experienced highly reinforcing consequences following violence against peers or siblings. Consistent with this notion is a finding by Gully, Dengerink, Pepping & Bergstrom (1981) that violence towards siblings as a child was the strongest predictor of later violence outside the home in college students. If the reinforcement for violence entails enhancement of the child's self-esteem and no alternative method is developed to maintain esteem in adulthood, then perceived challenges to self-esteem (e.g. status

inconsistency) may be potent instigators to aggression. As Meehl (1977) has pointed out, the acquisition of an aberrant behaviour pattern may involve only one solitary, but very powerful event in an individual's childhood, thereby making frequency counts less sensitive to this aspect of the learning process.

The fact that extreme family violence produces both violent and nonviolent men implies a differential reaction to the experience of family violence. Herzberger, Dillon and Potts (1981) who interviewed boys abused by one or both parents concluded that certain attributions about parental abuse might be more harmful in the long run than others (e.g. interpretation of the abuse as parental rejection, seeing the abuse as legitimate). Unfortunately, there have been no reported attempts to compare the attributions of violent and nonviolent men who were abused or witnessed abuse as children. This type of research would likely provide important information about the transmission of violence in families.

In addition to research examining critical violence-reinforcing experiences in assaulters and attributions about past exposure to violence, there is also a need to develop a classification system for assaultive husbands that might include prior exposure to violence as a crucial variable. Snyder & Fruchtman (1981) attempted to develop a crude taxonomy of wife assault based primarily on characteristics of the woman and the pattern of violence. Their analysis indicated that prior abuse of the woman as a child may be related to the pattern of

violence and likelihood of repeated assaultive relationships. Similarily, it could be that severe patterns of violence are related to an extensive abuse history in the man. Consequently, the wives of these men may be more likely to seek refuge at women's shelters, where most information on the assaulter has been gathered. The development of a classification system for assaultive relationships might help to clarify differences in findings across studies.

Hypothesis six predicted higher scores in the assaultive group on Burt's three attitude scales. While the assaulters' scores were slightly higher on all three scales, they were not statistically different and therefore hypothesis six was not supported. The utility of attitude scales of this type in predicting assaultive behaviour is questioned by these results and others. While Burt (1980) has demonstrated relationships among clusters of attitudes, she has yet to demonstrate a relationship between attitudes and violent behaviour. In studies of assaulters using related attitude scales results have also been inconclusive. Rosenbaum & O'Leary (1981) had two groups of abused wives estimate their husbands' attitudes toward sex role issues. [2] They found that wives seen individually for counselling estimated more conservative attitudes than comparison wives, but that wives who were being seen conjointly with their husbands did not differ from comparison wives in

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[2] They completed the Spence-Helmreich Attitudes Towards Women Scale.

their estimations. Subotnik (1983) unexpectedly found that a group of assaultive men espoused more profeminist attitudes that did a college student norm sample on Tellegen's Differential Personality Questionnaire. Dibble & Straus (1980) found that attitudes about violence were only weakly related to reports of minor domestic violence and that the consistency between violent attitudes and violent behaviour depended upon situational forces which might allow justification of the violence. This pattern of the results suggests several conclusions about the role of attitudes toward women in affecting wife assault. Firstly, if these attitudes contribute causally to assaultive behaviour they likely do so via a complex interaction with other attitude clusters and situational forces. Secondly , nonsignificant or reversed findings may reflect an attempt by the assaulter (conscious or otherwise) to present himself in a positive light on fairly transparent questions about male-female relations and violence. Finally, it is important to consider the possibility that the null hypothesis might stand under further scrutiny, implying that the key differences between assaulters and nonassaulters are not attitudinal.

The hypothesis that assaultive husbands should exhibit greater preoccupaton with power or control themes than comparison men found no support in the nPower data collected here. Average power imagery scores were almost identical for the three groups of men when combined responses to the five stimulus pictures were examined. Further, when pictures dealing specifically with male-female relations were analyzed

separately, the groups still did not differ. There are two possible explanations for these results. Firstly, since the TAT tends to be sensitive to situational variables (cf. Winter, 1973), variance in situational demand across the groups may have suppressed real differences in power imagery. For example, it is possible that embarrassment about their behaviour may have caused the assaultive men to feel more inhibited in their story-writing, thereby reducing power scores. However, there is good reason to believe that the effect of situational demand was minimal. The testing procedure and instructions were held constant across groups and marital conflict rather than marital violence was described as the focus of the study in order to minimize demand. In addition, the assaulters did not demonstrate a greater tendency for socially desirable responding on the Marlowe-Crowne Social Desirability Scale.

The alternative conclusion is that assaulters (at least this sample of assaulters) are not more "cognitively preoccupied" with general power themes than are nonviolent men of similar age and social class. If this is the case it does not necessarily imply that power issues are not salient for these men, nor does it imply that the concept of power is irrelevant for understanding wife assault. It does imply that power concerns may be limited to specific issues in the relationship, or that the crucial difference may centre around perceptions of powerlessness on the man's part and the method chosen to reduce powerlessness. Power or mastery over one's environment is generally ascribed a high value for males in our society (cf.

Fasteau, 1974; Lips, 1981). Assaulters may share with other men this masculine concern about exerting control, but feel powerless to attain this goal in their relationship because of negative expectations about their ability to influence their spouse. These expectations may be generalized and inaccurate (cf. generalized external locus of control) or specific to the relationship. Low relative status in the relationship combined with poor verbal skills would provide the man with no "legitimate" methods for claiming power, increasing the probability of violence as a control tactic. Future research should examine perceived powerlessness as an instigation to male violence in marital relationships, perhaps utilizing available locus of control scales (e.g. Rotter, 1966).

The videotape component of this project enabled a further investigation of power factors as instigators of angry reactions in wife assaulters. The power dynamic (i.e. relative dominance of the husband and wife) was the focus in this part, as was the interaction between dominance and specific relationship issues. The men's physiological reactions and self-reports of anger in response to the conflict scenes did not indicate greater emotional reactions to verbal dominance by the female. Overall, there were no significant differences between the dominance conditions nor interaction effects that would indicate differential responding by the assaultive group to the two dominance conditions. The physiological and self-report ratings taken during viewing time appeared to parallel differences in these ratings prior to viewing. Ratings of anticipated anger

(had the men been in the situation) appeared to follow a similar pattern with no substantial differences between dominance conditions. The absence of significant interaction effects for the dominance, intimacy and group factors suggests that power dynamics were not more salient in producing anger for one intimacy issue over another.

These results are surprising in view of clinical observations suggesting that domination by the wife (particularly with respect to key issues) often precedes the husband's aggression - which is presumably generated as a response to perceived threat. However, discussions with the men following testing suggested that their emotional responses may have been complex in origin, possibly mitigating against unidirectional effects. For example, several assaulters who viewed the male-dominant tapes commented on how verbally aggressive the woman seemed (though they felt the man was more dominant overall). These comments suggest that the woman may have seemed dominant in both conditions relative to the man's own wife. Some men could have been responding to female dominance cues in the male dominance condition thereby diluting response differences between the conditions. It is also possible that viewing a male-dominant model may have facilitated anger expression in the men in that condition, perhaps more so for the assaultive men who are already more prone to express anger in response to male-female conflict. In future tests of dominance hypotheses it will be important to separate the potentially confounding effects of model-facilitated anger responses and

threat-based anger responses. This might be accomplished in videotape format by employing a "calm" male model who would dominate the argument verbally, or in a role play paradigm by having the participant actually argue with a woman who is trained to win or lose despite the man's verbal abilities. It may also be useful to systematically assess the similarity between the female used in the stimulus material and the participant's wife in terms of verbal ability and style.

In summary, the two methods of investigating power as an explanatory concept in wife assault did not provide supportive evidence for the hypothesis that assaulters have a greater overall concern for being powerful or that assaulters are more angered by female domination. However, future research is encouraged in this area using a variety of assessment procedures. In particular, an assessment of perceived powerlessness in response to male-female conflict might be fruitful.

The intimacy dimension of the videotape component showed mixed results. Despite clinical descriptions of assaultive husbands as dependent, possessive and controlling in their relationships (e.g. Ganley & Harris, 1978), these men did not differ significantly from comparison men in their sensitivity to abandonment cues as reflected in their ratings of intimacy movement in the abandonment tapes. Perhaps social pressure to appear "reasonable and fair" may have inhibited reports of perceived abandonment in the tapes. Alternatively, the

suspiciousness which characterizes many of these men may be applied exclusively to their own wife.

The three intimacy conditions produced no differential physiological responding. However, overall the men reported more anger while watching the abandonment scenes than the neutral or engulfment scenes. The men also reported the abandonment scenes to be more conflictual, raising the possibility that men in general view attempts to reduce intimacy as more serious conflict (i.e. as questioning the integrity of the relationship). While the men's ratings of anger while watching the tapes did not demonstrate differential reactions for assaulters in response to the abandonment tapes, there is other suggestive evidence supporting the salience of the abandonment issue for assaulters. When the men rated anger anticipated had they been in the situation, the largest difference between the ratings of the assaulters and comparison men occurred in the abandonment condition. [3] In addition, when men were asked which scenes were relevant to their own relationship problems, the abandonment scene was rated as relevant by almost twice as many assaulters as VSA men and more than three times as many assaulters as NA men. These data seem to be suggesting that it is this type of issue that is particularly problematic for the assaultive group in their relationship, but that perhaps it manifests itself in a different manner than was depicted in the

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[3] Though the interaction term did not meet the Bonferroni-adjusted level of significance.

videotape for a given man. The issue of perceived abandonment should receive attention in future investigations using a range of abandonment stimuli. Since jealousy appears common in assaultive husbands (Roy, 1977; Ganley & Harris, 1978), it may be useful to examine to what degree sexual jealousy overlaps with perceptions of abandonment and related anger.

The engulfment scenes did not differ significantly from the neutral scenes in terms of the men's anger ratings. In fact, contrary to theoretical predictions, the engulfment scenes produced the lowest anger ratings for the assaultive group. Post-experimental data showed that the engulfment scene was perceived as being about equally relevant for the three groups of men, suggesting that this may be a relatively common conflict issue in male-female relations. These results suggest a number of important points. Firstly, there seems to be a fine line between romance - which generally has a positive valence - and a feeling of engulfment which should have a negative emotional valence. Since anger is considered to be a dissonant response to romantic behaviour, it may be the interpretation of the woman's motives for increasing intimacy that is of crucial significance. Patterson (1976) has hypothesized that attempts to increase intimacy will be met with rejection if the interpretation of the behaviour by the recipient is negative, but with acceptance if the interpretation is positive. Hence, the interesting question becomes: is a negative attribution (e.g. "She's trying to trap me.") the key to explaining why anger reactions occur in response to cues that increased intimacy is desired. Further,

must this attribution have personal relevance to occur (i.e. involve the man's own partner with whom he has a history)? If personal relevance is necessary for an engulfment interpretation, that would explain the reduced anger levels in response to the videotapes. The attributional component of the engulfment process might be a fruitful area for future research.

A second point raised by the engulfment findings has to do with the model used to explain the connection between intimacy issues and violence. Do assaultive men have a narrow "comfort zone" for intimacy, violations of which (in either direction) produce panic-based anger or, alternatively, are individual men sensitive to abandonment <u>or</u> engulfment fears but not both. The results of this project suggest that there may be some idiosyncracy in terms of sensitivity, with abandonment issues being more often relevant for assaulters.

Several other pieces of information not pertaining directly to the hypotheses deserve discussion. The assaulters reported over twice as much alcohol consumption than comparison males consistent with previous research (e.g. Coleman and Straus, 1979; Rosenbaum and O'Leary, 1981). The large variability in consumption within the assaultive group supports the notion that alcohol is not necessary for violence to occur (cf. Eberle, 1982), but that in some men it may facilitate violence. The impact of alcohol consumption on other relevant variables (e.g. power concerns; cf. McClelland et al, 1972) might be a useful area for further investigation.

Low scores on the Dyadic Adjustment Scale for the assaultive group reflect the high degree of conflict present and the dissatisfaction of these men with their relationship consistent with Rosenbaum and O'Leary (1981). The finding that seventy-two percent of the men had been violent within the first year of marriage also validates Rosenbaum and O'Leary's results and implies that violence generally begins before or shortly after marriage, a period when difficult personal adjustments are required and stress is high. The finding that a majority of the assaultive husbands had been violent in previous relationships [4] and had been involved in fights outside the home reinforces the argument that characteristics of the husband play a primary role in producing the violence and caution against etiological models that blame the victim. The fact that only seventeen percent [5] of the wives had ever charged their husbands with assault despite repeated violence, whereas thirty-three percent of the husbands who assaulted outsiders were charged reflects justice system barriers to legal remedy for assaulted wives and the relative unwillingness of these victims to lay charges (cf. Barnsley, 1980; Dutton, 1981).

The discrepancy between the violence ratings of husbands and wives on the CTS is interesting both theoretically and methodologically. Theoretically, it is consistent with the

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[4] This is particularly interesting where one considers that the average age of the husbands was only thirty.

[5] This figure is likely inflated by the selection procedure which included court-referrals.

concept of minimization invoked by clinicians to described assaultive husbands (cf. Ganley & Harris, 1978) and suggests the utility of further systematic investigation into this process. Methodologically, these results, along with recent investigations elsewhere (Szinovacz, 1983) strongly support the inclusion of wife reports in future research on assaultive husbands in order to validate violence estimates.

While this research project tested a number of hypotheses about wife assault, it also represented one of the first attempts to apply psychological research methods to the study of assaultive husbands. As such, the project has heuristic value insofar as suggestions for workable methodology and general research direction follow from current experience.

The usefulness of obtaining couples data in studies on wife assault is strongly supported by the results of this project. As previously mentioned, differences between husband and wife in reporting the husband's violence imply that the wife's reports may improve the assessment of the violence by providing a rough estimate of the husband's minimization. Similarly, Rosenbaum and O'Leary's (1981) data suggest that wife reports may provide information about childhood violence which may also be minimized by the husband. Finally, the use of self-report inventories to measure attitudes, behaviour patterns and personality styles presupposes a degree of self-awareness which may not be present in the assaultive husband. The assessment of a significant other (such as the wife) may provide more depth to these self-reports.

Apart from providing useful validational information, couples reports would provide data which might be theoretically interesting in its own right. There already exist evidence both for violent (Szinovacz, 1983) and nonviolent (Jacobson and Moore, 1981) couples, that husband and wife ratings are often discrepant even when specific behavioural events are the focus. Relatively little is known about the psychology of differential reporting in the marital dyad or the conditions which affect it. In particular, little is known about how the husband and wife reconstruct a given assault or construe the history of violence in their relationship. Increased understanding of these phenomena would be of obvious clinical interest. However, this knowledge would also be crucial from a research standpoint given the possibility that two divergent literatures on wife assault could emerge - one from studies using husband reports and one from studies using wife reports. Knowledge about differential perception and reporting of events in the marriage would help to reduce potential confusion in the literature. Since there is reason to believe that couples data can provide us with information of this nature not obtainable from aggregate husband and wife data (Szinovacz, 1983), the recruitment of the marital partner into research projects on wife assault is strongly advised.

A second methodological suggestion stems from evidence in this research that there can be considerable heterogeneity among men who are labelled "wife assaulter". Initial expectations of a group who share such a salient behaviour pattern as wife assault

is that there should be more similarities that differences among its members. However, high within-group variability on many of the measures in this project combined with high cross-study variance in estimates of assaulter characteristics in the literature strongly imply that the label "wife assaulter" comprises a number of subgroups. In order to make sense out of variable data, it may be necessary to develop a rough taxonomy of wife assaulters or at least specify a number of relevant dimensions along which assaulters may vary and then use this information to provide a context for data interpretation. Such an approach demands large sample sizes indicating the need for relatively long term projects that can accumulate data over time. Snyder and Fruchtman's (1981) study represents an initial step in this direction. Further attempts of this nature should be made with an increased emphasis on husband characteristics as these may have more predictive value (Rosenbaum & O'Leary, 1981). Some potentially useful dimensions to include might be overcontrolled versus undercontrolled emotional style (cf. Megargee, 1966; Subotnik, 1983), generality of violence, frequency and severity of violence and alcohol use. The use of standardized personality inventories such as the MMPI might also provide information that is capable of differentiating types of assaulters.

The issue of individual variation can be addressed on another level by considering the differentiation between nomothetic and idiographic approaches to explaining behaviour . Gelles (1982) views the former as the backbone of scientific

research, the latter being the purview of clinical practice. Despite apparent incompatibilities between the two perspectives, it may well be that a more individualized approach to research could facilitate the demonstration of lawful relationships in the wife assault area. The results of the videotape component of this project provide a case in point. Videotape scenes attempting to embody general themes (i.e. power, abandonment, engulfment) in standardized scenarios generated only mild to moderate emotional responses in the men. By contrast, other researchers (e.g. Weerts and Roberts, 1976; Schwartz et al, 1981) have been able to generate strong emotional responses using more individualized material. Though these researchers were not so much interested in the content of the imagery as in the physiological response patterns themselves, it does seem possible to design research that focuses on both imagery content and responsivity. The process of refining several personalized anger-provoking scenarios for each man, validating their arousal producing properties (for that man) physiologically using guided imagery or audiotape presentation, and then having the scenarios rated for thematic content by independent raters would appear to be a promising procedure. The result might be valuable information about the relative salience of power and specific intimacy themes for these men.

A specific recommendation for future studies employing psychophysiological measurement techniques is that within-subjects designs be employed exclusively where possible. Participants in this project brought large individual

differences in responsivity to the laboratory, particularly on measures of skin conductance. Differences of this magnitude are not always "evened out" through random assignment unless very large sample sizes are obtainable. Law of initial value problems may be more readily overcome by using each participant as his own control and employing a reasonable counterbalancing procedure.

The results of this project and those of other studies (e.g. Dutton and Painter, 1980; Rosenbaum and O'Leary, 1981) highlight the need for proper comparison groups in research on wife assault. The need to balance comparison groups has been discussed earlier. However, the clustering of the PA and VSA groups on several dependent measures (e.g. spouse-specific assertiveness, childhood violence, anger reports) supports Rosenbaum and O'Leary's (1981) contention that some sort of nonviolent, maritally-distressed comparison group be employed in order to differentiate factors associated with violence from factors associated with marital discord.

The difficulty in finding straightforward differences between matched groups of abusive and nonabusive families found in this study and elsewhere (e.g. Gaines et al, 1978; Starr, 1982) demonstrates the need to employ broad-based theoretical models and broad-based data collection techniques. Ecological models (cf. Belsky, 1980; Starr, 1982; Dutton, 1983) which consider contextual factors as well as individual and relationship factors appear particularly well-suited for this

task. While Belsky (1980) has suggested that the inclusion of two or more levels of his four-level model constitutes sufficient coverage for a given study, the present findings suggest that broader coverage within individual studies may lead to a more integrated knowledge base.

The need for controlled research on wife assault is almost universally recognized, but has been rarely attempted to date. The intractability of assaultive husbands combined with problems in finding standardized measures which adequately reflect complex clinical concepts have mitigated against research in the area. The major benefits derived from this initial research project are an increased awareness of potential substantive myths regarding assaultive husbands and the completion of considerable methodological groundwork which will facilitate continued work in the area.

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APPENDIX A

LETTER TO MARITAL THERAPISTS AND CLIENT HAND-OUT

I am a doctoral student in Clinical Psychology at the University of British Columbia. My dissertation research involves an intensive examination of men who assault their wives or common-law partners. The overall purpose of the study is to test some clinically-derived hypotheses regarding the causes of wife assault. I have access to a sample of convicted wife assaulters and will be obtaining information from them relating to their perceptions of their marital relationship, tactics they use to deal with conflict in their relationship, power concerns, assertive communication skills, emotional style, attitudes toward women and family background. The men will be asked to fill out questionnaires and will view videotapes of male-female conflict scenarios while having their physiological responses monitored.

I also wish to test two other groups of men for comparison purposes. One group will be comprised of men who report no physical aggression and little verbal conflict with their partners. The second group will be comprised of men who are experiencing marital problems in the form of frequent verbal conflict with their partner, but who report no physical violence. This second group is important for methodological reasons and should provide interesting information bearing on the manner in which physically aggressive husbands differ from husbands who limit their aggression to the verbal mode.

I would like to ask for your cooperation in referring maritally-distressed, but nonviolent men to this project. They should be currently in therapy for marital problems, report frequent verbal conflict with their partner and report no physical violence against their partner in the last year. Both married men and men involved in common-law relationships are welcome.

Should a client or patient of yours agree to participate, he will be asked to be involved in two testing sessions each lasting about two hours. The first session which could take place either in his home or at the university, would consist of paper and pencil questionnaires covering demographic information, an assessment of his marital satisfaction and the tactics he uses to deal with marital conflict, his degree of concern with power, assertive communication, emotional style, attitudes toward women and family background. The second session would take place at UBC and would consist of the man viewing a series of short videotaped conflict scenes while simple physiological measures are taken. Since there are some selection criteria built in to the questionnaires, a given man may or may not be asked to participate in the videotape component of the study (but most likely he will be).

The men who participate in the study will receive a payment of $10.00 for the first session and $15.00 for the second session. In addition, they will be contacted by telephone after their material is scored and given feedback based on their responses, should they desire it. A summary of the information may also be forwarded to their therapist, given the man's consent. Finally, a written summary of the study's findings will be sent to the men and their therapists at the end of the project.

Since it is my preference that subjects not be aware I am studying wife assault per se until after they have been tested, I am merely informing subjects that it is a project on how different men deal with conflict in their relations with women and I would request that you introduce the project to them in this manner.

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APPENDIX B

ADS IN THE VANCOUVER SUN

APPENDIX C

AD IN LAUNDROMATS

APPENDIX D

CONSENT FORM

APPENDIX E

DEMOGRAPHIC INFORMATION SHEET

A. Demographic Information

1. Age ___
2. Date of birth _____
   month day year
3. Occupation _____
4. Income (approx.): Your Income _____ Your wife's or partner's income: _____
5. Education (last year completed in school) _____
6. Married ___ Single ___ Divorced ___ Commonlaw ___
7. Years married ___ Years living together ___
8. Children (please list age and sex of each)

   _____
   _____
   _____
   _____
   _____

9. Wife's (or partner's) occupation: _____
10. Wife's education (last year completed in school) _____
11. Have you been married before? Yes ___ No ___
12. If Yes, please list duration of previous marriage(s): _____
    _____
13. How many drinks (beers + glasses of wine + drinks of hard liquor) do you consume during an average week? _____ drinks per week.
14. Do you feel that your drinking is a problem? Yes ___ No ___
    Has it ever been? Yes ___ No ___
15. Please list any prescription or nonprescription drugs used and frequency:

    _____
    _____
    _____
    _____

16. Do you sometimes have trouble keeping your weight down? Yes ___ No ___
17. Do you diet on a regular basis? Yes ___ No ___
18. Do you engage in any other self-improvement activities on a regular basis (for example; exercise, body-building, yoga, etc.)? Yes ___ No ___
    What are these activities (if any)? _____
    _____
19. Do you participate in any sports or games on a regular basis? Yes ___ No ___
    Please list them: _____
    _____

APPENDIX F

CONFLICT TACTICS SCALE

B. Marital Relationship

1. No matter how well a couple gets along, there are times when they disagree on major decisions, get annoyed about something the other person does, or just have spats or fights because they're in a bad mood or tired or for some other reasons. They also use different ways of trying to settle their differences. Below are listed a number of behaviors that people use to settle differences. Please read each one and circle the number that best represents how often in the past year that you and your partner have used these behaviors when dealing with each other.

	You - In past year								Partner - In past year							
	NEVER	ONCE	TWICE	3-5 TIMES	6-10 TIMES	11-20 TIMES	MORE THAN 20 TIMES	EVER HAPPENED?	NEVER	ONCE	TWICE	3-5 TIMES	6-10 TIMES	11-20 TIMES	MORE THAN 20 TIMES	EVER HAPPENED?
a. Discussed the issue calmly	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
b. Got information to back up (your/his) side of things	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
c. Brought in or tried to bring in someone to help settle things.	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
d. Argued heatedly but short of yelling.	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
e. Insulted, yelled or swore at the other one.	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
f. Sulked and/or refused to talk about it.	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
g. Stomped out of the room or house (or yard)	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
h. Cried	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
i. Did or said something to spite the other one.	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
j. Threatened to hit or throw something at the other one	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
k. Threw or smashed or hit or kicked something	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
l. Threw something at the other one	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
m. Pushed, grabbed, or shoved the other one	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
n. Slapped the other one	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
o. Kicked, bit, or hit with a fist	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
p. Hit or tried to hit with something	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
q. Beat up the other one	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
r. Threatened with a knife or gun	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
s. Used a knife or gun	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X
t. Other _____	0	1	2	3	4	5	6	X	0	1	2	3	4	5	6	X

APPENDIX G

CONFLICT TACTICS SCALES USED TO ASSESS CHILDHOOD EXPOSURE TO VIOLENCE

10. All families experience conflict or disagreements at times. We would like to have some information about how the members of your family dealt with conflict when you were growing up. Please try to remember as best you can and answer the following questions about your family as they were when you were growing up.

Below are a number of different ways people use to resolve conflict. Please read each item and circle the number that represents the approximate number of times per year ("Never" to "more than 20") that you saw your father and mother use these behaviours in dealing with each other.

	YOUR FATHER (When dealing with your mother) Times per year								YOUR MOTHER (When dealing with your father) Times per year							
	NEVER	ONCE	TWICE	3-5 TIMES	6-10 TIMES	11-20 TIMES	MORE THAN 20 TIMES	EVER HAPPEN?	NEVER	ONCE	TWICE	3-5 TIMES	6-10 TIMES	11-20 TIMES	MORE THAN 20 TIMES	EVER HAPPEN?
a. Discussed the issue calmly	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
b. Got information to back up his/her side of things.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
c. Brought in or tried to bring in someone to help settle things.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
d. Argued heatedly, but short of yelling	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
e. Insulted, yelled or swore at the other one.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
f. Sulked and/or refused to talk about it.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
g. Stomped out of the room or house (or yard)	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
h. Cried	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
i. Did or said something to spite the other one.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
j. Threatened to hit or throw something at the other one	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
k. Threw or smashed or hit or kicked something	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
l. Threw something at the other one.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
m. Pushed, grabbed, or shoved the other one	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
n. Slapped the other one	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
o. Kicked, bit, or hit with a fist.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
p. Hit or tried to hit with something	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
q. Beat up the other one.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
r. Threatened with a knife or gun	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
s. Used a knife or gun	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
t. Other	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7

11. In the same manner as above, please indicate about how many times per year your father and your mother used each of these behaviours when dealing with you while you were growing up.

	YOUR FATHER (In dealing with you)								YOUR MOTHER (In dealing with you)							
	NEVER	ONCE	TWICE	3-5 TIMES	6-10 TIMES	11-20 TIMES	MORE THAN 20 TIMES	EVER HAPPEN?	NEVER	ONCE	TWICE	3-5 TIMES	6-10 TIMES	11-20 TIMES	MORE THAN 20 TIMES	EVER HAPPEN?
a. Discussed the issue calmly	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
b. Got information to back up (his/her) side of things.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
c. Brought in or tried to bring in someone to help settle things.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
d. Argued heatedly, but short of yelling.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
e. Insulted, yelled or swore at you.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
f. Sulked and/or refused to talk about it.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
g. Stomped out of the room or house (or yard)	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
h. Cried	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
i. Did or said something to spite you.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
j. Threatened to hit or throw something at you.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
k. Threw or smashed or hit or kicked something.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
l. Threw something at you.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
m. Pushed, grabbed, or shoved you.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
n. Spanked you.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
o. Slapped you.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
p. Kicked, bit, or hit with a fist.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
q. Hit or tried to hit with something.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
r. Beat you up.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
s. Threatened with a knife/gun	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
t. Used a knife or gun.	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
u. Other (Probe): _____	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7

APPENDIX H

RATHUS ASSERTIVENESS SCALE

D. Personal Characteristics

Indicate how characteristic or descriptive each of the following statements is of you by using the scale given below.

+3 very characteristic of me, extremely descriptive
+2 rather characteristic of me, quite descriptive
+1 somewhat characteristic of me, slightly descriptive
-1 somewhat uncharacteristic of me, slightly nondescriptive
-2 rather uncharacteristic of me, quite nondescriptive
-3 very uncharacteristic of me, extremely nondescriptive

___ 1. Most people seem to be more aggressive and assertive than I am.
___ 2. I have hesitated to make or accept dates because of "shyness".
___ 3. When the food served at a restaurant is not done to my satisfaction, I complain about it to the waiter or waitress.
___ 4. I am careful to avoid hurting other people's feelings, even when I feel I have been injured.
___ 5. If a salesman has gone to considerable trouble to show me merchandise which is not quite suitable, I have a difficult time saying "No".
___ 6. When I am asked to do something, I insist on knowing why.
___ 7. There are times when I look for a good, vigorous argument.
___ 8. I strive to get ahead as well as most people in my position.
___ 9. To be honest, people often take advantage of me.
___ 10. I enjoy starting conversations with new acquaintances and strangers.
___ 11. I often don't know what to say to attractive persons of the opposite eex.
___ 12. I will hesitate to make phone calls to business establishments and institutions.
___ 13. I would rather apply for a job or for admission to college by writing letters than by going through with personal interviews.
___ 14. I find it embarrassing to return merchandise.
___ 15. If a close and respected relative were annoying me, I would smother my feelings rather than express my annoyance.
___ 16. I have avoided asking questions for fear of sounding stupid.
___ 17. During an argument I am sometimes afraid that I will get so upset that I will shake all over.
___ 18. If a famed and respected lecturer makes a statement which I think is incorrect, I will have the audience hear my point of view as well.
___ 19. I avoid arguing over prices with clerks and salesmen.
___ 20. When I have done something important or worthwhile, I manage to let others know about it.
___ 21. I am open and frank about my feelings.
___ 22. If someone has been spreading false and bad stories about me, I see him(her) as soon as possible to "have a talk" about it.
___ 23. I often have a hard time saying "No".
___ 24. I tend to bottle up my emotions rather than make a scene.
___ 25. I complain about poor service in a restaurant and elsewhere.
___ 26. When I am given a compliment, I sometimes just don't know what to say.
___ 27. If a couple near me in a theatre or at a lecture were conversing rather loudly, I would ask them to be quiet or to take their conversation elsewhere.
___ 28. Anyone attempting to push ahead of me in a line is in for a good battle.
___ 29. I am quick to express an opinion.
___ 30. There are times when I just can't say anything.

APPENDIX I

SPOUSE-SPECIFIC ASSERTIVENESS SCALE

Directions: Please use the scale described below to indicate how characteristic or descriptive each of the following statements is of you. After reading each statement, choose a number from the scale and place it in the space provided.

EXAMPLE: "I often yell back when my mate yells at me."

CODE:
+3 extremely descriptive, very much like me
+2 quite descriptive, rather like me
+1 slightly descriptive, somewhat like me
-1 slightly nondescriptive, somewhat unlike me
-2 quite nondescriptive, rather unlike me
-3 extremely nondescriptive, not at all like me

If you feel that you frequently yell back at your mate when he/she yells at you, then this statement describes you well. Rate it as a +3, "very much like me".

If you feel that you never say a word when your mate yells at you, then this statement doesn't describe you very well. Rate it as a -3, "not at all like me".

* Please note that there are also other possible responses (that is, +2, +1, -1, -2) that you can use to indicate a lesser degree of similarity or dissimilarity to yourself.

__1. Confronting my mate with problems as they come up is seldom a problem for me.

__2. I often yell back when my mate yells at me.

__3. When my mate tries to boss me around, I frequently do the opposite of what he/she asks.

__4. Telling my mate that he/she takes advantage of me is difficult for me to do.

__5. I am seldom able to tell my mate that I don't want to engage in sexual intercourse when he/she desires to.

__6. If my mate is annoying me, I often find it difficult to express my annoyance to him/her.

__7. I often take my time "just to show" my mate, when he/she tries to boss me around.

__8. Saying "NO" to my mate when I would like to say "NO" is difficult for me to do.

__9. I frequently find that I am able to ask my mate to do me favors without any difficulty.

__10. I often have difficulty telling my mate my true feelings.

+1 slightly descriptive, somewhat like me
-1 slightly nondescriptive, somewhat unlike me
-2 quite nondescriptive, rather unlike me
-3 extremely nondescriptive, not at all like me

__11. Challenging my mate's beliefs is something I can do with little difficulty.

__12. In general, I'm not very direct in expressing my anger to my mate.

__13. In general, asserting myself with my mate is something I seldom do, even though I don't think he/she would say or do anything negative to me.

__14. I often have trouble saying something that might hurt my mate's feelings, even when I feel he has injured me.

__15. I often make threats to my mate that I really don't intend to carry out.

__16. Expressing criticism to my mate is often a problem for me.

__17. I can express a differing point-of-view to my mate without much difficulty.

__18. When I'm feeling insecure and jealous, I'll often pick a fight with my mate rather than tell him/her directly what's on my mind.

__19. Starting arguments with my mate when he/she disagrees with me is something I often do.

__20. Asking my mate to do one of my chores, even when I don't feel well, is something I have difficulty doing.

__21. I often say nasty things to my mate, especially when I'm angrily discussing something with him/her.

__22. Slamming doors is something I often do when I get mad at my mate.

__23. I'll often do something on purpose to annoy my mate, and then apologize excessively when he/she accuses me of it.

__24. I often let my mate know when I disapprove of his/her behavior.

__25. I will often break a "rule" my mate has made just to spite him/her.

__26. When my mate makes me do something that I don't like, I often make a point of getting even later.

__27. In general, I seldom assert myself with my mate because I am afraid to.

__28. I often won't do what my mate asks me to do if he/she asks in a nasty way.

__29. I'll often give my mate the "silent treatment" when I am mad at him/her.

APPENDIX J

TEST OF EMOTIONAL STYLE

INSTRUCTIONS:

This questionnaire consists of a number of statements that people have used to describe their own emotional style.

The statements are presented in pairs; read each pair and circle the letter (a or b) of the statement which is more true of you, or which better represents your own attitudes toward emotion. You will notice that some statements appear more than once, but are paired with different statements. Thus, each time you read a statement, you must evaluate it along with the other statement in the pair.

Because the statements in any particular pair are often not opposites of each other, it may happen that both statements are true (or false) for you. In that case, circle the one which is more true (or less false) for you.

In this "forced-choice" format, many items may be difficult for you to answer. Thus people often prefer the open-ended sentence completion format where they are free to write out their own statement. However, the sentence completion format is time consuming to fill out, and is difficult to score objectively, so we have developed alternative formats.

The statements here have been chosen to reflect a wide range of attitudes and emotional styles. We would like you to use this questionnaire to describe your own emotions and attitudes as accurately as you can.

1. a Getting upset clears the air.
   b Getting upset usually doesn't help the situation.

2. a Getting angry is a good release.
   b Feeling affection can lead to disappointments.

3. a Emotions should be governed by reason.
   b For me to cry while with someone can be very beautiful.

4. a When I feel unhappy I usually don't try to hide it.
   b When I feel unhappy I try not to show it.

5. a For me to cry while with someone is unlikely.
   b Crying at a movie is something I do a lot.

6. a For me to cry while with someone makes me feel closer to them.
   b Getting upset usually doesn't help the situation.

7. a For me to feel depressed is rare.
   b Letting go emotionally I do easily.

8. a Expressing emotions should be done with discretion.
   b Letting someone else know my emotions makes me feel good.

9. a People who have strong emotions should be careful of them.
   b People who have strong emotions should express themselves.

10. a Most of the time my emotions are minimal.
    b Most of the time my emotions are intense.

11. a For me, showing anger is a sign that I have lost control of myself.
    b For me, showing anger is a good way to begin to make a situation better.

12. a Getting angry feels good.
    b Getting angry is a weakness.

13. a Most of the time my emotions are not all that deep.
    b For me to feel depressed is common.

14. a When I feel really happy I let everyone know it.
    b Most of the time my emotions do not show.

15. a People who have strong emotions should try to be careful of them.
    b Letting go emotionally can be great.

16. a When a close friend responds emotionally I also feel the emotion.
    b When I am with someone who gets emotional I am usually calm and collected.

17. a When I am disgusted by someone I show it.
    b When I am disgusted by someone I usually keep it to myself.

18. a Getting angry upsets me; I don't like to.
    b When I feel unhappy it's okay because I use that time to go off by myself and think.

19. a Letting go emotionally is something I try not to do.
    b People who express their emotions freely are honest and can be relied on.

20. a Becoming anxious is a waste of time and energy.
    b Getting angry is a good release.

21. a Crying at a movie is something I do a lot.
    b My emotional responsiveness to movies is private; I don't show it.

22. a When I feel resentment toward someone I usually show it.
    b When I feel resentment toward someone I usually keep it inside.

23. a When I am disgusted by someone I tell them.
    b For me, showing anger is hard to do.

24. a People who have strong emotions are my kind of people.
    b People who have strong emotions should try to control them.

25. a Getting angry feels good.
    b Getting upset is a waste of time.

26. a Most of the time my emotions are let out freely.
    b Most of the time my emotions are controlled by mind.

27. a When I become anxious I sweat.
    b My emotional responsiveness to movies is minimal.

28. a When I feel guilty I show it.
    b When I become anxious no one but me is likely to know.

29. a When I am frustrated I am quick to anger.
    b My emotional responsiveness to books is not that great.

30. a Emotions should be governed by reason.
    b Responding to things with deep emotion is normal.

31. a Emotions should be controlled.
    b Letting someone else know my emotions is a good release.

32. a When I am unhappy it is very intense.
    b Most of the time my emotions are low key.

33. a For me, showing anger is difficult.
    b For me, showing anger is no problem; it's hiding it that's hard.

34. a Becoming anxious is not one of my personality traits.
    b When I feel guilty I have a good deal of trouble falling asleep.

35. a Crying at a movie is natural and healthy.
    b Expressing emotion should be done with discretion.

36. a When I feel unhappy I try not to show it.
    b When I feel unhappy it shows.

37. a The number of different emotions I feel makes me more interesting.
    b Expressing emotion should be done with discretion.

38. a When I feel unhappy it is not very deep or long lasting.
    b My emotional responsiveness to movies is high.

39. a Getting upset is self-defeating.
    b Getting upset is healthy.

40. a Emotions should be controlled.
    b Letting go emotionally makes me feel good.

41. a People who have many different emotions are like me and I love 'em.
    b People who have strong emotions should be careful of them.

42. a Getting angry is not a problem for me.
    b Getting angry upsets me; I don't like to.

43. a Letting go emotionally is just not me.
    b When I am with someone who gets emotional I get emotional.

44. a When I feel guilty it is usually not long lasting.
    b For me to love comes easily.

45. a When I am with someone who gets emotional I feel for the person.
    b When I am with someone who gets emotional I try to remain calm.

46. a People who bubble with enthusiasm and good humor sometimes annoy me.
    b People who have strong emotions are strong people.

47. a Getting angry is a good release.
    b Getting angry is a waste of time.

48. a Emotions should be controlled.
    b Letting go emotionally can be great.

49. a Letting go emotionally I do easily.
    b Getting upset is not characteristic of me.

50. a When I feel guilty I become anxious and confused.
    b Feeling guilty doesn't really bother me.

51. a Responding to things with deep emotions is good.
    b People who have strong emotions should try to control them.

52. a When I am disgusted by someone I let him know it.
    b For me, showing anger is rare.

53. a When I feel really happy I tend to communicate it only to people I feel close to.
    b When I feel really happy I let everyone know it.

54. a Most of the time my emotions are low key.
    b Feeling guilty is hard to overcome.

55. a Most of the time my emotions are hidden.
    b When I have an emotional reaction it's obvious to anyone who knows me.

56. a Crying at a movie is customary for me.
    b Crying at a movie is very rare for me.

57. a When I have an emotional reaction I go off by myself.
    b When I have an emotional reaction it is obvious to anyone who knows me.

58. a Crying at a movie is embarrassing.
    b Getting angry feels good.

59. a People who have strong emotions should try to control them.
    b Responding to things with deep emotions is normal.

60. a For me to feel depressed is good because sometimes afterwards you feel better.
    b For me to feel depressed is awful.

61. a Getting angry is a good release.
    b Getting angry is unfortunate.

62. a Expressing emotions is how I relate to others.
    b Most of the time my emotions are controlled by mind.

63. a My emotional responsiveness to books is usually very great.
    b Getting me angry requires much provocation.

64. a Showing affection is almost too easy for me.
    b When I feel really happy I tend to communicate it only to people I feel close to.

65. a Getting angry is typical of me.
    b Most of the time my emotions are not that deep.

66. a Letting go emotionally is something I seldom do.
    b When I am with someone who gets emotional I stay emotional.

67. a When I feel unhappy I try not to show it.
    b When I have an emotional reaction I show it.

68. a When I become anxious I conceal it well.
    b When I become anxious it is apparent.

69. a Most of the time my emotions are intense.
    b Getting upset rarely happens to me to any great degree.

70. a Most of the time my emotions are not readily noticeable.
    b Most of the time my emotions are visible.

71. a When I become anxious I conceal it well.
    b Showing affection is almost too easy for me.

72. a Letting someone else know my emotions is rare and the someone has to be special.
    b Letting someone else know my emotions is frequent for me.

73. a When I am frustrated it is short-lived.
    b For me to love comes easily.

74. a When I have an emotional reaction I go off by myself.
    b Expressing emotions is something I do all the time.

75. a Letting someone else know my emotions is natural for me.
    b Letting someone else know my emotions is rare and that someone has to be special.

APPENDIX K

BURT ATTITUDE SCALES AND MARLOWE-CROWNE SOCIAL DESIRABILITY SCALE

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether you agree or disagree with it. Indicate your response by making a check mark in the appropriate box.

	STRONGLY DISAGREE	MODERATELY DISAGREE	SLIGHTLY DISAGREEE	SLIGHTLY AGREE	MODERATELY AGREE	STRONGLY AGREE
1. Before voting I thoroughly investigate the qualifications of all the candidates.						
2. I never hesitate to go out of my way to help someone in trouble.						
3. A man should fight when the woman he's with is insulted by another man.						
4. A woman will only respect a man who will lay down the law to her.						
5. People today should not use "an eye for an eye and a tooth for a tooth" as a rule for living.						
6. It is sometimes hard for me to go on with my work if I am not encouraged.						
7. It is acceptable for the woman to pay for the date.						
8. I have never intensely disliked anyone.						
9. On occasion I have had doubts about my ability to succeed in life.						
10. Many women are so demanding sexually that a man just can't satisfy them.						
11. Being roughed up is sexually stimulating to many women.						
12. I sometimes feel resentful when I don't get my way.						
13. A woman should be a virgin when she marries.						
14. A man's got to show the woman who's boss right from the start or he'll end up henpecked.						
15. I am always careful about my manner of dress.						
16. Many times a woman will pretend she doesn't want to have intercourse because she doesn't want to seem loose, but really she's hoping the man will force her.						

	STRONGLY DISAGREE	MODERATELY DISAGREE	SLIGHTLY DISAGREE	SLIGHTLY AGREE	MODERATELY AGREE	STRONGLY AGREE
17. My table manners at home are as good as when I eat in a restaurant.						
18. If I could get into a movie without paying and be sure I was not seen, I would probably do it.						
19. There is something wrong with a woman who doesn't want to marry and raise a family.						
20. On a few occasions, I have given up doing something because I thought too little of my ability.						
21. Women are usually sweet until they've caught a man, but then they let their true self show.						
22. A wife should move out of the house if her husband hits her.						
23. I like to gossip at times.						
24. There have been times when I felt like rebelling against people in authority even though I knew they were right.						
25. A wife should never contradict her husband in public.						
26. A lot of men talk big, but when it comes down to it they can't perform sexually.						
27. Sometimes the only way a man can get a cold woman to turn on is to use force.						
28. No matter who I'm talking to, I'm always a good listener.						
29. I can remember "playing sick" to get out of something.						
30. It is better for a woman to use her feminine charm to get what she wants than to ask for it outright.						
31. There have been occasions when I took advantage of someone.						
32. I'm always willing to admit it when I make a mistake.						
33. I always try to practice what I preach.						
34. In a dating relationship a woman is largely out to take advantage of a man.						
35. I don't find it particularly difficult to get along with loud mouthed, obnoxious people.						
36. I sometimes try to get even rather than forgive and forget.						

	STRONGLY DISAGREE	MODERATELY DISAGREE	SLIGHTLY DISAGREE	SLIGHTLY AGREE	MODERATELY AGREE	STRONGLY AGREE
37. A man is never justified in hitting his wife.						
38. It is acceptable for a woman to have a career, but marriage and family should come first.						
39. When I don't know something I don't at all mind admitting it.						
40. Men are out for only one thing.						
41. I am always courteous, even to people who are disagreeable.						
42. At times I have really insisted on having things my own way.						
43. There have been occasions when I felt like smashing things.						
44. It looks worse for a woman to be drunk than for a man to be drunk.						
45. I would never think of letting someone else be punished for my wrongdoings.						
46. I never resent being asked to return a favour.						
47. Most women are sly and manipulating when they are out to attract a man.						
48. I have never been irked when people expressed ideas very different from my own.						
49. There is nothing wrong with a woman going to a bar alone.						
50. I never make a long trip without checking the safety of my car.						
51. There have been times when I was quite jealous of the good fortune of others.						
52. I have almost never felt the urge to tell someone off.						
53. A lot of women seem to get pleasure in putting men down.						
54. I am sometimes irritated by people who ask favours of me.						
55. I have never felt that I was punished without cause.						
56. I sometimes think when people have a misfortune they only got what they deserved.						
57. I have never deliberately said something that hurt someone's feelings.						

APPENDIX L

DESIGN OF VIDEOTAPE STUDY

	MALE DOMINANT TAPES	FEMALE DOMINANT TAPES
PHYSICALLY AGGRESSIVE (N=18)	A E N (N=9)	A E N (N=9)
VERBALLY/ SYMBOLICALLY AGGRESSIVE (N=18)	A E N (N=9)	A E N (N=9)
NON-AGGRESSIVE (N=18)	A E N (N=9)	A E N (N=9)

where A = Abandonment

E = Engulfment

N = Neutral

APPENDIX M

COUNTERBALANCING PROCEDURE

While the available sample size of nine subjects per cell did not allow for perfect counterbalancing, the following alternative strategy was employed to balance the groups for order effects. Within each cell the following orders were used:

ANE	EAN	NEA
AEN	ENA	NAE
ANE	EAN	NEA

where A = abandonment tape
E = engulfment tape
N = neutral tape

This strategy had two important positive features:

1) The first six subjects were perfectly counterbalanced and

2) Every videotape was viewed first, second and last an equal number of times over the nine men in each cell.

APPENDIX N

INSTRUCTIONS TO PARTICIPANTS

You are going to see three short scenes of a married couple interacting in their home. Their names are Jim and Barbara. As part of our in-depth study of marriage Jim and Barbara allowed our film crew to virtually live in their home for several months. After Jim and Barbara got used to the cameras, we were able to get some shots of them behaving pretty much as they usually do. We got their permission to use three short excerpts from the filming for research purposes and this is what you will see in a moment.

We would like you to watch each excerpt very carefully and while you are watching to imagine that you are in Jim's position. Try to really get into the scene and imagine how you would feel if you were the man in this situation. While you are watching the scene you may become aware of certain feelings that you are experiencing. You may also notice some physical sensations as you imagine yourself in these situations. For example, your heart may begin to beat faster, you may notice yourself perspiring or breathing more quickly, your muscles may tense up and so on.

After each videotaped scene you will be asked to fill out brief checklists contained in the booklet in front of you. Please leave the booklet closed until the first scene has ended. Then open the booklet and read the instructions carefully before answering. If you have any questions, ask the researcher who will be just outside the videotape room.

When you have completed the questionnaires there will be a two minute delay before the next scene will begin. Just put the booklet aside and relax during this time period. Do you have any questions before we begin?

APPENDIX O

SUMMARY OF PRETEST ANALYSIS

Initial pre-testing of the videotape scenes was conducted using twelve men in their late twenties as subjects. The purpose was to check the physiological recording procedure and to obtain some initial data on men's perceptions of the tapes. The twelve men were divided randomly into two groups of six men. One group viewed all male dominant tapes counterbalanced for order of presentation and the other group viewed all female dominant tapes. The men rated the tapes for severity of conflict, realism, dominance, intimacy and also rated their own feelings of anger and anxiety. The means and standard deviations for these ratings appear later in this Appendix.

Generally, the men viewed the tapes as being highly realistic and highly conflictual. They reported feeling a moderate amount of anger in response to the tapes and a somewhat higher amount of anxiety. Two-way repeated measures ANOVAs carried out on these variables indicated no significant differences on any of the variables.

The scores for the dominance and intimacy ratings were generally as expected. For the dominance rating mean scores were uniformly higher (and above a neutral score of 4) for the male dominant tapes, while the reverse was true for the female dominant tapes (though the female dominant/engulfment tape was closer to a neutral rating of 4 than expected). A two-way repeated measures ANOVA indicated a significant main effect for the dominance factor as expected ($F(1,10)=47.61; p<.0001$) and no differences on the intimacy or interaction factors. The ratings for attempted intimacy movement conformed to expectations with the exception of the male dominant/abandonment tape in which the ratings were neutral vis-a-vis intimacy movement. A two-way repeated measures ANOVA indicated an overall significant difference for the intimacy factor ($F(2,20)=17.03; p<.0001$), but no significant differences for the dominance or interaction factors as expected. Newman-Keuls comparisons were calculated to assess which means were different and it was found that the engulfment scenes differed significantly from both the neutral and abandonment scenes ($p<.01$). However, the latter two conditions did not differ significantly.

In sum, the tapes as rated by these twelve men appeared to be realistic, involving, able to generate self-reports of moderate emotion and generally represented the dominance and intimacy manipulations desired. The one difficulty was that the abandonment tapes (particularly the male dominant tape) were not perceived as strongly in the abandonment direction as expected. However, considering the assaulter's "hypersensitivity" to abandonment cues it was felt that an attempted to reduce intimacy would be perceived by the clinical population and therefore the tapes were retained.

Means and Standard Deviations for
Pre-test Data: Videotape Scenes

Variable	Domin Condition	Abandonment	Engulfment	Neutral
Conflict*	Male Dom. (N=6)	7.67(1.03)	7.00(1.26)	7.67(1.21)
	Female Dom(N=6)	7.00(1.55)	6.00(1.79)	6.50(1.22)
Realism*	Male Dom. (N=6)	7.33(1.03)	7.67(0.82)	6.00(1.26)
	Female Dom(N=6)	6.00(2.45)	7.17(1.17)	7.00(1.41)
Dominance*	Male Dom. (N=6)	4.83(0.98)	5.83(1.47)	6.00(1.55)
	Female Dom(N=6)	2.16(0.41)	3.83(1.47)	2.00(0.89)
Intimacy*	Male Dom. (N=6)	4.00(0.89)	2.33(1.37)	4.00(0.63)
	Female Dom(N=6)	5.00(1.26)	2.00(0.63)	4.33(1.03)
Anger**	Male Dom. (N=6)	11.33(7.34)	9.83(4.36)	11.50(6.60)
	Female Dom(N=6)	15.67(4.32)	14.83(6.68)	13.50(5.43)
Anxiety**	Male Dom. (N=6)	16.83(5.67)	16.00(5.06)	16.50(6.25)
	Female Dom(N=6)	17.50(6.09)	16.17(6.88)	13.50(6.02)

* Range of scores possible: 1-9

**Range of scores possible: 3-27

APPENDIX P

AFFECT ADJECTIVE CHECKLIST

Please indicate how you felt while you were watching the last scene by making a check somewhere on the line between each pair of words (make your checkmark in one of the spaces, not on the dots).

tense	:___:___:___:___:___:___:___:___:___:	not tense
angry	:___:___:___:___:___:___:___:___:___:	not angry
elated	:___:___:___:___:___:___:___:___:___:	not elated
not aggressive	:___:___:___:___:___:___:___:___:___:	aggressive
not anxious	:___:___:___:___:___:___:___:___:___:	anxious
interested	:___:___:___:___:___:___:___:___:___:	not interested
hostile	:___:___:___:___:___:___:___:___:___:	not hostile
not aroused	:___:___:___:___:___:___:___:___:___:	aroused
nervous	:___:___:___:___:___:___:___:___:___:	not nervous
sexually excited	:___:___:___:___:___:___:___:___:___:	not sexually excited
suspicious	:___:___:___:___:___:___:___:___:___:	not suspicious
not frustrated	:___:___:___:___:___:___:___:___:___:	frustrated
humiliated	:___:___:___:___:___:___:___:___:___:	not humiliated
not fearful	:___:___:___:___:___:___:___:___:___:	fearful
helpless	:___:___:___:___:___:___:___:___:___:	not helpless
not sad	:___:___:___:___:___:___:___:___:___:	sad
not overwhelmed	:___:___:___:___:___:___:___:___:___:	overwhelmed
excited	:___:___:___:___:___:___:___:___:___:	not excited
not irritated	:___:___:___:___:___:___:___:___:___:	irritated
annoyed	:___:___:___:___:___:___:___:___:___:	not annoyed

How vivid or real did this scene feel to you?

vivid	:___:___:___:___:___:___:___:___:___:	not vivid

How severe did you feel the conflict was in this scene?

minimal	:___:___:___:___:___:___:___:___:___:	severe

(TURN TO NEXT PAGE)

APPENDIX Q

FORM FOR RATING DOMINANCE AND ATTEMPTED INTIMACY MOVEMENT

1. Think back to the last scene that you saw. Which person do you think was more powerful or dominant in that scene, the husband or the wife?

Please indicate on the scale below by circling a number.

1	2	3	4	5	6	7
Wife very much more	Wife much more	Wife a bit more	Wife & Husband about equal	Husband a bit more	Husband much more	Husband very much more

In terms of the emotional life of these two people, do you feel that, in the last scene, the wife was trying to move closer, pull away, or maintain about the same level of closeness with her husband (try to disregard whether or not she was successful)? Please indicate on the scale below by circling a number.

1	2	3	4	5	6	7
Wife trying to get very much closer	Wife trying to get much closer	Wife trying to get a bit closer	not trying to move closer or farther away	Wife trying to pull a bit farther away	Wife trying to pull much farther away	Wife trying to pull very much farther away

APPENDIX R

LIST OF QUESTIONS ASKED IN POST-EXPERIMENTAL INTERVIEW

1) What were your general impressions of the tapes?

2) What did you think of the man?

3) What did you think of the woman?

4) When you think about the three scenes you have just viewed, were there any scenes which brought up issues that you could identify as problem issues in your own relationship?If so, which ones?

5) Sometimes participants in studies have specific ideas or guesses about what the research was looking at or about the researcher's hypotheses. Do you have any ideas about what I may have been looking at with these tapes or about what my hypotheses might have been?

6) Did Barbara or Jim seem like real people to you?

7) Did you ever think that they might be actors?

8) Do you have any questions?

APPENDIX S

LIST OF QUESTIONS RELATING TO THE PA MEN'S VIOLENCE

1) Was there a previous incidence of hitting your partner before the incident which resulted in you referral to the therapy group?

2) When did the first hitting incident occur?

3) Were you married at the time?

4) Have you been physically violent in any previous relationships with women? If so, describe.

5) Who do you feel is generally to blame when you are physically violent with your partner? What percentage of the blame would you give to youself; what percentage would you give to your partner? Explain.

6) Have you been in a physical fight with anyone or hit anyone outside your home within the last year? If yes, how many times? Describe.

7) Have you ever been in a fight or hit someone outside your home? When did this happen? Describe.

8) Have you ever been charged with assault or any similar charge? If yes, please describe.

APPENDIX T

DETAILED EXAMINATION OF QUESTIONNAIRE VARIABLES

When the nine variables whose means and standard deviations appear in Table 4 were examined individually using univariate ANOVAs none of the resulting F ratios exceeded the required magnitude for significance at alpha=.05. One of the nine variables - spouse-specific assertiveness - approached, but did not quite reach significance ($F(2,51)= 3.145$; $p= .052$).

In terms of the nPower measure, it could be reasoned that some of the stimulus pictures might have aroused more power imagery in the assaultive group than others (e.g. those pictures involving male-female interaction) and that by using a combined nPower score these potential differences may have been obscured. The means and standard deviations of raw nPower scores for the five individual stimulus pictures are shown in Table 28 of this Appendix. Picture two and five showed a man and woman together, while picture three involved two female scientists in a laboratory. Although the means for picture five indicate slightly more power imagery in the assaultive group, univariate ANOVAs performed on the five stories were all nonsignificant (criterion alpha level= .05). Therefore, it appears that more detailed analysis of the men's responses to specific stimulus material does not enable successful differentiation of the groups.

The parent-parent and parent-child violence scores were composite scores derived by summing over a number of equally-weighted behaviors that actually differ in severity and potential impact on a child (e.g. pushing versus beating up) and also by summing over mother and father scores. In addition, the item "spanked" was added, perhaps having the effect of masking real differences among the groups in terms of abusive violence. Straus(1981)--in response to criticism of the CTS--suggested a severity weighting system for the physical aggression items. While no reliability or validity data has been reported as yet using this system, it was applied to the parent-parent and parent-child violence scores to examine its effects on the data. In addition, scores were recalculated by removing the "spanked" item from the analyses. Table 29 in this Appendix lists the means and standard deviations for these measures. It is clear from observation of these data that using the weighted system accentuates mean differences between the groups. However, variances are also considerably inflated and, in fact, univariate ANOVAs performed on these data were uniformly nonsignificant(criterion alpha level= .05) for mother and father data separately and for combined parental violence. Therefore, it appears that childhood violence as reported by the men is highly variable within groups, but not significantly different across the three groups. By comparing the means for total parent-respondent violence (see Table 4) and the same means with the "spanked" item removed (Table 29, last line), it was found that the different groups reported almost exactly the same degree of spanking on average, implying that any differences that do exist among the groups are accounted for by "non-spanking" physical aggression.

Finally, in reference to the Test of Emotional Styles Expressiveness score, since this measure is a composite of several emotions (including anger), it could be argued that assaulters might express anger much more frequently, but not other emotions (cf. Ganley and Harris, 1978) and inflate their score by reporting high anger scores. In order to investigate this assumption, the four items that specifically tapped anger expression were removed yielding the following means and standard deviations (PA= 8.00(6.28); VSA= 9.00(5.75); NA= 8.33(5.40)). This procedure resulted in a slightly greater drop in overall scores for the assaultive group compared to the other two groups. However, the change in scores was not sufficient to generate a significant group difference and the men end up looking very similar in terms of self-reported emotional expressiveness.

The overall conclusion from this more detailed examination is that it supports the notion that these groups of men are remarkably similar with respect to these measures.

Table 28
Means and Standard Deviations of Raw nPower Scores for the Five Individual Stimulus Pictures

	PA	VSA	NA
Picture one (Ship's Captain & Passenger)	1.94(1.60)	1.77(1.91)	2.44(1.70)
Picture two (Couple Out to Dinner	1.27(1.60)	1.22(2.20)	1.72(1.74)
Picture Three (Two Women Scientists)	0.78(1.62)	0.72(1.45)	1.06(1.60)
Picture Four (Boxers and Shadow)	1.44(1.91)	1.11(1.70)	1.06(1.89)
Picture Five (Couple Standing)	2.72(1.88)	2.11(1.79)	1.83(1.85)

Table 29
Means and Standard Deviations for Weighted Childhood Violence Measures With and Without "Spanking" Item

Weighted for Severity	PA	VSA	NA
Father-mother Violence	8.44(20.32)	6.56(23.18)	3.22(9.01)
Mother-father Violence	4.39(9.95)	5.28(11.33)	0.61(1.46)
Total parent-parent violence	12.83(29.51)	11.83(31.24)	3.83(8.98)
Father-respondent violence	11.33(17.67)	11.39(15.22)	7.28(13.19)
Mother-respondent violence	8.67(17.17)	6.44(5.43)	3.50(3.37)
Total parent-respondent vio.	20.00(24.26)	17.83(16.59)	10.78(13.88)
Weighted for Severity/ Spanking Item Removed			
Father-respondent violence	9.22(16.36)	8.94(15.34)	5.44(12.72)
Mother-respondent violence	6.78(15.95)	4.44(5.17)	1.83(2.53)
Total parent-respondent vio.	16.00(22.65)	13.39(17.09)	7.28(13.08)
Unweighted for Severity/ Spanking Item Removed			
Father-respondent violence	4.89(8.35)	4.44(6.07)	3.11(6.00)
Mother-respondent violence	3.67(7.59)	2.94(3.23)	1.33(1.94)
Total parent-respondent vio.	8.56(11.50)	7.39(7.01)	4.44(5.96)