

UNDERSTANDING STAY/LEAVE DECISIONS IN VIOLENT RELATIONSHIPS: A BEHAVIOR ANALYTIC APPROACH

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ABSTRACT: Numerous theories have been developed to account for the various factors influencing victims' decisions to remain in or leave an abusive relationship. Thus far, however, these theories have failed to adequately capture the complexity of stay/leave decision-making and have had limited clinical and research utility. The purpose of the current paper is to provide a behaviorally based approach to understanding stay/leave decisions by expanding on Myers' (1995) behavioral conceptualization of partner violence. An illustration is given on how various basic and contemporary behavioral principles might be applied to stay/leave decisions, followed by a discussion of how this behavioral analysis may provide a means of incorporating the components of other stay/leave models into a more comprehensive, contextually-based behavior analytic approach. Lastly, recommendations are provided for integrating this approach into future research, and suggestions are made regarding how this analysis might be used to improve future partner violence prevention and treatment programs.

Key Words: partner abuse, behavioral theory, decision making

In recent years, greater attention has been given in the literature towards understanding factors that potentially influence a victim's decision to permanently leave an abusive relationship. Numerous studies indicate that victims who contact the police during a domestic dispute or briefly leave an abusive relationship are often at high risk for eventually returning to that relationship and experiencing continued abuse (Brookoff, O'Brien, Cook, Thompson, & Williams, 1997; Herbert, Silver, & Ellard, 1991; Martin et al., 2000; Snyder & Scheer, 1981). Despite the fact that so many victims return to their partners and continue to be physically assaulted, victims may be unaware of their potential for returning to the abusive relationship and the risks involved in remaining in that relationship (Herbert et al., 1991; Martin et al., 2000). Although some evidence suggests that victims will permanently leave an abusive relationship within two years after the initiation of violence (Gortner, Berns, Jacobson, & Gottman, 1997), additional findings indicate that the victim may repeatedly leave and return to the batterer before eventually ending the relationship (Schutte, Malouff, & Doyle, 1988).

Researchers have identified a variety of factors influencing a victim's decision to remain in an abusive relationship. Among the many factors recognized, commitment to the relationship appears to be particularly salient for predicting a victim's decision to stay in the relationship. Findings from previous studies indicate that victims who have been in abusive relationships for longer durations are more likely to stay in those relationships

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(Strube & Barbour, 1984). Furthermore, women² who report being more invested in “saving” the relationship or admit having emotional attachment to the batterer may be more likely to remain in violent relationships (Pfouts, 1978; Strube & Barbour, 1983). Additional factors that may increase the risk that a victim will stay in the relationship include lack of financial and housing resources, lack of child care, few relationship alternatives, lack of employment or education, batterers’ promises to change, fear of batterer retaliation, and social pressure (Brookoff et al., 1997; Gelles, 1976; Short et al., 2000; Stevens & Rosenbaum, 1991; Strube & Barbour, 1983, 1984).

Further studies have examined some of the variables that may increase the likelihood that a victim will leave an abusive relationship. Most notable are several studies that have shown that victims are more likely to leave a violent relationship as the frequency and the severity of the abuse increases (Gelles, 1976; Short et al., 2000). In one study, level of violence was the greatest predictor of separation and divorce (Gelles, 1976). Interestingly, increase in emotional abuse appears to impact a victim’s decision to leave more so than an increase in physical abuse (Gortner et al., 1997; Herbert et al., 1991). Victims are also more likely to seek help or end an abusive relationship when their children’s risk for becoming emotionally or physically harmed by the family violence increases (Gelles, 1976; Short et al., 2000). Increased access to various resources (e.g. financial, educational, occupational) and additional social support seem to further increase the likelihood that a victim will leave a violent relationship (Gelles, 1976; Schutte et al., 1988; Short et al., 2000; Strube & Barbour, 1984).

THEORETICAL CONCEPTUALIZATIONS

Based on the factors described above, several theories have been offered to summarize these findings and explain the processes underlying victims’ stay/leave decisions. For the purpose of this paper, three of these theories will be highlighted—Learned Helplessness, Psychological Entrapment, and Investment Theory. These particular theories were selected based on degree of empirical support as well as their popularity among domestic violence researchers and practitioners. All three of these models are based on the assumption that the decision to leave an abusive relationship is a

² Although numerous researchers have found approximately equal rates of partner violence perpetration and victimization among men and women (Arias & Johnson, 1989; Gortner, Berns, Jacobson, & Gottman, 1997; Harned, 2001), additional studies have shown that women are more likely than men to suffer injuries as a result of intimate partner violence (Cascardi & Vivian, 1995; Sorenson, Upchurch, & Shen, 1996). Furthermore, most current theoretical models of intimate partner violence and stay/leave decisions focus predominantly on the relationship between female victims and male perpetrators. Therefore, for the purposes of the current paper, we will primarily consider heterosexual relationships involving female victims and male perpetrators. We recognize, however, that other forms of intimate partner violence exist, which may involve male victims, female perpetrators, mutual violence, and same-sex partner violence, and we hope that a behavioral analysis of these relationships may be applied similarly in the future.

rational one (Strube, 1988).³ See Strube (1988) for a more extensive review of these models.

Learned Helplessness Model

Initially developed by Seligman (1973, 1975) to describe clinical depression, the theory of learned helplessness suggests that repeated presentations of non-contingent aversive stimuli eventually result in an individual's expectation that consequences are independent of responses. In the case of intimate partner violence, Walker (1977-78) argues that battered women frequently believe that they are powerless to stop the batterer and, thus, often cease making any attempts to leave or change the abusive situation. Walker (1977-78) theorizes that society's traditional sex roles may further contribute to a victim's belief that she cannot leave the violent relationship. For instance, Walker suggests that in the United States women may be socialized to believe that a perfect marriage is attainable if they work hard enough to make the marriage successful. Walker hypothesizes that battered women who hold these beliefs may continue to remain in an abusive relationship despite the fact that attempts to change their relationships have remained futile. The author notes that battered women may even begin to believe that they are responsible for the abuse and may start to buy into the batterers' verbal abuse. These feelings of powerlessness and self-blame are thought to contribute to the development of depressive symptomatology, which may further exacerbate the victims' feelings of helplessness. Walker suggests that victims may need to be repeatedly shown that they can change their lives in order to alter their beliefs and resume their responding. If this theory holds true, then it may help explain why it takes victims several brief separation periods before they are able to permanently leave an abusive situation.

Researchers investigating the tenets of the learned helplessness model have found modest support for the theory. It is well-established in the literature that battered women are at a greater risk for experiencing symptoms of depression than non-abused women (Campbell, Sullivan, & Davidson, 1995; Cascardi & O'Leary, 1992; Stein & Kennedy, 2001; Watson et al., 1997). In addition, it appears that these depressive symptoms are more likely to worsen in cases where the victim believes that she has little control over her life. Additional research directly assessing hopelessness feelings in battered women has found a relationship between dysphoric symptoms, feelings of hopelessness, and poor problem-solving skills (Clements & Sawhney, 2000).

Psychological Entrapment

The second theory, often referred to as psychological entrapment, suggests that level of commitment within a relationship will increase as the amount of investments into that relationship increases. For example, a married woman may have spent a great deal of

³ Strube (1988) refers to a "rational decision" as the decisional process a victim makes based on the evaluation of available "data" using "predictable 'decision rules'."

time, energy, and money trying to make her marriage work. Although she continues to feel dissatisfied with the status of her relationship, she may continue to invest more time and energy into the marriage in order to justify her previous expenses. Hence, the woman has invested too much into the relationship to quit (Teger, 1980). Time becomes both an investment and an expense. In order to justify the amount of time spent on the relationship, she must continue to invest time. Although possibly unattainable, it is hoped that continued investments will increase proximity to the desired goal (Rubin, Brockner, Small-Weil, & Nathanson, 1980).

A number of conditions are required to increase the likelihood that psychological entrapment will occur (Brockner & Rubin, 1985; Strube, 1988). First, individuals must perform various purposeful, goal-directed behaviors that are expected to be rewarded eventually. For example, a person may remain in an abusive relationship and frequently comply with her partner's requests in the hopes that those behaviors will eventually lead to a reduction in violence and improved relationship satisfaction. Initial unsuccessful attempts at reaching these goals are followed by an increase in investment. Thus, although the person's compliance may be ineffective in preventing future violent episodes, that individual may believe that she simply did not try hard enough to improve the relationship. As a result, the person may remain in the relationship and increase relationship-nurturing behaviors (e.g. compliance with partner's requests, affection towards partner). Individuals may be conflicted, however, over whether to continue investing in the hopes of eventually reaching the goal, or discontinue the investment, avoiding any additional costs, but essentially losing all previously invested resources. This conflict may explain why battered victims make several attempts at leaving an abusive relationship before ending the relationship permanently. A battered woman may recognize that her attempts at improving the relationship are unsuccessful, but she may be hesitant to leave the home, resources (e.g. money, valuables, mutual friends), and relationship where she invested so much time and energy.

Psychological entrapment is also more likely to occur in situations where the probability of reaching the goal remains uncertain to individuals and these same individuals believe that they have choices in pursuing the goals (Rubin & Brockner, 1975; Brockner & Rubin, 1985; Strube, 1988). In the case of intimate partner violence, the victim may be unsure as to whether or not the relationship could ever be "violence free" and may believe that she has the option to leave or remain in the relationship. Social desirability and feelings of personal responsibility for outcomes appear to strengthen psychological entrapment (Brockner, Rubin, & Lang, 1981; Staw, 1976). Hence, individuals who are concerned about how leaving the relationship would be viewed by others and those who blame themselves for the violence may be more prone to psychological entrapment. Furthermore, entrapment is more likely to continue when the individual only has to make a passive decision to commit, but must make an active decision to quit (Rubin et al., 1980). For example, a person must take specific actions to end a marriage (e.g. filing divorce paperwork, moving out of the home). However, a person's decision to continue to stay committed to the marriage simply requires the person to remain in the marriage. Finally, the less a person is aware of risks associated

with continued commitment, the more likely that person will become entrapped (Rubin et al., 1980). Thus, a person who is less aware of the dangers involved in remaining in abusive relationship will be more likely to become psychologically entrapped.

Investment Model.

The investment model, based on exchange theory (Thibaut & Kelley, 1959), describes a cost/benefit analysis in making commitment decisions. These commitment decisions are based on comparing rewards and costs for the current relationship against the estimated benefits and costs for alternative relationships (including being single). Pfouts (1978) described a two-stage process that occurs in violent families, which determines how victims will respond to these abusive relationships. During the first stage, a victim estimates her current level of relationship satisfaction by figuring out the current number of rewards within the relationship (e.g. security, housing, emotional support) and weighing it against the total number of costs associated with the relationship (e.g. frequency/severity of abuse, instability, effects on children). Using this same cost/benefit approach, an estimate of satisfaction for alternative relationships is determined and compared with the satisfaction level for the current relationship.

Pfouts (1978) proposed four basic coping strategies that may result from this cost/benefit analysis. The first of these coping responses, known as the self-punishing response, occurs when there are low payoffs in the marriage, but even lower payoffs for alternative relationships. As a result, the victim may believe that she is responsible for being trapped in the current relationship and not having any additional relationship options. For instance, a person in an abusive relationship may receive little financial and emotional support from her partner, but believe that she would lose even more economic security if she was single or in an alternative relationship. In order to justify remaining in the current relationship, the victim may blame herself for the abuse and may believe that no other viable relationship options exist. The second reaction, termed the aggressive response, reflects high marital payoffs, but low payoffs from alternate relationships. Victims in this situation may retaliate by aggressing against their husbands and children. In this case, the abused victim may still report high levels of relationship satisfaction and may believe that alternate relationships would not offer equivalent relationship payoffs. The victim may then respond to relationship violence by engaging in retaliatory aggression against her partner and children. The third response is referred to as the early disengagement response and describes cases in which payoffs for the current marriage are low, but the alternative relationship payoffs are high. Thus, victims in this category may be less tolerant of abuse and may leave the abusive relationships sooner. The final response is labeled the reluctant mid-life disengagement response. This response involves high payoffs both inside and outside of the current relationship. In these cases, victims may gradually move towards ending their current relationships as they become more certain that the risks involved in staying are too high (Pfouts, 1978). Although only indirectly tested, this model may aid in targeting specific entries for intervention that will assist victims in ending abusive relationships. In addition, the model may be useful in

explaining cases where victims leave the abusive relationships despite high investments (Strube, 1988).

Expanding on this model, Rusbult and Martz (1995) argued that both satisfaction levels and commitment levels are essential to understanding stay/leave decisions. Satisfaction continues to be defined as an estimate of the payoffs for the current relationship minus the estimated payoffs for alternative relationships. Commitment is then determined by a comprehensive assessment of relationship satisfaction, degree of investments, and quality/availability of alternatives (Rusbult & Martz, 1995). The authors argue that it is level of commitment that essentially determines whether an individual will leave a relationship. Based on this theory of commitment, a victim of intimate partner violence would be most likely to leave the relationship when there was low relationship satisfaction, little investment into the relationship, and numerous, rewarding alternatives available. Preliminary studies examining this model have found substantial evidence supporting this theory (Bui, Peplau, & Hill, 1996; Davis & Strube, 1993). In one study, Rusbult and Martz (1995) found that the investment model accounted for approximately 21 – 33% of the total variance associated with stay/leave decisions. Similar to Pfout's model, Rusbult and Martz's investment theory may account for why a victim would remain in an abusive relationship even when investments are low. Problematic to Rusbult and Martz's theory, however, is the degree of circular reasoning and lack of genuine explanatory power that the model offers. Although preliminary evidence supports the authors' theory that level of commitment may in some measure predict stay/leave decisions, the model fails to provide an adequate understanding of how factors related to high and low levels of commitment develop and how these levels can be modified to impact stay/leave decisions.

Theoretical Limitations

As can be seen from the summary above, numerous theories have been developed to aid in the field's understanding of stay/leave decisions. Each of these theories has found some degree of support within the literature. Nevertheless, our understanding of stay/leave decisions within violent relationships remains limited (Strube, 1988). This lack of understanding may, in part, be due to the current theoretical models proposed to explain stay/leave decisions. Many of the theories described above are exceedingly broad in scope, rely heavily on self-report data, focus primarily on unalterable historical factors and victim characteristics/traits, lack adequate research and clinical utility, and fail to capture the full complexity of stay/leave decisions (Gortner et al., 1997; Rusbult & Martz, 1995; Strube, 1988; Strube & Barbour, 1983). In order to correct for some of these problems, Strube (1988) suggests that "future research should examine the ways in which the models can be integrated to maximize explanatory and predictive power."

BEHAVIORAL CONCEPTUALIZATION OF STAY/LEAVE DECISIONS

Few articles have been published in social science journals that have used strictly behavior analytic models to characterize physically violent relationships. Theorists who have taken a more behavioral approach to understanding the dynamics of intimate partner violence have tended to emphasize the importance of consequences and contextual factors when conceptualizing battering relationships (Jacobson, 1994; Riggs & O'Leary, 1989).

One of the more rigorous theoretical attempts in applying behavioral principles to episodes of partner violence was conducted by Myers in 1995. Myers (1995) proposed a three-term contingency model to describe how physical violence may function to control victims' behaviors. The author suggested that a woman's assertive and refusal skills, as well as other independence-seeking behaviors (e.g. working outside the home), may be punished by her partner's use of verbal and physical aggression. Consequently, the woman may comply with her husband's future requests as a means of avoiding or escaping potential verbal and/or physical altercations. The woman's compliance following physical assault may also serve as a reinforcer for the husband's violent behavior, which may further strengthen the battering response. The batterer may also receive social praise and avoid ridicule from his peers as a result of physically assaulting his partner. The combination of these potential reinforcers may increase the likelihood that the batterer will act physically aggressive towards his partner in the future. Myers also argued that batterers may rarely come into contact with punishing consequences (e.g. legal ramifications) that may otherwise serve to reduce aggressive behavior. Myers theorized about how cultural rules and beliefs function to initiate and maintain intimate violence. The author proposed that the media and peers model consequences of battering described above. These rules and models then serve as contingency-specifying stimuli that work in conjunction with discriminative stimuli to trigger battering episodes.

Although theoretically sound, Myers' behavior analytic approach to conceptualizing violent relationships has received little attention in the partner violence literature. This is somewhat disconcerting given that the application of behavior analytic principles to violent relationships may aid in researchers' understanding of the factors that impact the development and maintenance of partner violence. Current non-behavioral theories on partner violence are wide-ranging in their approach to conceptualizing intimate partner violence, and each of these theories has found some degree of empirical support (Lenton, 1995; Mihalic & Elliott, 1997; Riggs & O'Leary, 1996; Smith, 1990). Yet, researchers continue to have a limited understanding of violent relationships (Jacobson, 1994), and the prevention and treatment programs that have developed from these theories have typically been only marginally successful (Gortner et al., 1997; Jacobson, 1994; Lewis & Fremouw, 2001; Ritmeester, 1993; Wathen & MacMillan, 2003). Furthermore, the creation of numerous partner abuse theories has resulted in a division among researchers, which we believe has limited collaboration among different theoretical researchers and impeded the progress towards ending intimate partner violence.

Using a behavior analytic strategy to conceptualize intimate partner violence has several potential advantages. First, a behavior analytic approach may prove to be useful in identifying key contextual/environmental variables and functional relationships between variables associated with intimate partner violence. By exploring functional relationships within partner aggression, a behavioral approach can provide a parsimonious framework that ties together factors identified by various theories of partner violence and may eventually provide a more comprehensive model for understanding the complexity of violent relationships. In addition, a behavioral strategy would utilize objective, scientific procedures to examine measurable behavior and draw from concepts tested directly through basic laboratory research. Using these scientific procedures, researchers would then be able to test the adequacy of their theories and identify the functions of specific behaviors relevant to partner violence, which could then guide the development of more effective prevention and treatment strategies.

The following is an expansion of Myers' conceptualization and application of behavioral principles to understanding stay-leave decisions. The illustrations provided below address how a behaviorally based approach to conceptualizing intimate partner violence might be utilized to integrate the various stay/leave theoretical models and incorporate our current empirical understanding of stay/leave decisions into a larger contextual framework. Table 1 provides a brief summary of some of these examples.

General Operant Principles

In attempting to understand a victim's decision to remain in or leave an abusive relationship, we discuss a basic operant analysis that attempts to identify relevant controlling variables, including both antecedents and consequences of a particular behavior. In addition, there are features of a victim's repertoire that may be important to understand in terms of how they impact one's decision to stay or leave a violent relationship. A basic operant analysis may provide an alternative approach to conceptualizing stay/leave decisions that incorporates features of several of the models summarized above including learned helplessness, psychological entrapment, and the investment model. For instance, an analysis of the potential positive reinforcers related to "staying" and "leaving" behaviors (described in detail below) is similar to an investment model analysis of possible rewards associated with the abusive and alternative relationships. Likewise, understanding the potential costs related to both the abusive and non-abusive alternative relationships is comparable to investigating possible punishers within those environments that may affect stay/leave behavior. As will be presented below, this same level of analysis can be applied to other stay/leave models. The benefit of this operant approach is that it allows researchers to bridge together the various stay/leave models into a more cohesive analysis based on empirically-validated, laboratory based principles of human behavior. For the purposes of the current discussion, we refer to "stay/leave behavior" as the overarching target behavior.

STAY/LEAVE DECISIONS

TABLE 1. OPERANT PRINCIPLES APPLIED TO STAY/LEAVE DECISIONS.

Behavioral Principle	Example
Positive Reinforcement	Victim receives praise from friends and family for returning to batterer
Negative Reinforcement	Victim escapes physical abuse by calling police and leaving home
Punishment	Victim punished for leaving by encountering barriers to finding alternate living arrangements (e.g. limited low-income housing options)
Extinction	Victim continues to be abused even after leaves relationship and, thus, the leaving response is eventually extinguished
Behavioral Deficits	Victim lacks skills to find alternate living arrangements
Rule-Governed Behavior	Victim who believes “If I just continue to work on the relationship, eventually my partner will change” may be more likely to remain in an abusive relationship
Choice and Behavioral Economics	Victim stays in violent relationship when current relationship offers more incentives (e.g. housing, social & emotional support, sexual intimacy, financial stability) than alternate relationships
Delay Discounting	Victim chooses immediate reinforcers associated with staying in current relationship (e.g. familiarity of current relationship; emotional attachment; possessions and social support linked with relationship) rather than choosing more delayed reinforcers related to leaving relationship (e.g. violence free relationship; financial & occupational independence)

Reinforcement Contingencies. Reinforcement refers to the presentation or removal of a stimulus that results in an increase in the future frequency of a behavior. Generally, behavior is more likely to be reinforced when the consequence immediately follows the behavior. Reinforcement can either be positive or negative.

Positive reinforcement is the delivery of a stimulus that strengthens the behavior. A victim's decision to remain in an abusive relationship may be positively reinforced in several ways. Walker (1977-78) suggested that battering incidents often may be followed by a period of calm, during which time the batterer engages in apologetic and compensatory behaviors in an attempt to salvage the relationship. It could be that reinforcers associated with this "honeymoon period" may serve to strengthen the victim's decision to stay in the relationship. For example, after an abusive incident, the batterer may give the victim gifts, treat the victim kindly, show more affection, and even compliment the victim. In essence, following the abusive incident, the batterer's behavior may begin to match the victim's ideal image of a suitable partner. Thus, the batterer's actions may actually serve to reinforce the victim's "staying behavior." Given that intermittent reinforcement may increase resistance to extinction, it stands to reason that the victim's "staying behavior" may be less likely to be extinguished if the batterer's reinforcing behaviors occur inconsistently throughout the duration of the relationship.

The principle of positive reinforcement may also explain why a victim might return to an abusive relationship. First, a woman who decides to return to an abusive relationship may receive items that she initially lost when she left the relationship (e.g. house, money, mutual friends, etc...). In addition, she may be praised by both her friends and family for deciding to return to the relationship and "work it out." Furthermore, as noted above, many victims report still having an emotional attachment with the batterer even after abuse has occurred (Strube & Barbour, 1983; Tan, Basta, Sullivan, & Davidson, 1995). By returning to the relationship, the victim may be able to receive intimacy and affection, which may have been unavailable when the victim was away from the batterer. Thus, the victim's decision to return to relationship may again be positively reinforced.

Negative reinforcement involves the removal of an aversive stimulus that also results in an increase in the future frequency of a behavior, and often involves escape or avoidance responding. One of the most obvious ways that a victim can avoid or escape physical abuse may be by contacting the police and leaving the home. However, there may be additional behaviors that are negatively reinforced that are relevant to understanding stay/leave decisions. For instance, negative reinforcement may provide a more consistent behavioral analysis to understanding psychological entrapment. Recall that psychological entrapment occurs when an individual believes that he/she has invested too much in a relationship to quit. From a behavioral perspective, psychological entrapment may be accounted for in terms of negative reinforcement, in which the victim's decision to remain in the violent relationship is a function of avoidance of the negative impact of leaving (i.e., losing various possessions, money, friends, etc...). This may also explain why relationships that have lasted for a longer duration are more often associated with "staying behavior." As the relationship progresses, the person stands to

lose more and the aversiveness of leaving the relationship increases. Thus, the victim's "staying" behavior is negatively reinforced by avoiding the aversive consequences associated with leaving.

Sidman (1993) suggested that individuals may act in a specific way to avoid potential catastrophes. Therefore, it could be that a victim may choose to remain in an abusive relationship in order to avoid possible punishing consequences associated with leaving that could be worse than the abuse itself. For instance, a victim may decide to stay in the relationship for fear of escalating violence or risk of substantial physical injury if she tries to leave the relationship (Fleury, Sullivan, & Bybee, 2000; Frisch & MacKenzie, 1991).

As with positive reinforcement, negative reinforcement could explain why a victim might return to an abusive relationship. Previous research has shown that abusive incidents may continue to occur even after the victim leaves the violent relationship (Fleury et al., 2000; Tan et al., 1995). By returning to the relationship, the batterer may temporarily stop assaulting the victim. In addition, returning to the relationship might also serve as an escape from the possible punishing conditions (e.g. poor alternative living conditions, financial strain, family/friend criticism, etc...) associated with leaving an abusive relationship.

Punishment Contingencies. Unlike reinforcement, punishment involves the presentation or removal of a stimulus that results in a decrease in the future frequency of a response. Leaving an abusive relationship may be punished in a number of ways. If the victim leaves, the individual may lose access to a number of reinforcers (e.g. friends, money, valuables, etc...). Thus, leaving behavior may be punished through the removal of these reinforcers. The leaving response may be further punished if the abusive incidents increase in intensity or frequency after the individual leaves the relationship. In fact, a recent study conducted by Fleury et al. (2000) found that nearly three-quarters of the women assaulted by their partners after leaving the relationship experienced severe physical abuse and approximately half of these women suffered some form of injury. The victim's social system may also criticize the victim for leaving, which may function as a punisher (Stevens & Rosenbaum, 1991). After the victim has left the home, the individual may continue to encounter aversive consequences related to the difficulties in arranging a new living environment (e.g. finding a new job, house, etc...). Given all of the potential aversive contingencies a victim might encounter when leaving an abusive relationship, it seems somewhat understandable that a victim may end up returning to or staying with an abusive partner.

Extinction. Extinction may also play a role in stay/leave decisions. During extinction, behavior that is no longer reinforced will eventually return to a baseline level of responding. Given that it may take time before a victim is reinforced for leaving, it may be that the "leaving behavior" becomes extinguished before reinforcement can occur. For example, it may take substantial time and effort before a victim can establish adequate housing, employment, financial stability, and childcare services (Tan et al., 1995). Since leaving may not be immediately reinforced, the victim may return to the abusive relationship before ever contacting these reinforcers. In addition, "leaving

behavior” may also be extinguished if the behavior does not result in effectively escaping physical abuse (Tan et al., 1995). On the other hand, “returning behavior” may also become extinguished if the victim no longer receives reinforcement for returning to the abuser (e.g. if abuse continues immediately after returning home; lack of affection or intimacy upon return). In the future, if the victim decides to leave the relationship again, the individual may be less likely to return to the abuser. This may help explain why it takes several cycles before a victim finally leaves an abusive relationship permanently.

Deficient Behavioral Repertoire. Occasionally, a person may lack the necessary behavioral skills required to attain reinforcement and may be unable to effectively respond in a given situation. Behavioral deficits are most often referred to in the literature to describe the characteristics of batterers. However, victims of partner abuse may also lack certain skills needed to successfully leave an abusive relationship. For example, a victim may lack problem-solving and coping skills that make it easier for her to leave the relationship and find alternate living arrangements. Indeed, various studies have found that battered women who lack certain essential problem-solving skills are more likely to report experiencing frequent episodes of abuse, engage in avoidant and dependent forms of behavior in response to abusive episodes, and suffer from dysphoric symptoms and feelings of hopelessness (Claerhout, Elder, & Janes, 1982; Clements & Sawhney, 2000; McNamara, Ertl, & Neufeld, 1998). If some victims lack these skills, it seems imperative that domestic assault prevention and intervention services offer skills-based training to assist these victims in leaving an abusive relationship.

Antecedents/Stimulus Control. Antecedents are environmental factors that precede a behavior and may influence whether or not that behavior will occur. Typically, these antecedents will occur in temporal proximity to the behavior. One type of antecedent commonly discussed is known as the “discriminative stimulus.” A discriminative stimulus is any stimulus that immediately precedes a behavior and signals the opportunity for reinforcement of that behavior. The decision to stay in an abusive relationship may be more likely to occur if environmental factors signal the presence of reinforcers within the relationship that may not be present outside of the relationship. For example, if the batterer tells the victim that she will only receive financial and emotional support if she remains in the relationship, then the victim may decide to stay in the abusive relationship. In fact, several researchers have noted that victims often cite both financial and intimacy-related factors as reasons for remaining in an abusive relationship (Herbert, Silver, & Ellard, 1991; Strube & Barbour, 1983; Strube & Barbour, 1984).

Motivative Variables and Establishing Events. An analysis of operant relations is incomplete without the consideration of motivating factors that may alter the reinforcing effectiveness of a particular object or event. Establishing or motivating operations are environmental conditions (e.g. food deprivation) that momentarily alter the effectiveness of a potential reinforcer (e.g. food) and result in a temporary change in the frequency of behavior associated with that form of reinforcement (Michael, 1982). Aversive stimuli, such as verbal threats, negative emotions (i.e. fear, anger), and physical pain sustained from abusive incidents, may serve as motivating events that increase the reinforcing effectiveness of certain stimuli associated with leaving (i.e. police assistance, shelter

services, etc...). Similarly, the aversive conditions outside of the relationship (e.g. poverty, loneliness) may temporarily increase the effectiveness of certain potential reinforcers (e.g. financial stability, intimacy) within the violent relationship, which may momentarily increase the likelihood that a victim who has left the violent relationship will return to that relationship. Possible support for the role of motivative factors in stay/leave decisions comes from initial research suggesting that abused women are more likely to leave a violent relationship when severity of abuse increases (Gelles, 1976; Gortner, Berns, Jacobson, & Gottman, 1997) and are more likely to return to a violent relationship due to unemployment and economic hardship (Aguirre, 1985; Schutte, Malouff, & Doyle, 1988).

Contemporary Behavioral Theories

A basic operant analysis of stay/leave behaviors may be able to shed some light into understanding a victim's decision to leave or remain in an abusive relationship. However, this analysis alone may be insufficient in fully capturing the complexity of stay/leave decisions. The decision to leave an abusive relationship involves not just a single behavior, but a string of behaviors, each potentially under the control of different variables. Thus, it may be necessary to incorporate more contemporary behavioral theories into a behavior analytic understanding of stay/leave behaviors, which may better account for the complexity of variables operating on victim behaviors.

Choice and Behavioral Economics. Choice and behavioral economic theories have been developed to explain why certain behaviors are emitted and why certain reinforcers are selected over others. Generally, the theories suggest that behavioral choices are made by comparing one reinforcer against all alternate reinforcers according to factors such as rate, probability, and effort for reinforcement. In behavioral economics, this cost-benefit ratio is sometimes referred to as the "unit price" (Madden, 2000). Research on behavioral economics has found that certain reinforcers can function as substitutes for other reinforcers, whereas some reinforcers are known to complement certain other reinforcers (Green & Freed, 1998).

Theories on choice and behavioral economics may provide behavioral descriptions of the investment model. Recall that the investment model assumes that stay/leave decisions are made using a cost-benefit approach. Likewise, according to choice and behavioral economic theories, the decision to leave may be determined according to the amount of effort required to leave, availability of reinforcers outside the relationship, probability of receiving these reinforcers, and delay in obtaining these reinforcers. Similar to Pfouts' (1978) proposed "early disengagement" and "mid-life disengagement" coping reactions (in which victims are more likely to leave a violent relationship when payoffs outside the relationship are high), victims may be more likely to leave situations where they have a high probability of obtaining a number of reinforcers (e.g. home, career, possessions, new relationship) shortly after leaving the current relationship. In addition, the easier it is for the victim to leave the relationship and obtain reinforcers

elsewhere, the more likely it is that the victim will successfully leave the abusive relationship.

As with the investment model, choice and behavioral economic theories may also help explain why it takes some victims awhile before they leave an abusive relationship. Previous research on choice theory has shown that both human and non-human animal behavior is more resistant to change in cases where there is a rich supply of reinforcers in the current environment (Nevin, 1998). This behavior may continue to be resistant to change even if there are disruptors (e.g. punishers) present in the current environment (Nevin, 1998). Thus, a victim may be more likely to remain in an abusive relationship if she continues to receive high levels of reinforcers within the relationship even though the abuse remains ongoing. It may be that the victim may not leave the relationship permanently until the level of reinforcement within the current environment is reduced (e.g. decreased affection from abuser) and the level of punishment within that environment is increased (e.g. increased abuse and isolation).

As mentioned previously, behavioral economics also accounts for reinforcers that may complement or substitute other reinforcers. Complementary reinforcers are reinforcers that are consumed by an organism in relatively equal, rigid proportions (i.e. if consumption of one reinforcer increases, then the consumption of the complementary reinforcer will also increase proportionally; Green & Freed, 1998). It could be that a victim may have difficulty leaving an abusive situation because certain reinforcers (e.g. house, friends, children) have a complementary relationship with the reinforcers more directly associated with the batterer (e.g. intimacy). Thus, by leaving the batterer, the victim may lose the reinforcers that are both directly and indirectly related to the batterer. Substitutable reinforcers, conversely, are those reinforcers that are often functionally and qualitatively similar to each other, and can frequently be exchanged for each other depending on the price of each reinforcer (Green & Fisher, 2000; Green & Freed, 1998). The availability of substitutable reinforcers within one's environment can increase elasticity between the target behavior and its consequences, which may make the target behavior more amenable to change. In the case of violent relationships, it stands to reason that a victim's behavior may be more amenable to change if there are viable substitutable reinforcers outside of the abusive relationship. For example, support groups may be established to provide emotional support as a substitute for the affection the victim may have received from the batterer, friends, and family. In order for the support group to function as a substitutable reinforcer, however, the group must provide functionally similar levels of emotional support to the support the victim receives in the abusive relationship. Additionally, the price of the substitutable reinforcer must be low enough to increase demand for the substitute. Therefore, the substitutable reinforcers outside of the violent relationship should be easily accessible and attainable to increase demand elasticity and make it more likely that the victim will leave the abusive relationship.

Delay Discounting. Although delay discounting is most often used to understand impulsivity, the theory may also be relevant in explaining stay/leave decisions. Delay discounting involves a person's decision to choose a smaller, more immediate reinforcer over a larger, more delayed reinforcer (Madden, 2000; Rachlin, 1995). In the case of

partner abuse, a victim may continue to remain in an abusive relationship in order to avoid the tension associated with making an active decision to leave. However, by deciding to stay in the relationship, the victim has also chosen not to engage in the “leaving behaviors” that may have eventually led the victim towards obtaining larger reinforcers (e.g. increased safety, better career, healthier intimate relationship). Research on delay discounting indicates that individuals will be even more likely to select an immediate outcome if the probability of attaining a larger, more delayed outcome is uncertain (Logue, 1995; Rachlin, 2000). Leaving an abusive relationship may involve a number of unknowns. For instance, if a victim leaves an abusive relationship, she may be uncertain about her safety, future living arrangements, and ability to survive on her own. Similar to the psychological entrapment model, which theorizes that entrapment is more likely to occur when probability of obtaining longer-term goals is uncertain, delay discounting may also be able to account for why uncertainties outside of the violent relationship may strengthen “staying” behavior. Specifically, it could be that these uncertainties may discount the value of leaving the current relationship and, thus, strengthen the victim’s decision to remain with the batterer.

Delay discounting can also be theoretically applied to cases in which the victim returns to the batterer. Studies on delay discounting have shown that when both the smaller and larger outcomes are temporally distant, an individual will choose the larger outcome. However, as the opportunity to obtain the smaller, more immediate outcome draws closer, the individual may change his/her preference and select the smaller outcome (Simpson & Vuchinich, 2000). In cases of domestic violence, victims entering a shelter often state that they will never return to the batterer (Martin et al., 2000). However, research has shown that many of these victims will eventually return to the abusive relationship (Compton, Michael, Krasavage-Hopkins, Schneiderman, & Bickman, 1989; Johnson, 1992; Martin et al., 2000). It could be that those victims may decide to return to the batterer when the opportunity to return to these relationships becomes available (e.g. batterer gets out of jail, victim believes there is increased safety, etc...). Ultimately, victims who decide to return to the abusive relationship may be selecting the more immediate reinforcers (e.g. shelter, valuables, financial security) rather than waiting to obtain the potentially larger reinforcers available outside of the current relationship.

A number of factors have been known to influence a person’s decision to wait for the larger, more delayed outcome. First, research on delay discounting has shown that gradual and repeated exposure to delays may habituate a person to the frustrations associated with waiting for an outcome, and may strengthen a person’s ability to successfully wait for the more delayed, larger outcome (Dixon et al., 1998; Schweitzer & Sulzer-Azaroff, 1988). This finding may help explain why it often takes victims several repeated attempts at leaving before they are successful at ending an abusive relationship (Schutte et al., 1988). It is possible that every attempt to leave may expose the victim to the delays associated with developing a new life outside of the relationship. These repeated exposures to the delays may gradually make the victim more adept at withstanding larger delays, which may increase the chance that the victim will be able to

permanently end the abusive relationship. In addition, research has found that distracting a person while they are waiting for a delayed outcome may increase the likelihood that the individual will eventually obtain this larger outcome (Kirk & Logue, 1996; Logue, 1995). If this holds true in cases of domestic assault, then domestic violence services may want to teach and assist victims in engaging in certain activities that will “distract” them from focusing on the delays associated with obtaining the larger reinforcers (e.g. time it will take to build up new finances). Precommitment to the larger, more delayed reinforcer has also been shown to increase self-control within individuals (Logue, 1998). This finding may help to explain why victims who obtain restraining orders and file charges against their assailants are more likely to successfully leave an abusive relationship (Snyder & Scheer, 1981). It may be that these legal proceedings serve as forms of precommitment to the larger, more delayed reinforcers associated with leaving an abusive relationship. If future research supports this notion that precommitment may influence stay/leave decisions, then domestic assault services may wish to consider various legally and non-legally binding strategies (such as behavioral contracting) for getting victims to make precommitments to leave and remain out of abusive environments. Additionally, research on delay discounting has shown that people who make self-statements (e.g. “If I wait just two more weeks, I can move out of the shelter and into my own home”) during these waiting periods may also be more likely to attain the larger outcomes (Logue, 1995; Logue, 1998). Therefore, domestic assault services may want to include some form of cognitive-behavioral therapy that teaches victims to use self-statements while working on making gains outside of the abusive relationship. Lastly, studies have found that providing individuals with knowledge about the costs and benefits associated with both the immediate and delayed outcomes may increase the likelihood that the individuals will choose the delayed outcomes (Larrick, Morgan, & Nisbett, 1990; Logue, 2000). These results are consistent with both Rusbult and Martz’s investment model (1995) as well as Rubin et al.’s (1980) findings that indicate that psychological entrapment is more likely to occur when a person is unaware of the risks involved in continued commitment. Psychosocial educational services regarding the costs and benefits associated with leaving vs. staying in an abusive relationship may be useful in preventing victims from returning to an abusive partner and remaining psychologically entrapped within the relationship.

Rule-Governed Behavior. Behavior under the control of verbally stated instructions is called rule-governed behavior and differs from behavior shaped by direct contingencies (Hayes & Ju, 1998; Hayes, Brownstein, Zettle, Rosenfarb, & Korn, 1986). Rule-governed behavior refers to behaviors that are under the control of verbal stimuli (i.e. verbal rules) that describe contingencies. Along with providing a description of potential social and natural consequences for engaging in a particular behavior, verbal rules often specify the type and rate of reinforcement for behavioral responding. Behavior under the control of rules may never have actually been shaped by direct contingencies. For instance, a person may follow the rule “If I do what my partner asks, my partner won’t hurt me” even though compliant behavior in the past has not resulted in an avoidance of physical abuse. Furthermore, rule-governed behavior is less sensitive to changes in nonverbal

contingencies than behavior that is directly under the control of those contingencies (Shimoff, Catania, & Matthews, 1981). Research investigating rule-governed behavior has shown that verbal stimuli can limit the range of behavioral responding, alter the function of nonverbal stimuli, and produce behavioral rigidity (Hayes & Ju, 1998).

An analysis of rule-governed behavior may account for the impact of blame and personal responsibility on decisions to remain in an abusive relationship, which is emphasized within both the learned helplessness and psychological entrapment models. Recall that within both of these models a victim is thought to be more likely to remain within an abusive relationship if she believes that she is at least partially responsible for either causing or repairing the abusive relationship. Using a behavioral approach, a victim's stay/leave decisions may be influenced by the rules held by that victim and the contingencies specified in the rule. For example, a victim who believes "A good wife stays with her husband" may be more likely to remain in an abusive relationship. Implicit in this rule is that if a woman leaves her husband then she is "bad" and therefore likely to encounter any number of negative social consequences. Rules such as these may be acquired during childhood and may reflect the patriarchal values of society. Preliminary research on this issue provides some support for this theory. For example, Frisch and MacKenzie (1991) found that battered women who remained in abusive relationships were more likely to endorse traditional gender role values, saw themselves as being more dependent on the abusive relationship, and were more likely to believe that they were responsible for holding the family together at all costs, that the batterer would eventually change, and that the "good outweighs the bad" within the relationship.

As briefly illustrated above, an analysis of rule-governed behavior can provide an alternative to the phenomenon explained by learned helplessness theory. For example, it may be that the cognitive component of learned helplessness is synonymous with rules victims follow that lead to a reduction in responding. As mentioned previously, operant research has shown that rule-governed behavior is often insensitive to natural contingencies and, thus, may be more challenging to modify (Shimoff, Catania, & Matthews, 1981). Therefore, if behaviors defined in learned helplessness are under the control of verbal rules, then one might expect the reduction in responding to continue regardless of whether or not the victim's behaviors could be effective in escaping or avoiding future abusive incidents. For instance, a victim who follows the rule "It would be worse for me if I left" may stop trying to find ways to leave the abusive relationship even if it could be possible for the victim to leave safely.

An analysis of the role rule-governed behavior plays in stay-leave decisions may also be useful in further capturing aspects related to psychological entrapment. A victim who believes "If I just continue to work on the relationship, eventually my partner will change" may be more apt to continue investing in the relationship even though it has resulted in little or no payoff. In an earlier section of this paper, recall that the literature on psychological entrapment suggests that victims who take personal responsibility for the abuse and are more concerned about appearing socially desirable may be more likely to become psychologically entrapped. Therefore, it could be that rules such as "I did something to cause the abuse" or "People would hate me if they knew about the abuse"

may strengthen the victim's "staying behaviors" and make it more likely that the victim will remain entrapped.

IMPLICATIONS FOR RESEARCH AND APPLICATION

It is only recently that researchers have taken an invested interest into understanding intimate partner violence. During this period, significant progress has been made toward identifying key variables associated with partner violence and developing theoretical models that incorporate these variables. Yet, much is still unknown about how to predict, treat, and prevent partner abuse. Thus, it seems imperative that researchers begin to modify preexisting theoretical partner abuse models or develop new, testable models that can guide future research, adequately account for the diverse and complex variables associated with violent relationships, and allow for the prediction of behavior. The behavioral approach highlighted above may be one such strategy that meets these standards. Future research in both applied and laboratory settings is warranted to determine the adequacy of this approach and aid in the development of an empirically-supported, behaviorally-based model of stay/leave decisions. Suggestions for proceeding with this line of research are provided below.

Basic Research

A key first step in beginning a behavior analytic investigation of stay/leave decisions is to explore the extent to which basic and contemporary behavioral principles adequately capture the environmental contingencies operating on individual stay/leave behavior within partner abuse populations. Ideally, it would seem important to begin this line of investigation within a controlled laboratory setting that would allow researchers to better isolate particular variables that are functionally-related to stay/leave behavior. Although there are numerous directions that one may take in pursuing this line of research, we have included below a few possible examples of how this type of behaviorally-based basic research might be applied to exploring stay/leave decisions.

As noted above, it is possible that deficits within a victim's behavioral repertoire may impair her ability to successfully leave an abusive relationship. Although some preliminary research suggests the possibility of skills deficits within at least a sample of partner abuse victims (Claerhout, Elder, & Janes, 1982; Clements & Sawhney, 2000; McNamara, Ertl, & Neufeld, 1998), little is still known about the extent to which these deficits exist and the degree to which these skills deficits may impair one's ability to successfully leave a violent relationship. Laboratory-based research designed to investigate victims' accuracy and fluency in specific skill areas thought to be related to stay/leave behavior (e.g. assertiveness skills, problem-solving skills) may be one area of investigation. In addition, researchers may want to explore the extent to which certain environmental and physiological conditions (e.g. substance use, emotional arousal, etc...) significantly improve or impair these skills. Lastly, future investigations may wish to

examine the degree to which various behaviorally-based interventions such as fluency training may enhance certain behavioral repertoires.

In our discussion of both operant principles and contemporary behavioral theories, a great deal of time was spent considering the importance of reinforcers on stay/leave behavior. Previous theoretical models on stay/leave decisions suggests the influence of a number of different reinforcers on stay/leave decisions (Pfouts, 1978; Rusbult & Martz, 1995; Strube, 1988; Walker, 1977-78), however, few investigators have examined the potency of various reinforcers on stay/leave behavior within a controlled, laboratory setting. Thus, it seems that an important first step is identifying under more controlled conditions the key reinforcers that impact stay/leave behavior and determining how this target behavior has come to function under the control of these stimuli/events. Additionally, it is imperative that researchers begin to explore the extent to which certain identified reinforcers are related to and interact to influence stay/leave behavior. For example, researchers may wish to develop studies designed to identify reinforcers both within and outside of abusive relationships that have either a substitutable or complementary relationship. As researchers' knowledge of the functional relationships between stay/leave behaviors and various reinforcers expands, it would then seem necessary to extend our investigation into examining how one might shift control of behavior from one reinforcer to another – exploring such topics as demand elasticity and stay/leave behaviors.

Applied Research

We hope that the findings from basic research studies on stay/leave behavior will guide future development of treatment outcome studies investigating the manipulation of contingencies to evoke behavior change. Furthermore, it is probable that basic research findings will provide new directions for clinical research within this area that we are not aware of yet. Until researchers have a better understanding of the mechanism of action underlying stay/leave decisions, however, it may still be possible to begin investigating various clinical interventions that are conceptualized within our behavior analytic framework, which may have a positive impact on victims' stay/leave behaviors. As with basic research, there are multiple routes of entry that a researcher can take when investigating behaviorally-based clinical interventions to address stay/leave decisions. Below are just two examples of how our behaviorally-based approach might be used to guide the development of more applied, clinically-focused research projects within the area of stay/leave behavior.

Along with conducting basic research on possible skills deficits related to stay/leave decisions, it may also be possible to investigate the effectiveness of certain empirically-validated skills-based clinical interventions on enhancing victims' behavioral repertoires. One possible treatment intervention that may be applicable to a partner abuse population is Dialectical Behavior Therapy (DBT; Linehan, 1993a). Originally developed for the treatment of Borderline Personality Disorder, DBT focuses on skills training with an emphasis on improving interpersonal effectiveness. Although the treatment program as a

whole may not be applicable to partner abuse victims, certain skills modules focusing on areas such as problem-solving, cognitive modification, relationship strategies, and emotion regulation (Linehan, 1993b) may be particularly relevant in addressing skills deficits impacting stay/leave behavior.

Another empirically-supported clinical intervention that may prove to be useful in modifying stay/leave behavior is Motivational Interviewing (Miller & Rollnick, 2002). Motivational interviewing techniques have been shown to increase motivation to change in individuals reporting various problems including substance abuse, health-related ailments, anxiety, and depression (Brit, Hudson, & Blampied, 2004; Burke, Arkowitz, & Menchola, 2003; Miller & Rollnick, 2002; Sobell & Sobell, 2003; Westra, 2004). Although not originally grounded in behavioral theory, it may be possible to conceptualize motivational interviewing from a behavioral perspective. Specifically, it could be that motivational enhancement techniques modify motivative factors or establishing operations, which temporarily alter the reinforcing effectiveness of certain stimuli/events and changes the rate of the target behavior(s). In the case of substance abuse, motivational interviewing may manipulate specific establishing operations that make the reinforcers associated with reducing substance use temporarily more effective and results in an increase in behaviors related to “staying clean.” Similarly, motivational enhancement techniques may prove to be useful in modifying certain motivative factors related to stay/leave decisions that would increase the reinforcing effectiveness of stimuli/events associated with “leaving” behaviors.

Future Analyses

We acknowledge that our current analysis likely fails to fully capture the complexity of factors influencing stay/leave behavior. We hope that this paper will stimulate future behavioral research examining this phenomenon, which will hopefully shape our behavioral conceptualization of partner abuse and stay/leave decisions over time. Along with continuing to refine our analysis, it may be beneficial to consider additional levels of analysis for understanding stay/leave decisions. Throughout the course of this paper, we have used individual behavior as our unit of analysis. Although it is beyond the scope of this current paper, future researchers may want to consider conducting an analysis of metacontingencies related to stay/leave decisions. Glenn (1991) defines the term *metacontingencies* as “contingent relations between cultural practices and outcomes of those practices (p. 62).” A metacontingency approach would allow for a cultural level of analysis that could explore the interrelation of contingencies across individuals, which may influence cultural/societal practices that impact individual stay/leave decisions. We encourage those interested in taking on this important challenge to review Glenn (1988, 1991).

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