UNIVERSITY OF CALIFORNIA

Santa Barbara

Toxic Expectations: Proposing and Testing Violent Entitlement Theory to Predict Intimate Partner Violence

A dissertation submitted in partial satisfaction of the

requirements for the degree Doctor of Philosophy

in Communication

by

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December 2021

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ACKNOWLEDGEMENTS

This dissertation would not have been possible without the support and encouragement from countless people in my life. I would like to first thank my brilliant committee, starting with my adviser Dr. Andy Merolla. Every time I have felt directionless or lost, Andy has helped me find focus and see the forest for the trees. He, in immeasurable ways, has shown me a model of what mentorship and teaching can and should look like. He truly went above and beyond to ensure that this dissertation was a milestone I would accomplish. I will forever be grateful for his patience and thoughtfulness as he provided constructive feedback, draft after draft, to elevate this manuscript to its final form.

I am also very grateful for my other two committee members, Dr. Dan Conroy-Beam and Dr. Tamara Afifi. Dan has always made time for me for a coffee or chat. His ideas have shaped this dissertation in innumerable ways, and his feedback and help have been invaluable throughout this entire process. I do not know how I wrangled in Dr. Tamara Afifi on to my committee, but I am so privileged that she accepted that role. There are some people who know a little about everything, and then there is Tammy, who knows a lot about everything. Both Tammy and Dan effortlessly raised so many critical points throughout this entire process that significantly improved this final manuscript.

Outside of my immediate committee, there are wonderful people at UCSB that I need to thank, especially Dr. Jennifer Kam and Tricia Taylor. Thank you, Jennifer and Tricia, for letting me feel heard and validated at times I needed it most.

This dissertation would also not have been possible without the loving support of my family and friends. I was especially motivated by my children, Ehsan and Humza, who told me countless times in their sweet, small voices that I can do this. They do not yet know that

I did this for them. They deserve (and will) receive the best ice cream sundae bar celebration after this dissertation is submitted for their endless patience and encouragement.

My husband, Mohemmad, also deserves very special recognition here. He has been my soul mate and partner for over a decade. His patience, love, and support has been the only way I have made it through to this point. Even though he himself has been working a full-time job *and* going through the same PhD program, he picked up all the slack with the kids and the house for the last few months so that I could push through this final step. I do not know where I would be without him.

I need to also acknowledge my sister, Farrah, who proofread *every single* in-text citation and reference for me and was willing to argue with me about the 7th edition APA manual as only sisters would. I owe her so much for her support throughout my entire program.

There are many more people in my life that deserve acknowledgement, but I will end this section by thanking my grandmother, who was not allowed to go to school after 12 years old, and my mother, whose education was interrupted by war at 17. Thank you for the sacrifices you made so that I could have the privilege to complete my education. Both these women taught me early on that education is the one thing that no one can take away from you. And truly, the entire process at UCSB to get to this point has changed and shaped me in ways I could never have imagined. It does not go unnoticed to me that at the time I am submitting this dissertation, so many women who look just like me in Afghanistan, whose lives I could have easily lived, *still* do not have access to education. I do not understand why I was given this chance when so many others like me who are far more deserving, did not. But, maybe understanding more about the violence in our lives and why it happens can be one tiny step closer towards the peace we all deserve.

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Merolla, A. J., **Hansia**, A., Hall, J. A., & Zhang, S. (2021). Moments of Connection for the Disconnected: People with Negative Relations with Others Experience Less, but Benefit More from, Positive Everyday Interaction. *Communication Research.* https://doi.org/10.1177/00936502211005890

GRANTS AND FELLOWSHIPS

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ABSTRACT

Toxic Expectations: Proposing and Testing Violent Entitlement Theory to Predict Intimate Partner Violence

by

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While research on intimate partner violence (IPV) is extensive, research investigating the motivations of IPV perpetration have yielded inconsistent evidence and opposing theoretical (and often atheoretical) frameworks across a diverse range of disciplines. These issues, in part, are due to scholars not a) agreeing on basic IPV terminology, b) distinguishing between different forms of IPV, and c) considering relational dynamics, and d) accounting for cultural factors that may shift from couple to couple. In this dissertation, I attempt to address these gaps by proposing a new theoretical framework titled Violent Entitlement Theory (VET) that seeks to explain acts of IPV that are not necessarily embedded in dynamics of long-term interpersonal control. VET stipulates that this form of *IPV is enacted as a punishment against a partner that is driven most proximally by anger arising from a sense of unfulfilled relational entitlement that is contextually-and culturally-bound*. I propose that URE can generally be calculated through a specific formula that considers metrics from both individuals in a dyad. Importantly, I expect that increased URE elevates risk of psychological aggression (H1) and physical assault (H2) and that these effects are moderated by gender (RQ1/RQ2). I conducted two studies—an experiment and a

cross-sectional survey study—to test the validity of VET-based predictions. Overall, results from Study 1 and Study 2 suggest that URE is associated with physical assault perpetration (H2), but not psychological aggression (H1). In Study 2 (but not Study 1), gender moderated the effect of URE's role on physical assault perpetration (RQ2) such that as URE increases for men, physical assault perpetration increases. This effect is the opposite for women, however, such that as URE increases, physical assault *decreases*. Gender did not, however, moderate the link between URE and psychological aggression in either study (RQ1). Overall, these results suggest that key ideas in VET, particularly regarding URE and male led physical assault perpetration, can contribute new perspective on the correlates of IPV.

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Chapter 1: The Insights and Limits of the Existing IPV Literature

Intimate partner violence (IPV) is a global issue that affects 20-80% of women in their lifetime (Devries, Mak, et al., 2013). In the US, approximately one third of men and women experience some form of sexual violence, physical violence, and/or stalking by an intimate partner in their lifetimes (Smith et al., 2018). About 41% of female IPV survivors and 14% of male IPV survivors report some form of physical injury related to IPV (Black, 2011). Many of these injuries are quite serious and can be chronic, affecting the cardiac, digestive, reproductive, and nervous systems (Black, 2011). Beyond physical ailments, IPV is associated with long-lasting mental health problems, such as depression and post-traumatic stress disorder (Warshaw et al., 2009). IPV is, without doubt, a major public health problem the world over.

IPV also inflicts immense social costs. When accounting for the economic toll associated with IPV, for instance, including medical services for IPV injuries, lost productivity of paid work, and criminal justice fees, the lifetime economic cost for IPV totals $3.6 trillion (Peterson et al., 2018). Given the immense individual, relational, familial, and societal costs attributable to IPV, it is paramount that researchers continually seek to better understand the primarily causes of IPV in efforts to reduce incidence and recidivism rates. Indeed, if scholars can identify the primary drivers of IPV, then clinicians and specialists can use this knowledge to inform IPV prevention and treatment efforts through tailored interventions, policies, and programs.

This dissertation aims to provide new insight regarding predictors of IPV perpetration. In this first chapter, I review the existing research on IPV motives and the current gaps and limitations in the literature. These limitations highlight why new theories and theory-based research related to IPV are needed. To that end, I propose and test a new

theoretical framework in this dissertation, called Violent Entitlement Theory (VET). In Chapter Two, I describe the assumptions and tenets of VET. In Chapters 3 - 6, I describe two studies—an experiment and a cross-sectional survey study—that test the validity of VET-based predictions. Finally, in Chapter 7, I discuss the overall implications of these two studies and future directions. Before articulating the main ideas underlying VET, it is imperative to thoroughly review the extant IPV literature. Despite a number of important contributions that existing work on IPV has made for understanding its causes and consequences, many limitations exist. In general, the past five decades of IPV research has been fraught with controversy and disagreement, including disagreements over basic terminology. I begin this review chapter, then, by describing basic definitions of relational violence.

IPV Terminology and Definitions

While violence has many manifestations, including self-harm, the focus of this dissertation is violence in the context of romantic relationships. Unfortunately, despite several decades of research, the proper term and definition of this form of violence has not reached consensus among researchers and practitioners. Scholars initially focused, for instance, on "wife abuse" (e.g., Yllo et al., 1989) to describe husband-perpetrated violence toward a wife. This term is clearly problematic, however, because it excluded female-perpetrated violence and violence that occurs within non-married couples. This term was eventually superseded by the term *domestic violence* (DV), which is still used by scholars today (Johnson & Ferraro, 2000, Leslie & Wilson, 2020; Ruddle et al., 2017). This term, too, is limited, though, because DV is often used interchangeably with *family violence* (e.g., Langlands et al., 2009), which includes any violence that happens within a family, including violence perpetrated towards children (Tolan et al., 2006).

Given these issues, I use the term IPV throughout this dissertation. IPV has been used by a number of researchers as an alternative to DV to specifically refer to violence that transpires between romantic partners, irrespective of gender or relationship status (e.g., married, dating). While this term solves some of the aforementioned terminological issues, the term IPV is not without controversy. Not all researchers, for instance, agree on the specific behaviors that constitute IPV. The Centers for Disease Control and Prevention (CDC), for instance, defines IPV as "physical violence, sexual violence, stalking and psychological aggression (including coercive tactics) by a current or former intimate partner (i.e., spouse, boyfriend/girlfriend, dating partner, or ongoing sexual partner)" (Breiding et al., 2015, p. 11). Despite the apparent inclusivity of that definition, scholars have identified additional forms of violence that they believe should be considered as IPV, including economic abuse (Yau et al., 2021) and spiritual abuse (Dehan & Levi, 2009). In addition, the CDC definition seems to imply that even one act of violence towards an intimate partner can be considered IPV. Consider, in contrast, the definition provided by the Domestic Violence Hotline website which considers IPV as "a pattern of behaviors used by one partner to maintain power and control over another partner in an intimate relationship" (National Domestic Hotline, n.d.). With this latter definition, single acts of violence are *not* necessarily IPV unless they become a pattern of abuse.

Terminological differences matter because they present numerous challenges for the interpretability and generalizability of research findings, intervention testing, and theory development. Consider, for instance, that research consistently shows high rates of IPV recidivism (Babcock, Costa, et al., 2004; Davis & Taylor, 1999; Feder & Wilson, 2005). Incidence rates for IPV, moreover, particularly in the US, have not significantly declined over the past 40 years (Wagers & Radatz, 2020). These are critical insights. Yet, the

interpretation of these findings is complicated if studies are employing different conceptual and operational definitions of IPV. It is essential, then, that researchers clearly identify their preferred conceptual and operational definitions of IPV. Thus, in the following sections, I will clearly outline my definition of violence and the specific forms of IPV that I will focus on in this dissertation.

Violence in Intimate Relationships and the Focus of this Dissertation

Violence, as defined by Hamby (2017) is "nonessential, unwanted, intentional, and harmful behavior" (p. 170). A closer look at these four elements reveals critical distinctions between violence and other broad concepts. Hamby (2017) first considers violence as a non-essential act. "Essential" violence includes acts of aggression that are in the service of one's survival or one's children's survival. As such, acts of aggression that are in the service of self-defense or the protection of others would not be considered violence. With this in mind, most acts of human aggression, such as bullying or child abuse, are nonessential. Thus, while acts such as bullying *could* be considered functional in that they achieve some benefit (e.g., elevating one's social status), those same benefits could be achieved through various non-violent means. Thus, based on Hamby's definition, bullying is considered a form of violence.

Second, violence is an unwanted behavior that excludes acts of force or harm that are permissible by the individual enduring them. Such examples would include those pertinent to medical procedures (e.g., surgery, chemotherapy), contact sports, or consent-based sexual behaviors. Thus, violence encompasses acts that are performed against another individual without their permission. Third, violence must be intentional; falling on someone accidentally, for instance, cannot be considered intentional harm while throwing a punch at someone can almost always be considered a deliberate act. Finally, violence must be

harmful. This last criteria is the most difficult concept to apply to violence identification because thresholds of harm can be vary across scholars and organizations. For instance, the Juvenile Victimization Questionnaire (Hamby et al., 2013) sets the threshold of harm for physical injury as pain that is felt one day later. For psychological disorders, the American Psychiatric Association (2013) sets a minimum degree of impact (e.g., significant distress) and a minimum timeframe of experiencing symptoms, such as one month for PTSD. While the thresholds in these examples are useful in that they provide clarity to the concept of harm, I would argue that the thresholds are too high. Pain that is felt one day later would exclude physical acts that I would consider violent such as slapping, pushing, or pulling someone's hair. Similarly, a one-month threshold of psychological impact is difficult to prove. Shouting and name calling may not directly lead to significant distress for one month, but it may indirectly impact self-esteem for much longer periods of time. Thus, in this dissertation, I maintain what I would consider a much more cautious threshold of harm. Any behavior that causes pain (or meant to cause pain) will fulfil the criteria of harm for violence identification.

While identifying harm requires some degree of subjectivity, Hamby (2017) asserts that harmful behavior must be lasting to some degree and must have a high likelihood of harm. This latter point implies that actions that have a low likelihood of harm, in general, such as romantic rejection, cannot be considered violence because it likely creates lasting harm for only an extreme minority of individuals. Extending this logic, acts that have a high likelihood of lasting harm but do not end up resulting in injury should still be considered violence. For example, firing a gun at someone and missing the person is an act of violence given that it had a high likelihood of harm.

It is important to note that the criteria for violence discussed thus far aligns closest with the definition of IPV provided by the CDC (Breiding et al., 2015) which considers even one act of violence as a possible act of IPV. Therefore, in this dissertation, I will consider any act of violence against an intimate partner as IPV, regardless of whether it is couched in a pattern of systematic violence. While patterned abuse is no doubt more severe and riskier than isolated incidents of violence, I maintain that it is paramount to include isolated forms of violence as IPV as even one act of violence can still result in long lasting outcomes or even death, and is therefore, equally deserving of scholarly attention.

Even with this definition of violence in mind, a broad variety of behaviors can be considered violent. As mentioned earlier in this section, IPV can include abusive behaviors that are physical, psychological, sexual, economic, or even spiritual. For the purposes of this dissertation, I will investigate two forms of IPV: *physical assault* and *psychological aggression*. Research suggests that these two forms of violence (a) are the most common manifestations of IPV (Breiding et al., 2015), (b) align together in terms of reported motives (Neal & Edwards, 2015), (c) coincide frequently together (Capaldi & Crosby, 1997; O'Leary & Maiuro, 2001), and (d) are often grouped together in studies of IPV (e.g., Capaldi et al., 2012). There is very little research on sexual violence, but the few studies that have focused on it has demonstrated that the motives for sexual IPV likely differ from those of physical and psychological (Caldwell et al., 2009). Even less research has been done on economic and spiritual violence, with no studies to my knowledge, investigating the motives of these types of violence. Therefore, I believe there is a solid rationale for focusing on psychological aggression and physical assault in this dissertation. It is vital to recognize, however, that both these forms of IPV have different prevalence rates (Smith et al., 2018)

and are qualitatively different from a medical and legal standpoint. Therefore, I will keep both forms of IPV differentiated when possible.

Using the definition provided by Stets and Straus (1989), I consider physical assault as "an act carried out with the intention or perceived intention of causing physical pain or injury" (p. 162). With this description, physical injury, or even physical contact, does not need to occur for physical assault to take place. Thus, shooting a gun or throwing a large object at someone, but missing the person's body, is still considered physical assault. Psychological aggression, previously called "verbal aggression," is defined as "a communication intended to cause psychological pain to another person, or a communication perceived as having that intent" (Vissing et al., 1991, p. 224). Some examples of psychological aggression that Vissing et al. (1991) provide include "name calling or nasty remarks", "slamming a door or smashing something", and "stony silence or sulking" (p. 224). Accordingly, physical assault and psychological aggression are both terms that describe behaviors that inflict harm (or have the intention to inflict harm), consist of a diverse range of behaviors, can occur as isolated incidents, and can inflict harm that lasts even in the short term. With the relevant terminology in place, I will next examine key findings in the existing literature on the motivations for psychological and physical IPV.

Power and Control

Much of the debate surrounding the motivating factors of IPV perpetration has been centralized around discussion of power and control. In their meta-analysis of IPV motivations, Langhinrichsen-Rohling et al. (2012) reported that 57 out of the 75 (76%) studies they reviewed measured some form of power and control. This finding reflects the long legacy of power and control discussions that have existed since the onset of IPV research. IPV became a focus of research beginning with the Women's Rights Movement

and the Battered Women's Movement in the 1960's and 1970's. During this time, IPV shifted away from being a "private family matter" and into the national conversation (Wagers & Radatz, 2020) as IPV perpetration became criminalized and different agencies began establishing women's shelters as a form of refuge from male batterers (Schechter, 1982).

This began an entire new area of study, led by gender researchers who began to take a critical look at IPV (AKA "wife abuse", "domestic violence", or "marital violence") and argued that its perpetration was firmly couched in historical, cultural, political, and social gender inequities between men and women (Dobash & Dobash, 1979; Dobash et al., 1992; Pence & Paymar, 1993). From this perspective, IPV perpetration is necessarily a gendered phenomenon, driven primarily by men's motivation to gain power and control over women. Through this framework, IPV could be understood as a symptom of patriarchal beliefs, which is composed of a strong belief in the institutional power of men, and the inferiority of women, and gendered domestic roles (Yoon et al., 2015).

Dobash et al. (1992), for example, argued, that these conditions create a form of violence against "wives" that is "often persistent and severe, occurs in the context of continuous intimidation and coercion, and is inextricably linked to attempts to dominate and control women" (p. 71). Thus, a key component of male-perpetrated IPV in this framework is that it is repetitive in nature and has the singular drive to control a female partner. Critically, this definition of IPV is narrower than the definition provided by the CDC (Breiding et al., 2015), and, instead, aligns closely with the definition provided earlier by the Domestic Violence Hotline. Dobash and colleagues (1992) cite evidence from emergency rooms, courts, police records, women's shelters, and national criminalization surveys that demonstrate survivors of IPV being largely female. They also contend that while there may

be male underreporting of IPV victimization in these settings, females also face high pressures and often precarious circumstances that drive them to underreport.

Whilst these scholars do not deny that female perpetrated IPV occurs, they largely maintain that a vast majority of this form of violence is conducted in the service of self-defense or retaliation (Dobash et al., 1992; Saunders, 1988). Note that retaliation and self-defense are conceptually similar but there are differences between them. In particular, self-defense is an act of aggression undertaken to protect oneself from immediate harm while retaliation is a form of revenge that could have legal consequences (Leisring, 2012). This is a critical distinction because, using Hamby's definition of violence (2017), only retaliation would constitute a form of IPV. Self-defense, in contrast, would not be considered violence, and instead be conceptualized as an essential act of aggression. Unfortunately, however, the distinction between retaliation and self-defense is not consistent throughout the literature, which complicates the claim put forth by gender researchers that female perpetrated IPV is predominately conducted in self-defense (Stairmand et al., 2020).

In agreement with the gender researchers are some evolutionary scholars who provide a more distal explanation for IPV (e.g., Buss, 2002; Buss & Duntley, 2011; Goetz et al., 2008; Wilson & Daly, 1992; 1993; 1996; 1998). Buss and Duntley (2011), for example, argue IPV is a male-specific adaptation, while female perpetrated violence is a "self-defense" (p. 417) measure that evolved as a response to the aggressive male strategy. Through this lens, IPV is still conceptualized as a gendered phenomenon, but one that arose in human evolution to solve the male problem of paternity confidence and mate poaching by a rival partner. While cis-gendered females do not face the issue of maternity confidence, paternity is mistakable. Similarly, mate poaching, which describes the act of luring someone out of an existing relationship for a long or short-term one is a surprisingly common mating

strategy (Buss & Duntley, 2011). As a result, males evolved a sense of *male sexual proprietariness* which refers to the tendency of heterosexual males to view their female intimate partners as personal property (Wilson & Daly, 1993, 1996, 1998). Wilson and Daly (1993) argue that this form of proprietariness leads males to have a sense of entitlement over their female partners which makes them possessive and sensitive to any cues of possible sexual infidelity. When these cues are present, males feel sexual jealousy which directly leads to behaviors that can be characterized as *mate guarding* (Buss, 2002; Goetz et al. 2008).

Mate guarding includes behaviors designed to "a) preserve access to a mate while simultaneously b) preventing the encroachment of intrasexual rivals, and c) preventing a mate from defecting from the mateship" (Buss, 2002, p. 23). Indeed, there is strong evidence that mate guarding exists throughout the animal kingdom. Male whiptail lizards, for example, closely follow their female companions for 1-2 days around ovulation and are aggressive towards other male lizards, ultimately gaining monopolized access to fertile females (Olsson et al., 1996). This sort of behavior is common throughout the animal kingdom and is taxonomically spread (Birkhead & Moller, 1998, Edward et al., 2015). In regard to human behavior, Buss (2002) describes various manifestations of mate guarding, ranging from non-violent behaviors such as "resource display" (p. 27; referring to gift giving) to violent behaviors (e.g., physically attacking either one's own partner or a potential rival).

Evidence cited by Wilson and Daly (1996) suggests that men who use severe and frequent violence against female partners are often those who are most controlling and limiting in the interactions of their partners with others. From this perspective, then, IPV can be understood as a process cascading from the experience of male sexual jealousy and a

desire to control female autonomy in efforts to mitigate threats from rivals and increase paternity confidence.

Ultimately, both gender and evolutionary scholars view IPV as a predominately-male behavior driven by a desire to control the autonomy of female intimate partners. While the former group of scholars typically discusses this drive as a symptom of historical patriarchal traditions, the latter group often examines IPV as a behavior inherent to male psychology. That said, gendered and evolutionary explanations for IPV do not need to be viewed as oppositional, as exemplified by the fact that evolutionary and gender researchers have written together using both frameworks (e.g., Dobash et al., 1992). Another point of consideration is that the vast majority of evolution and gender researchers consider psychological aggression to be beyond the scope of IPV. This is apparent, for instance, in Dobash et al.'s (1992) differentiation between "verbal aggression" and "violence" (p. 78). Hence, it should be understood that arguments from these disciplines regarding IPV as a male behavior motivated by power and control are referring exclusively to physical (rather than psychological) forms of IPV.

The gendered approach to power and control in IPV perpetration has shaped IPV prevention and treatment work. For example, a common psychoeducational approach, called the Duluth model, was developed in the early 1980s as a direct result of gender researchers' approach to IPV (Pence & Paymar, 1993). This model assumes instances of IPV are embedded in a pattern of power and control, such that men exercise violence to control women and women instigate violence to defend themselves (Pence & Paymar, 1993). Central to the Duluth model is the power and control wheel which is extensively used in women's shelters and support groups (Kelly & Johnson, 2008). The power and control wheel provides a graphical representation of the major forms of control: coercion and

threats; intimidation; emotional abuse; isolation; minimizing, denying, and blaming; use of children; using male privilege; and economic abuse (Pence & Paymar, 1993). Each spoke of the wheel is meant to reinforce that violence does not occur in isolation, but rather appears with multiple control tactics. Often, IPV programming that uses this approach will include the power and control wheel as a focal point of discussion to explore the destructiveness of patriarchal beliefs and challenge male assumptions of the right to control their partners (Kelly & Johnson, 2008).

Given that the Duluth model is foundational to a majority of IPV treatment programs (Price & Rosenbaum, 2009), it is essential to recognize the chief criticisms that have been raised regarding its implementation and efficacy. For example, some scholars (e.g., Wagers & Radatz, 2020) have questioned the decision some US states have made, whereby IPV programming was mandated to adhere to the Duluth model (Snead et al., 2018) and, simultaneously, prohibited from utilizing alternative programs despite empirical evidence that other programs are sometimes more successful than Duluth-based programs (e.g., Zarling et al., 2019). The overall effectiveness of the Duluth model at decreasing IPV recidivism has also been questioned (Babcock et al., 2016), stemming in part from the critique that the Duluth model advocates a problematic one-size-fits-all approach. The Duluth approach, moreover, does not apply to many communities of color and ignores IPV in homosexual relationships, which do not have applicable arguments of patriarchal power, female perpetrated IPV (that is not motivated by self-defense) and IPV perpetrated by factors beyond power and control (Wagers & Radatz, 2020). Some of these criticisms are echoed by the founder of the Duluth model, Ellen Pence, who penned years later after the establishment of the Duluth model:

> "By determining that the need or desire for power was the motivating force behind battering, we created a conceptual framework that, in fact, did not fit the lived experience of many of the men and women we were working with. The DAIP staff [...] remained undaunted by the difference in our theory and the actual experiences of those we were working with [...] It was the cases themselves that created the chink in each of our theoretical suits of armor. Speaking for myself, I found that many of the men I interviewed did not seem to articulate a desire for power over their partner. Although I relentlessly took every opportunity to point out to men in the groups that they were so motivated and merely in denial, the fact that few men ever articulated such a desire went unnoticed by me and many of my coworkers. Eventually, we realized that we were finding what we had already predetermined to find" (Pence, 1999, pp. 29-30).

Pence's (1999) reflections, in tandem with various other criticisms of the Duluth Model, point to critical gaps resulting from gender researchers' IPV framework. The chief problem has been that that this framework cannot explain many of the underlying motives in many situations involving IPV. I would conjecture that this is, in part, due to variations in IPV terminology. There is certainly a clear link between power and control in patterned abuse but looking at IPV as a broader construct that includes less frequent forms of abuse opens alternative explanations for violence perpetration. One prominent perspective, described next, considers violence through a much broader construct and, as such, finds evidence for a wide variety of causal motivations.

IPV as a Multi-Faceted Phenomenon

The next key body of work regarding IPV perpetration has been conducted by a group of scholars often called family violence researchers (Winstok et al., 2017). These

researchers typically agree with gender researchers that social structures do give men an advantage in controlling women and that women are more likely to be seriously injured than men (e.g., Jose & O'Leary, 2009; Straus, 2010). However, family violence scholars diverge from gender researchers in several key ways. First, family violence scholars consider IPV from a broader lens that includes violent behavior that can range in severity and be patterned *or* infrequent. This is most apparent through studies that consider *violence prevalence* (e.g., Straus et al., 1996) which is a measure that reflects even one act of IPV perpetration within a given time frame (e.g., a year or within a lifetime). Working with this construct of IPV, family violence scholars claim that power and control is only one facet of explaining IPV among dozens of other risk factors and motives (e.g., Straus, 2010). In addition, this perspective of IPV leads family violence researchers to claim that men and women do not differ significantly in their motives for IPV perpetration (e.g., Langhinrichsen-Rohling, 2010) nor do they differ in perpetration rates (e.g., Straus, 1993; Robertson & Murachver, 2007).

When considering their first claim—that men and women do not significantly differ in IPV perpetration motives—it is important to recognize that family violence scholars, relative to gender researchers, also conceptualize IPV motivations in fundamentally different ways. While gender researchers advocate for a framing of IPV through the dual constructs of power and control, family violence researchers see IPV motivations as a larger category that can include a diverse range of possible motives. Aligned with Fiske's (2014) definition of motives as fundamental, underlying psychological processes that trigger thoughts, emotions, and behaviors towards others, family violence researchers set their research sites on wide-ranging causes of IPV.

Family violence researchers often presume that aggression is a goal-oriented behavior and that perpetrators engage in aggression to achieve some benefit to themselves, in spite of whatever negative consequences arise (Langhinrichsen-Rohling et al., 2012). Consequently, whatever is the perceived benefit is what can constitute as a "motive." Some benefits that Langhinrichsen-Rohling et al. (2012) outline include regaining power or control, protecting oneself from harm (i.e., self-defense), transmitting communication about an intra/interpersonal process (e.g., anger or jealousy), or retaliating for a perceived injustice (i.e., infidelity). Stairmand et al. (2020) argue that motives are distinct from enduring personality traits (such as narcissism) nor are motives aspects of a particular situation. Rather, Stairmand and colleagues contend, motives are a by-product of the interaction between the two.

Motives of IPV are often grouped with attributions of IPV, which are similar, but arguably distinct from each other. While motivations point to the underlying processes of IPV, attributions, as defined by Neal et al. (2015), refer to why someone thinks IPV occurred. For example, if someone perpetrates physical assault towards their romantic partner after their romantic partner flirted with someone else, the perpetrator might attribute the IPV to "flirting," despite that their underlying motive might be better characterized as jealousy. Therefore, attributions are more proximal in nature. Yet, attributions are still conceptually similar to motives in that they are both much narrower in scope than terms like "reasons" or "antecedents" of IPV which can include distal (e.g., cultural norms) and proximate (e.g., substance use) factors. Although there is a conceptual difference between attributions and motives, I will review findings for both IPV motives and attributions since these terms align closely with each other and, in practice, many scholars use these terms interchangeably.

One of the earliest studies that investigated motives of IPV perpetration was conducted by Makepeace (1986) that examined the motives behind physical assault perpetration between male and female college students. Makepeace reported that the most commonly-occurring motives for men were (in order) uncontrollable anger, intimidation, self-defense, and retaliation. For women, the most commonly reported motives were (in order) self-defense, uncontrollable anger, and retaliation. Since this study, numerous scholars have continued research on IPV motives. For the most part, these studies examine motives for physical assault perpetration (e.g., Babcock, Costa et al., 2004), but some scholars consider motives for both physical assault and psychological aggression (e.g., Neal et al., 2015; Hamberger et al., 1997). Few studies exist that exclusively consider psychological aggression perpetration in the context of IPV (e.g., Shorey, Febres, et al., 2011).

Several meta-analyses have been published on physical assault motivations and attributions. A particularly noteworthy meta-analysis is Langhinrichsen-Rohling et al.'s (2012) review of 75 studies that reported on physical assault motivations. Across these studies, the authors found seven broad categories of IPV motivations: (a) control/power, (b) self-defense, (c) expression of negative emotion (i.e. anger), (d) communication difficulties, (e) retaliation, (f) jealousy, and (g) other. Another comprehensive review, conducted by Neal and Edwards (2015), examined specifically physical assault attributions. The authors reported comparable groupings to those reported by Langhinrichsen-Rohling et al. (2012). They found that across the 50 articles included in their study, both men and women commonly reported perpetrating physical assault because of anger, control, a desire to get attention, retaliation, and self-defense. Moreover, they frequently found that attributions, such as anger, control, self-defense, retaliation, and attention-seeking have been self-

reported by both perpetrators and victims. Thus, based on the reviews by Langhinrichsen-Rohling et al. (2012) and Neal and Edwards (2015), there seems to be evidence that suggests physical assault perpetration is motivated by many factors that are in addition to increased control over an intimate partner.

While there is much less research on motivations of psychological aggression perpetration, the studies that do examine psychological aggression motivation report similar findings to those that examine physical assault perpetration. Neal and Edwards (2015), for example, reported that both female and male perpetrators of psychological aggression report attributions of anger, control, self-defense, retaliation, and a desire to get attention. Additionally, Elmquist et al. (2016) found that both men and women frequently self-report psychological aggression perpetration as motivated by negative emotions, jealousy and communication difficulties. While motivations for psychological aggression and physical assault overlap considerably, Neal et al. (2015) reported some key differences between both forms of violence with their sample of college women. For example, the authors found that women who perpetrated psychological aggression were more likely to report their use of violence as motivated by a desire to get attention or gain control in the relationship than women who perpetrated physical assault.

When considering the existing findings for attributions and motivations for psychological aggression and physical assault, there is some critical alignment with gendered frameworks of IPV to bear in mind. Many of the various motivations and attributions of physical and psychological IPV could be argued as highly relevant to power and control. For example, intimidation or jealousy would directly relate to notions of power and control through existing gender (and evolutionary) theory. However, it would be hard to make that argument for all the motivations/attributions that appear in the literature as some

are clearly outside of the scope of power and control. For example, communication difficulties emerged as a key motive of physical and psychological IPV perpetration. For instance, in Langhinrichsen-Rohling et al.'s (2012) review, 36 out of 75 studies (48%) measured communication difficulties as a motive for perpetrating physical assault. From these studies, Langhinrichsen-Rohling and colleagues reported that for both men and women, communication skills are protective against IPV perpetration.

There is ample evidence from the field of Communication that would support the moderating influence of communication skills. Scholars such as Infante (1987) and Aloia and Solomon (2015) point to the Argument Skills Deficiency Model (ASDM), which argues that communication skills determine whether people can effectively defuse hostility during conflict interactions or experience conflict escalation. This model proposes that those with stronger argumentative skills develop constructive communication habits when facing conflict because they support their claims with evidence and reasoning. Those who lack effective argumentation skills, in contrast, are more likely to resort to destructive measures such as verbal aggression which, subsequently, increases the likelihood of physical violence, especially in relationships characterized by mutual verbal aggressiveness (Infante et al., 1989; Infante & Rancer, 1982). Evidence supports this model and demonstrates that physically-abusive relationships are higher in verbal aggression, but lower in argumentativeness, than non-violent/non-distressed relationships (Infante et al., 1989) and non-violent/distressed relationships (Sabourin et al., 1993).

Some of the evidence supporting IPV as a multi-faceted phenomenon also point to the next salient difference between family violence and gender researchers. Family violence scholars maintain that there is gender symmetry in multiple aspects of IPV perpetration, including motivations. Some of the studies examined thus far seem to support this argument

by demonstrating that motivations, such as argumentative skills, anger, control, a desire to get attention, retaliation, and self-defense are vital for *both* men and women. However, in Langhinrichsen-Rohling et al. (2012)'s meta-analysis, results are not straightforward across a variety of different motivations. Of the 12 papers that the authors reviewed that looked at significant gender differences in control/power motives towards IPV, three (25%) reported no significant gender differences, three (25%) found power/control as more likely to be a motive for men than women, one paper (8%) found that women were statistically more likely to be motivated by power/control, and one paper (8%) found mixed results. The remaining four papers (33%) did not provide statistics to determine any significant differences between genders. From these results, then, it is not clear whether gender symmetry exists in power and control motive as it relates to physical assault perpetration. Alternatively, these results do not demonstrate a consistent pattern of predominate male control motive, which calls into question whether scholars should extend gendered assumptions to broader terminological constructs of IPV.

Examining self-defense motive yields similar results. Langhinrichsen-Rohling et al. (2012) found that five of the ten papers (50%) that investigated gender differences in self-defense motive indicated that women, relative to men, were more likely to report self-defense as a reason for physical assault perpetration. Contrastingly, four papers (40%) did not find any statistical difference in self-defense motive between men and women. The one remaining paper (10%) found that men were more likely to report self-defense than women. Thus, half of the studies reviewed contributed validity to the argument that women engage in violence for self-defense; however, the other half did not. Importantly, Langhinrichsen-Rohling and colleagues called attention to their finding that, overall, self-defense was a motivating factor in most samples by only a minority of participants. This presents a

different view from the gendered framework of IPV which assumes that the *majority* of female perpetrated IPV is conducted in self-defense. However, we must keep in mind that a) the results of Langhinrichsen-Rohling and colleagues are qualified by their admission that self-defense often gets conflated with anger and retaliation in many studies which can ultimately downplay the importance of self-defense as an IPV motivation, and b) gender and family violence researchers are operating under two conceptually different definitions of IPV.

Through a family violence approach to IPV, there is evidence that challenges the assumption of self-defense motive as being uniquely female. Straus (2010), for instance, examines the methodologies and results of three studies that are cited by a report from the World Health Organization (Krug et al., 2002). Each of the three studies state plainly that violence by women is usually in the form of self-defense. In each citation, he finds a series of concerns, including contradictory results to this claim. Overall, Straus argues that the literature demonstrates that men and women have the same motivations. Citing evidence from Cascardi and Vivian (1995), Fiebert and Gonzalez (1997), and Kernsmith (2005) alongside a number of others, he argues that women, like men, are motivated toward violence by a host of forces including coercion, anger, and punishing misbehavior.

Beyond the motives of power/control and self-defense, family violence scholars suggest that women are more motivated toward physical assault perpetration through *anger* than men are. Langhinrichsen-Rohling et al. (2012) report that in two of the papers they included in their review, women were more likely than men to report anger as a motive for physical assault. No papers were found where anger was more of a motive for men than women's violence. However, like the qualification for the findings of self-defense motive, it is possible that anger could also be conflated with other constructs. Langhinrichsen-Rohling

et al. mention that anger was often measured in conjunction with things like jealousy or retaliation and, often, many studies do not report statistical differences between genders. Therefore, there is an explicit need for research to be conducted on the gender differences in IPV perpetration motivation with clearer terminological expatiation.

In addition to the gender symmetry argument towards IPV motives, family violence scholars similarly maintain that there is gender symmetry in violence perpetration. When we look at IPV by *prevalence*, there is some evidence for this. In the most recent National Intimate Partner and Sexual Violence Survey, for instance, Smith et al. (2018) reported that about a third of *both* men and women have experienced physical assault *and* psychological aggression in their lifetime by an intimate partner. However, it is important to note that this report would not be able to necessarily distinguish between violence perpetrated in self-defense versus other motivations. Similarly, it does not take distinguish between frequency or severity of violence, which is often elevated in male perpetrated violence (Johnson, 2006).

Overall, the findings from family violence researchers differ with those of gender researchers, although both frameworks are not necessarily in direct conflict. Recall that both groups of scholars have different operational definitions of IPV. Michael Johnson (e.g., Johnson, 1993) recognizes this critical difference between scholars and incorporates both forms of violence (i.e., patterned versus infrequent violence) into one IPV typology.

Johnson's Typology as a Bridge Between Perspectives

Michael Johnson's control-based typology of IPV (e.g., Johnson, 2008, 2011; Kelly & Johnson, 2008) offers a possible solution that resolves the mixed evidence of both gender and family violence researchers. Johnson attempts to reconcile both bodies of literature by pointing out that both groups of scholars are talking past each other by describing two

distinct forms of violence. In his typology, control/power is one of the most distinguishing features of the different types of violence (Johnson, 2008). Johnson (2017) recounts how he initially proposed two types of IPV: Coercive Controlling Violence (CCV; originally titled Patriarchal Terrorism) and Situational Couple Violence (SCV; originally titled Ordinary Couple Violence). While both these terms have been revised by him throughout the years and the typology has expanded (e.g., Johnson, 1995; Johnson, 2006a; Johnson, 2008; Kelly & Johnson, 2008), the core of these two concepts have remained at the heart of Johnson's IPV typology.

The first form of violence in Johnson's typology, CCV, aligns most closely with gender researchers and those who work with agency samples. This type of violence is characterized by an intense level *and pattern* of power and control over one's romantic partner. Within CCV, power and control can manifest itself through emotional abuse, intimidation, coercion, gaslighting, physical violence, and threats (Kelly & Johnson, 2008). This type of IPV is most frequently encountered in domestic violence shelter settings (Johnson, 2006a) and, as such, is most likely to be the type of violence that people think about when they hear the term *domestic violence*. CCV is, on average, more likely to have both physical and psychological violence and be more frequent and severe than other types of IPV (Johnson & Leone, 2005). As a result, survivors of CCV are more likely to be injured physically and suffer from psychological effects such as depression or PTSD (Kelly & Johnson, 2008). Moreover, CCV is more likely to include violence borne from jealousy (Babcock, Costa, et al., 2004). Critically, Johnson contends that this form of violence is gender asymmetrical and almost exclusively perpetrated by men (Johnson, 2006a). Although, in later writings, Kelly and Johnson (2008) acknowledge that women and men in both heterosexual or same-sex relationships can perpetrate CCV.

In direct contrast to CCV is SCV which aligns closest to the type of IPV described by family violence researchers. SCV is the most common type of couple violence (Johnson, 2008) which explains why SCV predominates (89%) in some community samples of IPV (compared to 79% of some clinical samples classified as CCV cases; Kelly and Johnson, 2008). Johnson (2008) explains that this form of IPV is the type of violence that continually shows evidence of gender symmetry by family violence researchers.

While jealousy and some of the same behaviors that occur in CCV can also exist within cases of SCV, the most distinguishing difference between SCV and CCV is its relation to power and control. The persistent pattern of power and control that characterizes CCV is largely absent in SCV. Instead, SCV includes violence that is rooted in anger or poor conflict management skills (rather than jealousy) and only involves short-term bids for control (Kelly & Johnson, 2008). Johnson (2006b) gives the example of a mugger, who may want to control his victim for only a few moments to extract their belongings, but once the immediate goal has been accomplished, the mugger is no longer interested in long-term control. In other words, violence in SCV is a response to a particular situation rather than a persistent desire to control one's partner in *every* situation. Men who perpetrate SCV, unlike those who perpetrate CVV, do not differ from non-violent men in misogynistic attitudes, borderline and antisocial personalities, or general violence outside the family (Babcock, Costa, et al., 2004; Holtzworth-Munroe et al., 2000). While SCV is less likely to escalate over time than CCV, it can occur as an isolated incident, sporadically or quite frequently (Kelly & Johnson, 2008).

It is worth noting that there are three types of IPV discussed in Kelly and Johnson (2008) that have since been added to Johnson's (1995) original framework. I mention them briefly as the other three forms of violence are either subsets of the first two types of

violence or do not meet the criteria for violence using the definition I presented at the start of this chapter. The third distinct form of IPV is Violent Resistance and it almost exclusively involves women who resist CCV. Perpetrators of this form of violence are not acting in the interest of long-term power and control in the relationship, but rather acting in a form of self-defense to a partner who seeks the goal of controlling them. However, keeping in mind Hamby's (2017) definition of violence at the beginning of this chapter, this form of self-defensive aggression does not meet the criteria to be considered violence.

A fourth type of IPV is Separation-Instigated Violence and consists of "unexpected and uncharacteristic acts of violence" committed by a romantic partner during a separation period (Kelly & Johnson, 2008, p. 487). These acts involve one or two episodes of violence and are not typically consistent with patterns of abuse or control. The final type of violence is called Mutual Violent Control. This occurs when both partners are violent and attempt to control one another (Kelly & Johnson, 2008). This is a relatively rare form of violence (Beck et al., 2013) and not much is known about its features, frequency or consequences (Johnson & Ferraro, 2000; Kelly & Johnson, 2008).

Johnson's typology is important because it potentially resolves a number of controversial debates in the field of IPV such as the gender symmetry argument or whether IPV is rooted in patriarchal traditions. By proposing multiple, distinct forms of violence, both gender and family violence researchers are correct in describing at least one of the distinct forms of IPV. According to Johnson's (2008) typology, while gender scholars have been describing CCV, family violence scholars have been describing SCV. Thus, each group of scholars, according to Johnson, have been looking at only a part of IPV and insisting it is the whole. From a clinical perspective, Johnson (2006b) suggests that certain intervention styles could be more appropriate given the type of IPV. Couples therapy, for instance, may

be a more appropriate intervention strategy for SCV than CCV. Nevertheless, while it may seem that many of the outstanding issues of IPV have been resolved with Johnson's IPV typology, numerous gaps and unresolved questions remain.

Limitations and Gaps of Existing Literature

While Johnson's typology has gained support from a wide range of scholars (e.g., Leone et al., 2013; Nielson et al., 2015; Schneider et al., 2013) and was the first body of work to highlight an extremely important terminological difference between family violence and gender scholars, there are several important limitations and gaps from this framework to consider. Most importantly, the distinctions in Johnson's (e.g., 2008) typology can be potentially risky as it groups different forms of IPV, such as physical assault, psychological aggression, and sexual violence, together into a single category of IPV. For instance, SCV is distinguished from CCV, mainly, from the element of control. However, SCV and CCV both can be characterized by multiple forms of IPV such as psychological, sexual, and/or physical assault perpetration. This sentiment is reflected by Johnson (2006a) who affirms "many of the separate violent incidents of SCV may look exactly like those involved in IT or VR" (p. 562). This is problematic in that there may be good reason to keep these forms of IPV separate in research.

Critically, physical assault, psychological aggression, and sexual violence are conceptually distinct and have a very different range of consequences from a legal and medical standpoint. Physical assault, for instance, may result in an immediate need for medical attention and has a much higher risk of homicide, while psychological aggression may result in much longer term effects on mental health. Moreover, Jacobson et al. (1996) and Kim et al. (2008) found that as time progressed with physically violent men, physical assault tended to decrease over time while psychological aggression remained consistent.

While I do not discuss sexual violence in depth in this dissertation, it is imperative to recognize that sexual violence is also conceptually distinct, can uniquely lead to reproductive harm and other consequences, and has motivations that differ significantly from those of physical assault and psychological perpetration (Caldwell et al., 2009). These findings together demonstrate that scholars studying IPV motivations may need to place greater emphasis on IPV forms as differentiated by *physical behaviors* (or the absence of them) alongside distinctions of control.

Additionally, scholars need to better understand some crucial gaps in research left behind by Johnson (e.g., 2008) and, by extension, family violence researchers. Specifically, there needs to be a clearer theoretical framework to explain the motivations behind SCV and CCV. While gender and evolutionary scholars have offered patriarchy and male sexual proprietariness, respectively, as conceptual frameworks for CCV, there is not yet a concise theoretical framework that explains SCV. Family violence researchers have offered a range of potential motivations that can lead to IPV (which in this context aligns closest with SCV), as reviewed by Langhinrichsen-Rohling et al. (2012). Nevertheless, many of the motivations summarized by Langhinrichsen-Rohling et al. (2012) do not seem to be motives at all. For example, "anger" and "jealousy" are described by the authors as two of the seven categories that emerged from their meta-analysis of IPV motivations. However, "anger" and "jealousy" are emotions. Motives were defined earlier as a set of fundamental, underlying processes that trigger certain behaviors and are undertaken for some benefit. With this definition in mind, jealousy and anger cannot be motives because communicating anger and/or jealousy are not necessarily linked to benefits. Instead, they most likely function as mediators between an underlying motive and IPV. Based on the arguments of other scholars (e.g., Buss & Duntley, 2011) jealousy can be conceptualized as a mediator between male sexual

proprietariness and, specifically, CCV perpetration. However, the question remains whether anger could possibly mediate the relationship between motive and SCV perpetration? And if so, what is that motive? As will be discussed further in the next chapter, Sell et al. (2009) has offered one potentially useful explanation through the Recalibrational Theory of Anger, which posits that anger is an emotion that drives aggression for the purposes of getting what one wants. However, even with this theory in mind, scholars do not yet know the precise mechanisms that activate this motivation.

This remaining question can most likely be better informed through further consideration of relationship dynamics. In almost all the frameworks discussed thus far, there is a distinct focus on the *intrapersonal processes*. However, Spencer et al. (2020) reports that the strongest risk markers for physical violence perpetration came from factors within the microsystem of the individual (i.e., the immediate setting of the individual) such as what other forms of violence have previously occurred in the relationship or relationship satisfaction. Perhaps further investigation into other relationship dynamics may yield more predictive power to models that deal with IPV perpetration.

Clearly, then, if we are to effectively understand and, hopefully, prevent IPV from occurring in at-risk couples we need a new theoretical perspective that, at minimum, elucidates the fundamental motives for IPV (including isolated and infrequent acts of violence) and their underlying processes that link IPV to a range of physically- and non-physically violent behaviors. This new theoretical framework should also consider relational dynamics, distinguish between different forms of IPV, and take into account cultural factors that may shift from couple to couple. Using an interdisciplinary approach that incorporates research from communication, family studies, public health, social psychology and evolutionary psychology, I propose such a model in Chapter 2.

Chapter 2: Violent Entitlement Theory

In this chapter, I propose a new theoretical perspective on IPV called Violent Entitlement Theory (VET). VET seeks to fill some of the remaining gaps in the IPV literature by investigating and predicting the motivations that lead to the form of IPV that Johnson (2008) calls SCV. One promising avenue in this regard is research related to narcissism which is defined, broadly, as "entitled self-importance" (Krizan, 2018, p. 16). Krizan (2018) maintains that "[n]arcissistic individuals are those who view their own needs and goals as more significant than other's and exhibit an inflated sense of importance and deservingness" (p. 16). Indeed, a number of scholars have pointed toward the association between IPV and narcissism (Baumeister et al., 1996; Catalá-Miñana et al., 2014; Corral & Calvete, 2014; Dutton & Hart, 1992, Romero-Martinez et al., 2016; Ryan et al., 2008; Swogger et al., 2007).

While this association is promising and sheds light on potential causal mechanisms of IPV, current research on narcissism is problematic. The most popular narcissism scale, the Narcissistic Personality Inventory (Raskin & Hall, 1979), has come under criticism in that it combines qualitatively different personality traits that, studied in isolation, predict multiple behavioral outcomes differently. For example, in line with previous research (e.g., Watson & Biderman, 1993), Brown et al. (2009) argues that the Narcissistic Personality Inventory is comprised of the two distinct factors of grandiosity and entitlement, which function independently (and often contrastingly) to predict mental health and ethical misconduct. Grandiosity is often associated with leadership qualities, pro-social behavior, and self-esteem while entitlement is associated with "maladaptive types of narcissism" (Brown et al., 2009, p. 952) such as aggression (Pincus et al., 2009), psychotism (Buss & Chiodo, 1991), and Machiavellianism (Ackerman et al., 2010). Ackerman et al. (2010)

though advocating for a three-factor solution for narcissism, comes to similar conclusions, noting that entitlement is a qualitatively different form of narcissism that seems to account for the associations of narcissism with negative interpersonal behaviors such as "impulsive anti-sociality" and aggression. It seems necessary, then, for scholars to shift their focus to entitlement rather than narcissism and place this concept in a larger theoretical picture that can account for the different cognitive and behavioral processes that work together and function in a dyadic relationship in a particular cultural context.

With this rationale in mind, VET proposes a new perspective of IPV perpetration that seeks to explain acts of IPV that are not necessarily embedded in dynamics of long-term interpersonal control. VET stipulates that this form of *IPV is enacted as a punishment against a partner that is driven most proximally by anger arising from a sense of unfulfilled relational entitlement that is contextually-and culturally-bound*.

Assumptions

There are two core assumptions that VET builds upon. The first is that individuals become angry when they are under-benefited in their relationships. This assumption draws mainly from Equity Theory (Adams, 1965; Walster et al., 1978) which postulates that people expect their investments in a relationship to be reciprocated fairly and get aggravated when this does not happen. Since its inception, Equity Theory has influenced a number of scholars from a diverse set of disciplines including those from social psychology (Adams, 1965; Deutsch, 1975), communication (e.g., Dunbar, 2000; T. D. Afifi et al., 2016), and occupational health (e.g., Hu et al., 2013; Schaufeli, 2006; Siegrist, 2002). Consequently, the principles of equity can be applied to a broad range of relationships (e.g., romantic relationships, work associates). Although many of the adaptations of Equity Theory differ in their specifics, at their core, they all maintain the assumption that individuals become

stressed when there is a mismatch between investments and their subsequent outcomes (Meier & Semmer, 2012). Indeed, scholars have demonstrated that those who perceive themselves to be in relationships where both partners' contributions are matched are more likely to maintain these relationships (e.g., Walster et al., 1978), be happier (e.g., Utne et al., 1984), be more satisfied in their relationships (Dunbar, 2000), and be better able to overcome hardships arising in relationships (T. D. Afifi et al., 2016). Evolutionary psychologists have contributed further evidence by finding that couples with lower mate value discrepancies (thus, less mismatch in subjective individual traits) tend to have higher marital satisfaction (Conroy-Beam et al., 2016) and that humans, globally, tend to mate assortatively with regards to overall desirability (Conroy-Beam et al., 2019).

Much of the crux of VET rests on the premise originally claimed by Adams (1965) which is that individuals use an interpersonal comparison to determine whether there is a mismatch in their romantic relationships such that each partner's ratio of efforts to outcome are related. People can ultimately receive less investment from their partner than they desire (i.e., be under-benefited) or receive more investment than they desire (i.e., be over-benefited). While many of the original models of Equity Theory assume that a mismatch in either direction is stressful (i.e., being under-benefited *or* over-benefited; Adams, 1965; Hatfield et al., 1985; Walster et al., 1978), other scholars only emphasize the negative effects of being under-benefited (e.g., Meier & Semmer, 2012; Siegrist, 2002).

In this dissertation, I only assume the latter, such that individuals will find it particularly aggravating to be under-benefited in a relationship. This is because there is evidence that being under-benefited has a stronger negative impact than being over-benefited (e.g., Hatfield et al., 1982; Sprecher, 1986; Taris et al., 2002; Walster et al., 1978). For example, evidence found by Sprecher (1986) demonstrates that the negative emotions of

anger, hate, and resentment are much more closely associated with being under-benefited than over-benefited. This is unsurprising given that the over-benefited are profiting more from the relationship than the under-benefited. It is important to also note that most work on Equity Theory has been done on Western populations; thus, this assumption is particularly true for Western societies but needs further consideration for other types of societies, particularly collectivistic ones.

The second assumption that VET builds upon is that all humans are capable of violence (Daly & Wilson, 1988). This departs from work in the extant literature that views violence as pathological or disordered, perpetrated by those who, for example, were physically abused as children or have cognitive disorders (e.g., Capaldi et al., 2012). In representative US samples, 30% of both men *and* women report experiencing at least one act of sexual violence, physical violence, or stalking by an intimate partner during their lifetime. While this statistic does not differentiate between violence motivations (i.e., some of the violence included in this statistic could actually be conducted in self-defense), this point, alongside the fact that this number is replicated globally for women (with some countries climbing to an 80% prevalence rate; Devries, Mak, et al., 2013), points toward an underlying universal ability to partake in violence given a particular set of risk factors and motives. My goal then is to use this dissertation to take a step toward understanding more clearly the nature of the inputs that most directly lead to violence. I believe the first step towards this goal begins with understanding the formation and fulfillment of *relational entitlement*.

Relational Entitlement

Relational entitlement has been defined by Tolmacz and Mikulciner (2011) as "the sense of entitlement in close relationships" (p. 76). While this definition provides the basis for an understanding of relational entitlement, it lacks a detailed explanation of the term

entitlement. Thus, I propose an alternative definition that (a) incorporates Sell et al.'s (2009) definition of entitlement as an "expectation of better treatment" (p. 15075) and (b) draws from the assumptions of Equity Theory as outlined in the previous section. A more nuanced definition of relational entitlement, then, is *a person's expectation of a minimum level of positive treatment from an intimate partner to match the perceived investment of them self.*

I contend that relational entitlement is derived from an internal assessment that considers the two fundamental concepts of positive externalities and social exchange which are explained in the evolution-based work of Tooby and Cosmides (1996). Positive externalities are "[b]ehaviors that are not undertaken as intentional acts of altruism" but nonetheless have "side-effects that are beneficial to others" (p. 137). For example, Tooby and Cosmides (1996) give the example of "[s]omeone who is a better wayfinder, game locator, tool-maker, or who speaks neighboring dialects" tends to be a "better associate, independent of the intentional altruistic acts she might direct toward you" (p. 137). In other words, positive externalities are traits that, when expressed in behavior, benefit another individual at no personal cost to oneself. This can be linked to conceptualizations of mate value which is "roughly, a person's overall desirability to their pool of potential mates" (Conroy-Beam et al., 2016, p. 2) as mate value is measured through individuals' desirable traits (Buss, 1989; Conroy-Beam et al., 2016).

Importantly, what is considered a positive externality can differ by contexts, cultures, and individual personalities. Consider, for instance, Tooby and Cosmides's (1996) example whereby a "wayfinder" or "game locator" would be much more likely to be considered a positive externality in hunter gatherer societies than in present-day Western ones. Similarly, culture can also influence the preferred ideal level of a positive externality. For example, heterosexual women who lives in Country A may consider, on average, the ideal male

partner to be a 7 out of 10 in terms of artistic ability, while in Country B this number might be a 5 out of 10. Furthermore, individual personalities can also affect how positive externalities are evaluated. Narcissists, for instance, may over inflate their self-assessments of their positive externalities and judge their charisma and leadership qualities as over benefiting their partner more than they do in reality.

Social exchange, on the other hand, is an act that benefits another individual at a personal cost to oneself (Tooby & Cosmides, 1996). The greater the personal cost to oneself to give a benefit to another, the greater the social exchange benefit one has presumably given. Tooby and Cosmides (1996) conceptualize a cost as "a diminution in [an individual's] direct reproduction" (p. 121). Building on this conceptualization, I consider a personal cost to be any expenditure of time, energy, or resources from an individual to benefit another. In the context of romantic relationships, social exchange aligns closely with the concept of relationship maintenance behaviors, which are defined by Canary and Stafford (1992) as the "actions and activities used to sustain desired relational definitions" (p. 5). Relationship maintenance behaviors are acts that benefit one's intimate partner and that require investments on the part of an individual. If we examine items from Stafford's (2011) Relational Maintenance Behavior Scale, we see that all scale items depict relationship maintenance behaviors that benefit a romantic partner at a cost to one's time (e.g. "spends time with our families"), energy ("shows me how much I mean to him/her"), or resources (e.g., "shares in the joint responsibilities that face us"). Each of these items requires use of a finite set of resources from an individual. For example, an intimate partner demonstrating how much an individual "mean[s] to him/her" can range in behaviors from planning special outings to purchasing a thoughtful gift. However, most behaviors that fall

under this category would require use of one's cognitive faculties, time, physical energy, and often financial resources.

Like positive externalities, social exchange benefits can also be sensitive to different cultures, contexts, and individual differences. For example, individuals from collectivistic cultures (Hui & Triandis, 1986) may place greater value on acts of social exchange that benefit family members more than individuals from individualistic cultures. Moreover, it should be noted that acts of social exchange are not *always* purely costly to the individual. In more collectively-oriented partnerships, for example, benefiting a partner can benefit oneself as well. For example, helping an intimate partner acquire a higher paying job can tangibly benefit both partners' financial resources. There is also evidence from Aron et al. (1991) that in relationships with a strong sense of communalism, individuals include their intimate partner in their sense of self, so that a behavior that benefits the self and one that benefits the other become blurred. Nevertheless, even if it is the case that some behaviors are not *completely* costly to the self, personal costs often exist in the enactment of relational maintenance behaviors. And it is precisely this remaining cost—within the social exchange process underlying relational maintenance (Stafford & Canary, 2006)—that I focus on with VET.

Theoretical Premises of VET

As one of the main tenets of VET, I propose that each member of a dyad makes an internal assessment of the positive externalities and social exchange benefits their intimate partner contributes to the relationship. As social exchange is inextricably related to personal cost, I propose that individuals' assessments of their intimate partner's relationship maintenance behaviors are weighted by the personal cost their intimate partner incurred. For example, using a simple monetary analogy, if Person A and Person B were both to invest

$100 into their respective relationship, but Person A only has $1,000 total while Person B is a multi-millionaire, then under this principle, Person A has incurred a much larger personal cost, and thus has given a much higher social exchange benefit to their intimate partner.

For a more complete picture, we can continue the analogy of Person A to include the concept of positive externalities and their specific relational dynamics. Say, for instance, Person A perceives that they offer 6 positive externalities and 10 social exchange benefits (which has been weighted to factor in personal cost). Person A would therefore conclude that they offer 16 total benefits to their partner. If Person A judges that their intimate partner, on the other hand, possesses only 5 positive externalities, then their partner would need to offer 11 social exchange benefits for Person A to avoid feeling under-benefited. Person A, then, feels *entitled* to a certain level of positive treatment in the form of social exchange benefits. Anything less can be considered a source of inequality, or even a *transgression*, from the part of Person A's intimate partner.

Importantly, the social exchange calculation considers a couple's relational history, but is also constantly recalibrating so that even one severe enough transgression can ultimately tip the scales toward an imbalanced relationship, as the transgression negatively factors into the overall assessment of partner social exchange. Similarly, assessments of positive externalities may shift over time as partners naturally shift in their characteristics. Of course, these assessments are only grounded in perception and not necessarily in reality. It might be that individuals who make assessments of extreme relational inequality have misguided notions of their own grandiosity. Regardless of whether these assessments reflect a true reality or not, relationship assessments as described in VET depend primarily on the *perception* of equality.

Notice also in the example above that Person A is only offering 10 social exchange benefits but expects 11 social exchange benefits in return. This phenomenon could account for other conceptual definitions of entitlement, especially those related to narcissism, such as "expecting special favors without assuming reciprocal responsibilities" (Raskin & Hall, 1979, p. 1). The entitled individual may feel that they are already accounting for the "special" treatment through their positive externalities. This offers an alternative explanation for narcissists' propensity to exploit others (e.g., Ackerman et al., 2010; Emmons, 1987). While Emmons (1987) argues that these individuals exploit in order to increase their self-worth, I argue that these individuals exploit because they feel like they *deserve* to.

Entitlement has been studied before in predicting the occurrence of IPV as it has been theorized that entitlement gives rise to deservedness and ownership rights of relational partners, which then gives rise to permission to enact violent behavior (Brainerd et al., 1996; Exline et al., 2004; Fields, 2012; Walters, 2007). While many scholars have established a link between entitlement and aggression, Fields (2012), noted that entitlement does not uniquely predict IPV nor does it account for the link between narcissism and IPV. While Fields (2012) offers the possibility that entitlement was already accounted for in their analyses through other scales that measured socially-dominant attitudes or hostile attributional biases, I suggest an alternative view. I argue that we should focus on *unfulfilled relational entitlement* (URE), rather than entitlement in isolation (i.e., at the individual level). URE stems from an individual not receiving the social exchange benefits they expected from their partner. I propose that URE can generally be calculated through the following formula where the difference between the positive externalities of oneself and one's partner is summed with the (weighted) difference between the social exchange benefits of oneself and one's partner:

$$URE = [(Positive\ Externalities_{s} - Positive\ Externalities_{p}) + [(Exchange\ Benefits_{s} * Personal\ Cost_{s}) - (Exchange\ Benefits_{p} * Personal\ Cost_{p})].$$

A positive value from this equation indicates higher URE (i.e., perceiving oneself as under-benefited), while a negative value indicates a lower URE score (i.e., perceiving oneself as over-benefited). I propose that individuals are constantly recalibrating this assessment so that any action or event can ultimately make an individual reassess any of the variables in the URE equation to yield a positive URE value (indicating unfulfillment). It is possible for positive externalities to be reevaluated as changes in employment status, appearance, personality, relational satisfaction, or resources arise. Alternatively, social exchange benefit calculations can be reassessed as individuals perceive their partner's actions as ones that are not properly taking their welfare into account. It is possible, then, that even one particular action can serve as a catalyst to tip the scales toward unfulfillment. This tipping of the scales is conceptually similar to what Bushman and Baumeister (1998) call an *ego threat*, which is what they consider any singular event that threatens a person's ego such as insults or criticism.

Importantly, the existence of URE is not necessarily a clear determinant of violence. It is probable that most individuals have URE at some point in their romantic relationships, at least in small amounts, and that a vast majority of these individuals do not perpetrate IPV. However, it is when URE exists in large amounts that I expect the risk of violence increases. Critically, it can therefore be conjectured that narcissists (although not exclusively so) have a high risk of IPV perpetration.

The greater one's URE, the more likely I would expect this person will assess a specific event as negatively valanced towards them, which can ultimately trigger anger and punishment motive in a bid for treatment they feel entitled to receive. This idea aligns

closely with the Recalibrational Theory of Anger (Sell et al., 2009) which posits that anger is a functional emotion that evolved for the purposes of negotiating and resolving conflicts in the interest of the angry individual. Another way of understanding this idea is that anger is an emotion used by an individual to gain power and/or control in a given situation. Evidence from experimental economics using public goods games also supports this idea as research has shown that punishment is an effective tactic in changing people's behavior towards oneself (Fehr & Gächter, 2000; Kurzban et al., 2001). Indeed, Tooby et al. (2006) maintain that any form of transgression that is perceived to undervalue an individual should trigger anger, and "anger and punitive sentiment are closely related functional systems, using much of the same infrastructure" (p. 127). Thus, I propose that heightened levels of URE enhance anger and, ultimately, a punitive sentiment towards one's intimate partner. This punitive sentiment can manifest in problematic and violent ways as the individual with heightened URE seeks to re-adjust the behavior of their intimate partner. Specifically, the person with heightened URE believes that their personal welfare needs to given higher priority by the partner. To reiterate in unambiguous terms, this is the perpetrator's perception and not indicative of an objective reality. Furthermore, it is critical to recall that violence is a broad category that can take many forms (e.g., physical, emotional, sexual, etc.). As mentioned in Chapter 1, I will be exclusively focusing on only physical assault and psychological aggression in this dissertation. Thus, I argue that heightened URE is a key risk factor for physical assault and psychological aggression in romantic relationships.

Contextual Variables

If URE is a key risk factor to physical assault and psychological aggression, how does URE relate to other contextual variables that are known risk or protective factors towards IPV? I argue that many contextual variables either intensify or mitigate risk towards

violence by directly skewing perceptions of URE or contributing independently to violence risk through unique processes. Narcissism as a personality trait, as mentioned earlier, is a clear example of a factor that most directly skews URE assessment. Narcissists are highly likely to have elevated URE in their romantic relationships because they most likely judge their positive externalities much higher than what their partner perceives. Alcohol might be another such factor where inebriation leads to impaired judgement, and possibly, an overly negative assessment of a partner's actions leading to over-inflated feelings of URE.

Another potential intensifying variable is male sexual proprietariness. As discussed in Chapter 1, male sexual proprietariness refers to the tendency of heterosexual males to view their female intimate partners as personal property (Wilson & Daly, 1993, 1998). This sense of proprietariness can intensify URE, but it might also independently increase violence risk through a separate set of processes (i.e., unrelated to URE). While Wilson and Daly (1993, 1998) recognize that male sexual proprietariness can vary from individual to individual and across different cultures, they argue that this psychological tendency exists at some level in all human societies. Wilson and Daly (1993) argue that this form of proprietariness leads males to have a sense of entitlement over their female partners, which is how proprietariness may ultimately intensify URE. Still, I maintain that the sense of entitlement over one's perceived personal property is qualitatively different than the entitlement referenced in URE. URE ultimately triggers punitive motive; thus, URE leads to *reactive* violence. Male sexual proprietariness, however, may motivate reactive *and* preemptive violence, the latter stemming from a bid for control over a female intimate partner against real or imagined threats.

This bid for control often manifests through coercive violence, which includes behaviors such as intimidation, isolating one from friends and family, or controlling one's

whereabouts (Dutton & Goodman, 2005). I would expect that a strong sense of sexual proprietariness paired with elevated URE can lead to a more severe type of violence, aligning with the type of IPV that Johnson (2008) coined as CCV (as discussed in Chapter 1). Indeed, Johnson (2008) characterizes perpetrators of CCV as almost exclusively male and those with a high need for control. Moreover, CCV is more likely to include violence borne from jealousy (Babock et al, 2004) and be more severe (Johnson, 2008). In a meta-analysis conducted by Love et al. (2020) that reviewed the risk factors for perpetrators of both CCV and SCV, the authors found that CCV was most closely associated with controlling behavior, jealousy, stalking and patriarchal beliefs. Given the effects of male sexual proprietariness, gender becomes an important risk factor that might separately contribute, and possibly moderate, URE's effects on IPV. Thus, as discussed later, gender is tested in this dissertation as a potential moderator in the link between URE and IPV.

In sum, various contextual variables (only some of which were alluded to here) can be conceptualized as either intensifying URE or contributing separate, direct effects toward IPV. In this sense, URE is useful in that it links a number of risk factors to violence perpetration through a cohesive theoretical framework. As will be discussed momentarily, this is just one of several important contributions that VET provides.

Theoretical Contributions

With the core tents of VET described, it is critical to articulate the specific theoretical and applied contributions that VET makes toward the IPV literature. First, VET was developed to account for cultural differences. The need for recognition of cultural variation in social scientific theory has been raised by numerous scholars from various fields (W. A. Afifi & Cornejo, 2020; Henrich et al., 2010; Nettle & Frankenhuis, 2019; Zietsch & Sidari, 2019). While I maintain that IPV is a human problem, I also stress the importance of

the variability of positive externalities and social exchange depending on the population under study. For example, in honor cultures (Nisbett & Cohen, 1996), reputations of toughness and strength are paramount, implying that these constructs are particularly weighted in positive externality assessment. Because the constructs that factor into URE are relatively broad, URE assessments should be able to account for cultural differences (such as those relevant to honor cultures) with the development of fine-tuned instruments. This point will be further discussed in the General Discussion (Chapter 7).

The second contribution of VET is that it adds a new perspective toward clinical settings for both risk assessments and cognitive behavioral therapy approaches. This is especially needed given some of the critiques of current IPV intervention strategies (Wagers & Radatz, 2020). For example, in the US, the first formal efforts toward IPV intervention began in the 1970's with the establishment of domestic violence shelters for IPV survivors (Buzawa et al., 2017) and intervention/treatment programs for IPV perpetrators (Adams & Cayouette, 2002; Wagers & Radatz, 2020). However, fifty years later, the high incident rate of IPV (Smith et al., 2018) demonstrates that IPV is still a common experience among Americans, and it is generally agreed that incidence rates for IPV have not significantly declined during this time (Wagers & Radatz, 2020). Moreover, meta-analytic reviews for perpetrator specific programs find very limited evidence of treatment programs reducing IPV recidivism (e.g., Babcock, Green, et al., 2004; Davis & Taylor, 1999; Feder & Wilson, 2005). Many scholars argue (e.g., Smyth et al., 2006; Wagers & Radatz, 2020) that one major problem with these programs is that they use a one size fits all approach, which includes an over reliance on the criminal justice system and a lack of nuance when addressing different communities who have unique needs and relational contexts. Wagers and Radatz (2020) argue that one way to address this one size fits all approach is to use

proper assessment tools at intake into programs to develop a personalized clinical case plan that addresses underlying issues specific to individuals. A finely tuned URE measure is one possible assessment that can be incorporated into an IPV perpetrator's intake program as it provides a unique lens into their relational history, can be tracked over time, and is less face threatening than direct IPV measures.

This novel approach can also be used to assess couples as high risk for IPV *before violence has occurred.* Based on couples' URE scores, practitioners could intervene to educate partners on risk factors to offer protection and safe haven to vulnerable individuals to extricate them from risky relational environments. A VET framework can also be integrated into cognitive behavioral therapy for IPV perpetrators seeking treatment. Tracking their URE over time could help provide evidence if they are likely to enact IPV in their relationships.

A third contribution is that VET integrates and unifies much of the existing literature on IPV risk factors. I argue that many risk factors of IPV are understood better through a lens that considers IPV a behavior ultimately motivated by an attempt to extract a level of treatment the perpetrator feels entitled to receive (i.e., triggered by URE assessments). This is important because one problem in IPV research is that a substantial portion of it (e.g., research grounded in clinical disciplines, social psychology, and communication) often considers *proximate explanations* of IPV without a larger theoretical framework in place. Consequently, there is an inordinate amount of focus on specific variables as key risk factors for IPV perpetration. For example, there is a particular focus on alcohol consumption as a risk factor for IPV perpetration. Focus on alcohol as a contributor to IPV is found across multiple disciplines, including clinical psychology (Foran & O Leary, 2008; Leonard & Quigley, 2016; Leonard & Quigley, 1999; H. S. Pan et al., 1994), public health (Coker et al.,

2000; Cunradi et al., 2002; Devries, Child, et al., 2013; Grisso et al., 1999; Kyriacou et al., 1999; World Health Organization, 2013), and social work (Miller et al., 2000).

Yet, alcohol, a seemingly straightforward risk factor for IPV, is anything but without a larger theoretical framework in place to contextualize its potential effects. Consider, for instance, that research pointing to the importance of alcohol in IPV perpetration is derived from Western samples. When we account for non-Western societies, a different picture emerges. In Afghanistan, for instance, 53% of ever-married women have experienced physical violence since the age of 15, with this number climbing to 91% and 93% in certain provinces of Afghanistan (Central Statistics Organization et al., 2017). This is despite the fact that it is illegal to drink alcohol at any age in Afghanistan, and only .07% of the population have self-reported drinking habits of any frequency—a statistic further verified by large-scale urine, hair, and saliva testing in a subset of the population (Cottler et al., 2014). In fact, 33 of the 50 Muslim majority countries have prohibitions on alcohol, ranging from total prohibition to strict restrictions (Al-Ansari et al., 2015). Muslim women, nevertheless, still have an increased rate of IPV (Adam & Schewe, 2007; Barkho et al., 2010; Colorado-Yohar et al., 2012; Lee & Hadeed, 2009). While religious tenets, of course, do not guarantee adherence among the faithful, scholars have systematically found that Muslim individuals across the globe report significantly less alcohol consumption than non-Muslim participants (Abu-Ras et al., 2010; Ahmed et al., 2014; Probst et al., 2017; S. Pan et al., 2016). Thus, a dilemma with a key variable such as alcohol presents itself: if alcohol consistently emerges in research as the key risk factor for IPV, scholars still need to explain how populations that do not typically consume alcohol can still have increased IPV rates.

Moreover, scholars need to consider that alcohol drinkers in the US far outnumber IPV perpetrators. Roughly, 86% of people ages 18 years and older reported that they drank

alcohol at some point in their lifetime (SAMHSA, 2019) while only 25% of individuals are reported to have perpetrated IPV in their lifetime (Desmarais et al., 2012). Without firm theoretical footing, it is hard to predict when alcohol is a risk factor for IPV perpetration and when it is not. With the theoretical framework outlined in VET, alcohol's role can become much clearer. Alcohol is a known substance that impairs executive function, and as a necessary consequence, judgement. I would argue that alcohol creates an overinflated discrepancy in the perpetrator's mind between their and their intimate partner's relational investment such that past and current interactions with an intimate partner become grossly exaggerated in the mind of the person under the influence of alcohol so that it significantly increases violent risk. Thus, it is plausible, albeit speculative at this point, that alcohol contributes to violence based on pre-existing levels of URE. Thus, if we consider alcohol as a moderator to existing levels of URE, it is easier to explain why populations with and without frequent alcohol consumption have high levels of IPV perpetration.

Similarly, VET can shed light on why childhood violence increases the likelihood of IPV perpetration and victimhood for some people, but not for others. Scholars from public health, developmental psychology, and social welfare fields often point to childhood violence as a key predictive factor to IPV (Capaldi et al., 2012; Manchikanti Gómez, 2010; Vagi et al., 2013; Yakubovich et al., 2018). In fact, the CDC (2019a) lists "victim of physical or psychological abuse" as "consistently one of the strongest predictors of perpetration." It is overly simplistic, however, to assume that all individuals who were abused become perpetrators of abuse. Manchikanti Gómez (2010), for example, reported that 19% of IPV perpetrators and 18% of victims report being abused as children. What about the other 80% of couples who experience IPV? Further, how can we explain findings suggesting child abuse can equally predict both IPV perpetration and victimhood at similar

rates? As Arata et al. (2005) reported, aggressive behavior towards others constitutes only one of many possible outcomes for the future behavior of mistreated children. Rather than becoming aggressive as adults, these individuals are just as likely to grow up withdrawn from others, depressed, or suicidal (Arata et al., 2005). While symptoms of aggression and depression are not mutually exclusive, they also do not necessarily co-occur with each other. Self-reported delinquency (i.e., fighting, theft, vandalism, etc.), for instance, only has a correlation between .15 to .39 with various other symptoms including depression symptoms (Arata et al., 2005).

I propose that we can consider the processes of childhood violence on future IPV perpetration versus victimization through new perspective provided by VET. Perhaps physical/emotional abuse recalibrates weightings of entitlement in children such that they take in certain characteristics as particularly weighted in entitlement formation. Thus, if a parent abused a child for talking back or "speaking out of line", the child learns that certain characteristics like, for example, being a parent, being physically stronger, being financially responsible is worthy of higher entitlement and deserves a certain expectation of treatment (e.g., not being talked back to). In other words, children take the attributes of their abuser and incorporate it into what they think are positive externalities that warrant a certain caliber of treatment that, when unfulfilled, deserve a certain level of punishment to recalibrate their behavior. While this is not that far from the explanation of a social learning perspective (Bandura, 1977), using this particular conceptualization creates new avenues of IPV research. It allows us to predict, for instance, that if adults who were abused as children do not internalize characteristics of their abuser, then they will *not* be more likely to have a skewed sense of entitlement and be at more risk of perpetrating IPV in their adult relationships. Similarly, if these same adults are paired with intimate partners who do have

these characteristics, it will be more likely that these people will consider their partners as more deserving of a bloated sense of entitlement. From a VET perspective, we can see how child abuse can predict both IPV perpetration and victimhood. VET, then, uses an interdisciplinary approach to make a comprehensive model that can inform the precise conditions under which IPV is likely to arise.

The fourth important contribution is that VET fills important gaps in existing theories, particularly those in both Equity Theory (Adams, 1965) and the Recalibrational Theory of Anger (e.g., Sell et al., 2009). For example, Equity Theory proposes that individuals seek equal relationships without ever expanding on what exactly makes an equitable relationship. While the construct of power may be invoked in these discussions, power, like equity, is a somewhat ambiguous concept that is tricky to both define and measure (Burgoon et al., 1998). Further, some studies of Equity Theory casts women as perceiving themselves as less deserving of equity (e.g., Hatfield et al., 1985), but it is hard to explain why that is the case using the basic premises of Equity Theory. So, either current measurements of equity are not reflective of women's experiences or a problematic gender bias pervades the theory, which undermines its validity and utility in the current framework.

Answering what specifically goes into the assessments of equity also answers some of the gaps in the Recalibrational Theory of Anger. For example, the Recalibrational Theory of Anger posits that anger is a functional emotion that evolved for the purposes of negotiating and resolving conflicts in the interest of the angry individual. In this theory, the notion of welfare tradeoff ratios (WTR) has been put forward to help clarify the relationship surrounding anger and entitlement. A welfare tradeoff ratio is the ratio of the extent to which a party values your welfare relative to their own (Sell et al., 2009). Each individual in a relationship has a separate WTR that guides their behavior towards their partner and the

behavior they feel they are entitled to. Sell and colleagues (2009) argue that individuals use anger and punishment to recalibrate WTRs of partners who do not hold the welfare of the individual in high enough regard. Yet, for a better understanding of WTR's role in anger and punishment, there are some underlying questions that need to be addressed. Where do these expectations for treatment come from? How are they formed? What exactly are the expectations individuals hold towards relational partners? Moreover, how does someone track the WTR they are receiving?

VET attempts to answer all these questions (as well those left unanswered by Equity Theory). VET proposes that expectations for treatment come from one's perception of their investments into a relationship through a series of calculations using the measurable constructs of positive externalities and social exchange. An important premise of VET is that individuals expect that the treatment received from a partner should at minimum match the perceived investment of the individual and that individuals track whether or not their expectations are met through assessments of their partner's positive externalities and social exchange. The URE formula presented in this chapter serves as a representation of this calculation, such that expectations of treatment from an intimate partner should sum to less than or equal to zero URE. Any value above zero then would be considered behavior that failed to meet expectations, or an *inequity.*

Thus, if the basic premises of VET are supported, there are numerous theoretical and applied contributions that VET can provide. To begin evaluating the validity of VET's predictions, I outline a set of hypotheses and research questions tested in this dissertation. I detail each hypothesis and research question in the next section.

Predictions

VET proposes that people in romantic relationships track the investments that they and their partner make into their relationship through contributions from positive externalities and social exchange. These investments give rise to certain expectations of treatment from an intimate partner, that when unmet, increases violence risk. Thus, at its core, VET predicts that individuals with a heightened sense of URE should be at greater risk of enacting violence against their intimate partner—especially, as focused on in this dissertation, physical assault and psychological aggression. As mentioned in Chapter 1, these two forms of violence are the most common forms of IPV (Breiding, 2015), are often aligned in terms of reported motives (Neal & Edwards, 2015), frequently co-occur (Capaldi & Crosby, 1997; O'Leary & Maiuro, 2001), and are often grouped together in studies of IPV (e.g., Capaldi et al., 2012). Thus, I expect both forms of violence to increase under conditions of high URE. However, given that both these forms of violence have quite different prevalence rates (Breiding, 2015), are qualitatively different from medical and legal standpoints, and have supporting evidence that there may be at least some different mechanisms motivating physical assault and psychological aggression (e.g., Jacobson et al., 1996), I separate them in the following hypotheses:

H1: Individuals with greater URE are more likely to perpetuate physical assault towards their romantic partner.

H2: Individuals with greater URE are more likely to perpetuate psychological aggression towards their romantic partner.

In addition to these hypotheses, I expect that gender potentially moderates the effect URE has on violence. As discussed earlier, there are several potential moderators that might alter the association between URE and IPV. In this dissertation, which provided an initial test of VET, I will focus primarily on the effects of gender as a potential moderator. From its

original conception, the field of IPV research has been a heavily gendered topic of study, beginning with the early gender scholars who began researching this field (Dobash & Dobash, 1979; Saunders, 1988). Since then, gender has been central to numerous scholars in many other fields ranging from evolutionary scholars who theorize on the related role of male sexual proprietariness (e.g., Wilson & Daly, 1993; 1998) to family violence researchers (e.g., Straus, 2008) who argue that IPV perpetration is a gender symmetrical phenomenon. Indeed, almost all empirically-based models of IPV include gender as an important factor in understanding IPV perpetration (e.g., Holtzworth-Munroe, 1992; Johnson, 2008). Given the long-standing importance of gender in research on IPV, it is critical to include a variable in this dissertation. Yet, based on the state of the literature, it is difficult to form specific hypotheses on the direction of potential gender effects. Thus, I present the following research questions:

RQ1: Will the effect hypothesized in H1 be moderated by gender?

RQ2: Will the effect hypothesized in H2 be moderated by gender?

In the following chapters, I report the methods, results, and implications of two studies—an experiment and a survey study—designed to test H1, H2, RQ1, and RQ2.

Chapter 3: Study 1 Methodology

Purpose and Procedure

The purpose of this study is to provide an initial test of VET's proposed relationships in an experimental setting. Participants were recruited through the crowd sourcing website Prolific.co. Since VET theorizes the processes involved in violence perpetration from the perspective of the violent actor, couples were not necessary for this study. Individuals, moreover, were preferred for the safety of participants who may not want to disclose abuse in a way that could be linked to their abusive partner. Supporting this approach is Moffit et al.'s (1997) argument that, under conditions that ensure complete confidentiality, either perpetrator or victim reports are suitable methods for reliably and validly researching partner abuse. Recruitment through crowdsourcing survey organizations, such as Prolific.co, ensures a higher level of anonymity that could otherwise be compromised through community-based recruitment methods.

Once participants consented to the study, they were given an approximately 10-minute survey that placed them in one of eight conditions that asked them to imagine themselves in a relationship with a hypothetical romantic partner. Participants were then asked to consider a scenario with their romantic partner that was intended to be upsetting and were asked to answer questions about their possible behavior in that circumstance. The survey was taken online on private computers using the Qualtrics platform in exchange for $2.50 as monetary compensation. This study was approved by the Human Subject Review Board at the University of California, Santa Barbara.

Participants

There were 513 participants who completed the survey. Participants were included in analyses if they completed over 70% of the survey, passed a data quality check based off an

open response item (see measures), and identified as either male or female (which was necessary to test RQ1 and RQ2). This resulted in a total of 500 participants included in analyses. Participants ranged in age from 18-74 (M = 31.90, SD = 10.75). Fifty-four percent of participants identified as female, 46% as male. Participants were free to report multiple ethnic and racial identities. A majority (73%) identified as White or Caucasian, 15% as Asian or Asian American, 9% as Hispanic or Latino/a/x, 6.0% as Black or African American, 3% as Multiracial, and 1% as Indigenous, Native American, or Alaska Native. Less than one percent of participants identified as Native Hawaiian or Pacific Islander, Middle Eastern or North African, preferred to self-describe or preferred not to answer.

In terms of relational status, approximately 32% were married, 29% were not currently seeing anyone, 27% were seriously dating, 7% were casually dating, 5% were engaged, and 1% characterized their relational status as "other." Eighty percent of participants identified as heterosexual, 10% as bisexual, 3% as lesbian, 2% as pansexual, 2% as undecided, 1% as gay, and 1% as asexual. Less than one percent identified as queer, preferred to not answer, or preferred to self-describe.

Experimental Manipulation

There was a total of eight conditions in this experiment that manipulated three variables integral to URE formation within the VET framework: positive externalities, exchange benefits and personal cost (see **Table 1** for full breakdown of conditions). Participants were randomly assigned to one condition where they were given a prompt (see Appendix A) that asked them to imagine a relationship with a hypothetical partner. The condition then described the participant's attributes and behavior in their romantic relationship compared to those of their hypothetical partner. The participant was described as either high or low on positive externalities (described in terms of intelligence,

attractiveness, positivity, and financial stability), exchange benefits (described in terms of investment of time and energy into the relationship), and personal cost (described as the total time and energy that they have available to invest).

After participants read about their hypothetical relationship, participants were directed to read a scenario that was the same across all conditions and described an incident where their hypothetical romantic partner flirted with the participant's work colleague at a holiday event (see Appendix A for full text). To enhance the realism of the scenario, a stock image of lights was added below the scenario text (see Appendix A for image). The scenario was written with the intention to induce anger while also remaining ambiguous enough to allow multiple interpretations to avoid a ceiling effect.

Table 1

Experimental Conditions

	Positive Externalities	Exchange Benefits	Personal Cost
Condition 1	High	High	High
Condition 2	Low	High	High
Condition 3	High	Low	High
Condition 4	High	High	Low
Condition 5	High	Low	Low
Condition 6	Low	Low	High
Condition 7	Low	High	Low
Condition 8	Low	Low	Low

Post-experimental measures

Revised Conflict Tactics Scale

The Revised Conflict Tactics Scale (CTS2; Straus et al., 1996) was adapted to measure the perpetration of two forms of IPV, psychological aggression and physical

assault. All questions related to the scales of psychological aggression (α = .83, *M* = 1.43, *SD* = .52) and physical assault (α = .91, *M* = 1.03, *SD* = .17) were used. The CTS2 has Level 1 and Level 2 subgroupings of each type of violence so that it differentiates between more dangerous forms of violence (i.e., Level 2) and less severe forms of violence (i.e., Level 1). For example, with regard to physical assault, a Level 2 manifestation is choking whereas a Level 1 manifestation is slapping. Both levels, to be clear, are problematic, but differentiating the severity of violent behaviors can help categorize individuals who engage in the most dangerous forms of violence. In the current study, as will be discussed in Chapter 4, the Level 1 and 2 manifestations were merged within the physical assault and psychological aggression higher-order latent constructs.

Due to the experimental nature of this study, the CTS2 was adapted to measure the violence inclination of the participant rather than actual past violent behavior. Instead of asking participants how often an act has occurred within their relationship, the survey asked participants to consider how they would *feel* like reacting towards their romantic partner in private if the scenario they read had happened to them regardless of how they would *actually* act. This nuanced phrasing was included to 1) make IPV related questions less face threatening and 2) measure more directly the impulse toward violence rather than the actual behavior. This latter point aims to address the tenet of VET that URE affects violent impulse, which then feeds into violent behavior. Thus, when considering URE as an independent variable, measuring violence inclination as the dependent variable is appropriate, as inclination is considered the most proximal dependent variable in the VET model.

Each item that was selected from the CTS2 was adapted to the future tense (e.g., "insulted or swore at my partner" was adapted to read "insult or swear at my partner") and

given a 1-5 Likert response scale where a "1" indicated the participant was "not at all likely" to want to engage in that particular behavior and a "5" indicated that the participant was "very likely" to want to engage in that behavior. There was a total of 8 psychological aggression items; examples include "*[I would..] insult or swear at my partner*", "*shout or yell at my partner*", "*destroy something belonging to my partner*", and "*threaten to hit or throw something at my partner.*" The physical assault scale consisted of 12 items; example items include "*[I would…] grab my partner*", "*push or shove my partner*", "*choke my partner*" and "*beat up my partner.*" See Table 2 for the descriptive statistics for physical assault and psychological aggression by gender.

Table 2

Descriptive Statistics for Psychological Aggression and Physical Assault by Level and Gender

Gender		*M*	*SD*	Min	Max
Man	Psych. Aggression	1.35	.44	1.00	3.38
	Phys. Assault	1.01	.06	1.00	1.58
Woman	Psych. Aggression	1.51	.57	1.00	4.13
	Phys. Assault	1.04	.23	1.00	3.42
Total	Psych. Aggression	1.43	.52	1.00	4.13
	Phys. Assault	1.03	.17	1.00	3.42

Realism

As a validity check, one closed-ended question was included that asked the participant, "*How easy or difficult was it for you to imagine yourself in this scenario?*" (*M* = 3.49, *SD* = 1.17). Participants then responded on a 5-point scale where a "1" indicated a "hard time imagining" themselves in the scenario and a "5" indicated the participant could "very much imagine" themselves in the scenario. Overall, the mean of 3.49 suggests participants were reasonably able to envision themselves in the scenarios. Further analysis of this item is provided in the next chapter.

Entitlement Scale

As one of my manipulation checks, the eight-item Entitlement Rage scale (Pincus et al., 2009; $\alpha = .83$, $M = 2.52$, $SD = .78$) was included in the survey form. The Entitlement Rage scale is one of seven subscales included in Pincus et al.'s 52-item Pathological Narcissism Inventory (PNI). Other dimensions of pathological narcissism in this scale include: Exploitativeness, Grandiose Fantasy, Self-sacrificing Self-Enhancement, Contingent Self-Esteem, Hiding the Self, and Devaluing.

There is another well-known scale concerning entitlement that could have been used—Tolmacz and Mikulincer's (2011) relational entitlement scale. However, the items from the relational entitlement scale were not adaptable for this study given that the items measured feelings toward one's current relationship (e.g., "*I am possessed with my partner's faults"* or *"When I feel angry with my partner, it's difficult for me to calm down"*) and these items would be difficult for participants to assess with a hypothetical romantic partner. As far as I am aware, no other alternative relational entitlement scale exists that would have been suitable as a manipulation check for this experiment. For this reason, I elected to use the well-validated entitlement rage scale from the PNI as part of my manipulation check. Given that the entitlement rage scale is closely associated with aggression (Pincus et al., 2009), I expected experimental conditions that aimed to heighten URE to correspond to a higher entitlement rage score. Example items from the Entitlement Rage scale included statements such as "*It irritates me when people don't notice how good a person I am"* and "*I get mad when people don't notice all that I do for them."* Participants then ranked their agreement with each statement from 1 "*Strongly disagree*" to 5 "*Strongly agree*."

Anger

A second manipulation check concerned evoked anger from the scenario. Two items that measured anger were adapted from Sell et al. (2009) and combined to create an anger scale (r = .75). Participants were asked to rate on a scale of 1 ("Very slightly or not at all") to 5 ("Extremely") how likely they would feel "enraged" or "angry" if the situation they read happened to them. I intended the anger scale to serve as an alternative manipulation check complimentary to the Entitlement Rage scale (Pincus et al., 2009). Whereas the entitlement rage scale captures relatively stable tendencies toward entitlement, the anger items are state-based, and therefore potentially more likely to fluctuate after reading a hypothetical scenario. If the manipulation worked, I expected that conditions with heightened URE should elicit more anger than conditions with lower URE.

Textbox

An open-ended response box was provided asking if there is anything else the participant would like to add. This question was included to filter out any potential nonsensical responses from bots and was scanned for any important themes that stood out to participants.

Chapter 4: Study 1 Results and Discussion

Analysis Plan, Variable Coding, and Descriptive Statistics

The main goal of this study was to test if heightened URE made it more likely that participants would report a desire to perpetuate psychological aggression (H1) or physical assault (H2) towards a romantic partner. In addition, I examined whether these hypothesized effects were moderated by gender (RQ1 and RQ2). Logistic regressions were conducted to evaluate the hypotheses and research question across the 8 conditions (see Table 3 for list of conditions).

When using the CTS2, researchers need to consider multiple variants of psychological aggression and physical assault. This is because violence in community samples, especially physical assault, mostly trends toward zero, with typically 70% to 90% of participants having a score of zero (Straus, 2004). This results in an extremely skewed distribution that is typically unable to be normalized even through statistical transformation. Consequently, statistical assumptions for various tests are often violated. As a result, the CTS2 is scored in a manner that typically does not yield a continuous outcome measure. Rather, the most common method of scoring the CTS2, and the method used in this study, is by calculating violence *prevalence* (Straus, 2004).

A prevalence score recodes violence occurrence as a binary response, where no violence occurrence is coded as “0” and violence occurrence is coded as “1” to indicate what percent of the group engaged in one or more acts of violence during a referent period (either in the past year or in the entire course of the relationship). A total of 71% of participants indicated they felt like engaging in at least one act of psychological aggression towards their hypothetical romantic partner after reading the scenario, while only 12% of participants reported feeling like engaging in at least one act of physical assault. See Table 3 and Table 4

for descriptive statistics for psychological aggression and physical assault prevalence by all eight experimental conditions. Given the dichotomous nature of the outcome variable, a logistic regression was run with all independent variables.

Table 3

Psychological Aggression Prevalence by Condition

			Psych. Aggression		
			0	1	Total
Condition	1	N	16	48	64
		% within condition	25.0%	75.0%	100.0%
	2	N	8	54	62
		% within condition	12.9%	87.1%	100.0%
	3	N	22	41	63
		% within condition	34.9%	65.1%	100.0%
	4	N	17	47	64
		% within condition	26.6%	73.4%	100.0%
	5	N	14	50	64
		% within condition	21.9%	78.1%	100.0%
	6	N	24	37	61
		% within condition	39.3%	60.7%	100.0%
	7	N	16	47	63
		% within condition	25.4%	74.6%	100.0%
	8	N	26	33	59
		% within condition	44.1%	55.9%	100.0%
Total		N	143	357	500
		% within condition	28.6%	71.4%	100.0%

Note. “0” signifies zero inclinations toward psychological aggression and “1” signifies as least one reported inclination toward psychological aggression

Table 4

Physical Assault Prevalence by Condition

			Phys. Assault		
			0	1	Total
Condition	1	N	52	12	64
		% within condition	81.3%	18.8%	100.0%
	2	N	52	10	62
		% within condition	83.9%	16.1%	100.0%
	3	N	56	7	63
		% within condition	88.9%	11.1%	100.0%
	4	N	53	11	64
		% within condition	82.8%	17.2%	100.0%
	5	N	59	5	64
		% within condition	92.2%	7.8%	100.0%
	6	N	56	5	61
		% within condition	91.8%	8.2%	100.0%
	7	N	59	4	63
		% within condition	93.7%	6.3%	100.0%
	8	N	52	7	59
		% within condition	88.1%	11.9%	100.0%
Total		N	439	61	500
		% within condition	87.8%	12.2%	100.0%

Note. "0" signifies zero inclinations toward physical assault and "1" signifies as least one reported inclination toward physical assault

It is noteworthy to mention that the CTS2 can also be scored by two other methods. The first method considers violence prevalence by severity. In this scoring method, violence prevalence is given further distinction by the creation of three categorical outcome variables (as opposed to two) by splitting violence occurrence into two categories: prevalence of Level 1 violence *only* and prevalence of Level 2 violence. Given the adaptations to the CTS2 for Study 1, I chose to analyze results with the default method of scoring which uses only the higher order categories of prevalence without further delineation into severity level.

Study 2, however, as will be seen in Chapter 5, has the ability for finer-grained distinction since it assesses past violent behavior in actual relationships (as opposed to hypothetical scenarios).

The second scoring method considers annual frequency of violent acts. In the original CTS2 scale, participants report how many times in the past year they have engaged in a particular violent behavior toward their intimate partner. The annual frequency scoring method sums up the frequency of items to yield a measure of *how many* acts of violence occurred in the last year. This scoring method was not possible for Study 1 due to the hypothetical nature of the study.

Simplified URE Categorization of the Experimental Conditions

Before discussing the results of the CTS2 based on violence prevalence, I want to first note two different treatments of the experimental conditions in the results. The main tests of the hypotheses and research questions will utilize the eight experimental conditions as they were designed for this study (as described in the previous chapter). However, after reviewing the results of these analyses, I observed several that occurred due to the distribution of physical assault inclination, and to a lesser extent psychological aggression inclination, being much lower than expected. As will be discussed momentarily, in the prevalence results for physical assault, the interaction effect between Condition 5 and gender had an extremely large odds ratio, and after some investigation, this was due to zero men in Condition 5 reporting physical assault inclination. Moreover, a brief glance at Table 4 indicates low *n*'s overall across each condition with respect to physical assault inclination. These issues suggest that such low prevalence rates for physical assault spread out over eight conditions and paired with gender moderation tests required much more power than what Study 1 offers. One possible way to address this issue is to supplement the findings (in

post-hoc analyses) based on the eight-condition system with a consolidated system, whereby the eight conditions were divided into just two higher-order categories (i.e., high URE and low URE). This simplified system allows me to still conduct hypothesis testing, but in a much more simplified design and with increased power. I refer to this alternative approach, as noted in **Table 5**, as the Simplified URE Categories.

Table 5

Original Experimental Conditions and the Simplified URE Categorization of the Conditions

	Positive Externalities	Exchange Benefits	Personal Cost	Simplified URE Category
Condition 1	High	High	High	High URE
Condition 2	Low	High	High	High URE
Condition 3	High	Low	High	High URE
Condition 4	High	High	Low	High URE
Condition 5	High	Low	Low	Low URE
Condition 6	Low	Low	High	Low URE
Condition 7	Low	High	Low	Low URE
Condition 8	Low	Low	Low	Low URE

With the Simplified URE Categories, I analyzed differences regarding prevalence of psychological aggression and physical assault across only two conditions of URE (high and low). High versus low URE categories were constructed from the original 8 categories this way: conditions that had at least two of three components manipulated to be "high" (i.e., Conditions 1-4) were coded into the "high URE" category and conditions which had at least two of the three URE components (e.g., Conditions 5-8) manipulated to be "low" were coded into the "low URE" category (see Table 3). The analytic plan was the same when testing the original eight-category system and the simplified system. That is, the logistic

regressions used with the original eight-condition system and simplified-condition system were identical such that both models considered the effects of URE (via the experimental condition), gender, and the interaction between URE and gender on both physical assault and psychological aggression inclination. Further, both models controlled for age given the existing research that IPV perpetration tends to decrease throughout adulthood (Capaldi et al., 2012).

For the remainder of this chapter, I provide findings based on the both the original eight-condition system and simplified-condition systems. Given the post hoc nature of the simplified category system, the simplified results could have been presented after the results for the original eight categories. The decision was made to present the results for the two category systems together because it made it easier to follow and compare the findings. See **Table 6** and **Table 7** for descriptive statistics for psychological aggression and physical assault prevalence using the simplified conditions (i.e., high versus low URE).

Validity Checks

Realism

Eighty percent (80%) of respondents reported at least being able to "moderately imagine themselves" in the scenario, while 20% reported having or "somewhat" having a hard time imagining themselves in this scenario. A one-way ANOVA revealed that mean realism scores across conditions were not significantly different from each other ($p > .05$). These results indicate support for experimental validity as a majority of participants were able to imagine themselves in the scenario and no condition was considered more or less realistic than another.

Randomization Checks

Chi square tests were not significant ($p > .05$) for the relationship between gender and condition. Thus, there was not significantly more of one gender in any one condition than the others. A one-way ANOVA also showed that age was not significantly different across conditions ($p > .05$).

Table 6

Psychological Aggression Prevalence by Condition (Simplified)

				Psych. Aggression		
Gender				0	1	Total
Men	Condition	Low URE	N	43	74	117
			% within condition	36.8%	63.2%	100%
		High URE	N	39	74	113
			% within condition	34.5%	65.5%	100%
	Total		N	82	148	230
			% within condition	35.7%	64.3%	100%
Women	Condition	Low URE	N	37	93	130
			% within condition	28.5%	71.5%	100%
		High URE	N	24	116	140
			% within condition	17.1%	82.9%	100%
	Total		N	61	209	270
			% within condition	22.6%	77.4%	100%
Total	Condition	Low URE	N	80	167	247
			% within condition	32.4%	67.6%	100%
		High URE	N	63	190	253
			% within condition	24.9%	75.1%	100%
	Total		N	143	357	500
			% within condition	28.6%	71.4%	100%

Note. "0" signifies zero inclinations toward psychological aggression and "1" signifies as least one reported inclination toward psychological aggression.

Table 7

Physical Assault Prevalence by Condition (Simplified)

Gender				Phys. Assault 0	Phys. Assault 1	Total
Men	Condition	Low URE	N	109	8	117
			% within condition	93.2%	6.8%	100.0%
		High URE	N	96	17	113
			% within condition	85.0%	15.0%	100.0%
	Total		N	205	25	230
			% within condition	89.1%	10.9%	100.0%
Women	Condition	Low URE	N	117	13	130
			% within condition	90.0%	10.0%	100.0%
		High URE	N	117	23	140
			% within condition	83.6%	16.4%	100.0%
	Total		N	234	36	270
			% within condition	86.7%	13.3%	100.0%
Total	Condition	Low URE	N	226	21	247
			% within condition	91.5%	8.5%	100.0%
		High URE	N	213	40	253
			% within condition	84.2%	15.8%	100.0%
	Total		N	439	61	500
			% within condition	87.8%	12.2%	100.0%

Note. "0" signifies zero inclinations toward physical assault and "1" signifies as least one reported inclination toward physical assault

Manipulation Check

Both the Entitlement Rage Scale (Pincus et al., 2009) and the anger scale (adapted from Sell et al., 2009) was included to serve as a manipulation check with the assumption that conditions that (theoretically) heightened URE the most should have the highest means of entitlement rage and anger. For both scales, I used a one-way ANOVA to test whether mean entitlement rage and anger scores significantly differed across both the original eight category conditions and the simplified conditions. For both entitlement rage and anger, the

one-way ANOVAs demonstrated that mean entitlement rage scores were not significantly different across either original or simplified conditions ($p > .05$). While this suggests that the manipulation check was not successful, which is entirely possible given some of the limitations of the study (as will be discussed later), it is also equally possible that both the entitlement rage and anger scales were not well suited for the manipulation check of this experiment given that (a) entitlement rage is probably a relatively-stable self-perception that is unlikely to fluctuate based on a hypothetical scenario, and (b) anger is a logical expectation of URE but is not perfectly aligned conceptually with URE. These points will be discussed further in the "Future Directions and Limitations" section of Study 1.

Results for Prevalence

Psychological Aggression

Both H1 and RQ1 can be answered through tests pertaining to psychological aggression. H1 predicted that individuals with greater URE are more likely to perpetuate psychological aggression towards their romantic partner. RQ1 asked whether the effect hypothesized in H1 would be moderated by gender.

To test H1 and answer RQ1, I conducted a logistic regression which required dummy coding the Condition variable given it is a categorical predictor variable with multiple levels. Condition 8 (which had the lowest manipulated URE levels) served as the reference category. This means Condition 1-7 were each compared to Condition 8 to determine if there was a significant difference in psychological aggression inclination between conditions.

In addition, the model also included gender, the interaction between gender and URE, and age. For H1 to be fully supported, psychological aggression inclination in Conditions 1-7 should all be significantly higher than that of Condition 8. For H1 to be

partially supported, any combination of Conditions 1-7 should be significantly higher than Condition 8. In terms of RQ1, any statistically significant interaction terms between gender and condition would indicate at least partial support of a gender moderation effect.

The omnibus test using logistic regression revealed that the original model was statistically significant, $\chi^2(16) = 44.35$, $p < .001$. Upon closer examination of the independent variables (see **Table 8**), only one main effect reached marginal significance.

Table 8

Logistic Regression Results for Psychological Aggression Prevalence with Original Conditions

	B	S.E.	Wald	df	Sig.	Exp(B)
Constant	-.06	.49	.02	1.00	.90	.94
Age	.00	.01	.18	1.00	.68	1.00
Gender	.33	.53	.39	1.00	.53	1.39
Condition			7.12	7.00	.42	
Condition 1	.34	.53	.42	1.00	.52	1.40
Condition 2	1.22	.63	3.75	1.00	.05	3.37
Condition 3	.78	.55	2.07	1.00	.15	2.19
Condition 4	.20	.52	.15	1.00	.70	1.23
Condition 5	.78	.53	2.13	1.00	.14	2.17
Condition 6	.19	.56	.11	1.00	.74	1.21
Condition 7	.87	.54	2.61	1.00	.11	2.40
Condition * Gender			11.25	7.00	.13	
Condition 1 * Gender	1.29	.84	2.37	1.00	.12	3.63
Condition 2 * Gender	.86	.95	.83	1.00	.36	2.37
Condition 3 * Gender	-.76	.75	1.03	1.00	.31	.47
Condition 4 * Gender	1.42	.84	2.91	1.00	.09	4.15
Condition 5 * Gender	.73	.84	.75	1.00	.39	2.07
Condition 6 * Gender	-.05	.75	.00	1.00	.95	.95
Condition 7 * Gender	-.03	.79	.00	1.00	.97	.97

Note. "Condition 8" and "Male" served as the reference category for "Condition" and "Gender", respectively

Specifically, the main effect for Condition 2 (relative to Condition 8) was marginally significant (p = .05). This marginal effect indicates that participants in Condition 2 were 3.37 times more likely to be inclined toward psychological aggression than participants in Condition 8. These results, at best, indicate very weak partial support for H1. Given, however, that only one of the conditions demonstrated a notable difference from the reference category (Condition 8), the overall pattern of results do not support H1. In response to RQ1, the results indicate that gender did not moderate the link between URE and violent psychological aggression.

When conditions were collapsed into the Simplified URE Categories (see Table 9), omnibus testing indicated a significant model ($\chi^2(4) = 15.46$, $p < .01$), but upon examination, no main effects or interaction terms were significant, thus rejecting H1 and the possibility of a moderating gender effect for H1 (RQ1).

Table 9

Logistic Regression Results for Psychological Aggression Prevalence with Simplified URE Conditions

	B	S.E.	Wald	df	Sig.	Exp(B)
Constant	.41	.52	.62	1.00	.43	1.51
Age	.00	.01	.01	1.00	.92	1.00
URE Condition	.10	.28	.13	1.00	.72	1.10
Gender	-.18	.62	.08	1.00	.77	.84
URE * Gender	.56	.40	1.89	1.00	.17	1.75

Note. "Low URE" and "Male" served as the reference category for "Condition" and "Gender", respectively

Physical Assault

Both H2 and RQ2 can be answered through tests pertaining to physical assault. H2 predicted that individuals with greater URE are more likely to perpetuate physical assault

towards their romantic partner. RQ2 asked whether the effect hypothesized in H2 would be moderated by gender.

To test H2 and answer RQ2, I conducted a logistic regression where Condition 8 (which had the lowest manipulated URE levels) served as the reference category. This means that, once again, Conditions 1-7 were individually compared to Condition 8 to determine if there was a significant difference in physical assault inclination between conditions. In addition, the model also included gender, the interaction between gender and URE, and age. For H2 to be fully supported, physical assault inclination in Conditions 1-7 should all be significantly higher than that of Condition 8. For H2 to be partially supported, any combination of Conditions 1-7 should be significantly higher than Condition 8. For RQ2, any statistically significant interaction term would indicate that the effect in H2 is at least partially moderated by gender.

The logistic regression for the original model was not statistically significant ($\chi^2(16) = 23.69$; $p > .05$), nor were any main effects or interaction terms (see **Table 10**; all ps $> .05$). These results lead to a rejection of H2 and fail to support a gender moderation effect (RQ2). Of note, the interaction effect between Condition 5 and gender had an extremely large odds ratio, but upon further investigation, this is most likely due to the fact that zero men in Condition 5 reported physical assault inclination.

Once the conditions were collapsed into the Simplified URE Categories, however, the logistic regression was re-run and omnibus testing indicated a statistically significant model, $\chi^2(4) = 10.10$, $p < .05$. The model explained 4% (Nagelkerke R^2) of the variance of physical assault inclination and correctly classified 88% of cases. As shown in **Table 11**, a significant main effect was found for URE condition ($p < .05$) where people in the higher versus lower URE condition were more likely to indicate physical assault inclination. This

result is consistent with H2. **Table 11** also demonstrates a non-significant main effect for gender and age ($p > .05$ for both) and a non-significant interaction effect between URE condition and gender, thus rejecting a gender moderation effect ($p > .05$; RQ2).

Table 10

Logistic Regression Results for Physical Assault Prevalence with Original Conditions

	B	S.E.	Wald	df	Sig.	Exp(B)
Constant	-1.05	.70	2.26	1.00	.13	.35
Age	-.03	.01	2.87	1.00	.09	.98
Gender	-.31	.82	.15	1.00	.70	.73
Condition			5.25	7.00	.63	
Condition 1	-.05	.76	.00	1.00	.95	.95
Condition 2	.54	.74	.53	1.00	.47	1.72
Condition 3	-.83	.91	.83	1.00	.36	.44
Condition 4	.43	.71	.37	1.00	.54	1.54
Condition 5	-19.44	6969.51	.00	1.00	1.00	.00
Condition 6	-.49	.92	.29	1.00	.59	.61
Condition 7	-.90	.91	.98	1.00	.32	.41
Condition * Gender			3.37	7.00	.85	
Condition 1 * Gender	.96	1.06	.83	1.00	.36	2.62
Condition 2 * Gender	-.25	1.07	.05	1.00	.82	.78
Condition 3 * Gender	1.31	1.20	1.19	1.00	.28	3.70
Condition 4 * Gender	-.09	1.06	.01	1.00	.94	.92
Condition 5* Gender	19.99	6969.51	.00	1.00	1.00	481190209.63
Condition 6 * Gender	.19	1.26	.02	1.00	.88	1.21
Condition 7 * Gender	.34	1.32	.07	1.00	.79	1.41

Note. "Condition 8" and "Male" served as the reference category for "Condition" and "Gender", respectively

Table 11

Logistic Regression Results for Physical Assault Prevalence with Simplified URE Conditions

	B	S.E.	Wald	df	Sig.	Exp(B)
Constant	-2.79	.88	9.96	1.00	.00	.06
URE Condition	.89	.45	3.87	1.00	.049	2.43
Age	-.02	.01	2.63	1.00	.11	.98
Gender	.79	1.00	.61	1.00	.43	2.20
URE * Gender	-.33	.59	.32	1.00	.57	.72

Note. "Low URE" and "Male" served as the reference category for "Condition" and "Gender", respectively

Overview of Study 1 Results and Discussion

Psychological Aggression

Results were largely unsupportive of H1. Results for the original eight category system did indicate one marginally-significant difference consistent with H1, such that participants in Condition 2 reported higher psychological aggression inclination compared to participants in Condition 8 (see Table 10). Recall that Condition 8 was manipulated to have the lowest URE. This finding, however, was not accompanied by evidence from other conditions that were predicted to have similar results. Thus, it is possible this one significant difference is based mainly on chance. Moreover, collapsing conditions into Simplified URE Categories also did not yield any support for H1.

In response to RQ2, there was no evidence of a gender-based interaction effect on the link between URE and psychological aggression. Overall, then, the Study 1 results for psychological aggression suggest that URE has little to no effect on psychological aggression. This conclusion is tentative at this time, given that this is the first test of URE on psychological aggression.

Physical Assault

Results demonstrated partial support for H2 which predicted that individuals with greater URE would be more likely to perpetuate physical assault towards their romantic partner. When analysis was conducted for the original eight-category model, there was no supporting evidence for H2. However, when URE was collapsed into the Simplified URE Categories ("high" and "low"), results suggested that participants were 2.4 times more likely to be inclined toward physical assault perpetration when they were in the high versus low URE conditions. It is possible that the discrepancy in results between the original and simplified models—whereby a significant effect only emerged in the simplified category system—is attributable to a lack of power in the original eight-category test. Still, although the results for the simplified model are intriguing and encouraging, they must be interpreted with caution, particularly given the simplified model structure was developed in a post hoc fashion.

In terms of RQ2, which asked whether the effects of URE on physical assault would be moderated by gender, both models (i.e., original and simplified) indicated no evidence for an interaction effect. Yet, like the interpretation for the results of psychological aggression above, further testing is warranted to be confident in these results.

Limitations and Future Research

The first important limitation to note is that the manipulation check for the experiment did not yield evidence that URE was successfully manipulated across the eight conditions. While the experiment's goal was to manipulate URE, this was a difficult task to evaluate given that URE is a novel concept proposed only in this dissertation. In efforts to approximate differing levels of URE for the manipulation check, I utilized two complimentary scales that measured entitlement rage and anger. Tests, however, detected no

significant differences across the conditions for entitlement rage nor anger. The lack of entitlement and anger differences across conditions could suggest that URE was not successfully manipulated in this study. This is possible for two reasons. First, a vignette study is highly unlikely to be equivalent to real-life circumstances and, thus, one's real-life entitlement (i.e., their existing entitlement levels coming into the study) may not be easily overridden by hypothetical relationship dynamics. Secondly, the scenario used in the study might not have been sufficiently anger-provoking for the high versus low levels of URE to be salient to participants' behavior. In other words, even when URE was manipulated to be high, the hypothetical nature of the study limited how much anger any participant might feel.

However, another interpretation for the failed manipulation check could be that entitlement rage and anger were not appropriate constructs to approximate URE. While there is conceptual similarity, URE remains a qualitatively different concept than both entitlement rage and anger. While URE is something that fluctuates depending on the specific relational experiences and perceptions an individual has regarding their partner, entitlement rage is likely to be a relatively stable quality of an individual in relation to the world as a whole (as opposed to a specific partner). Although anger was assessed as state-based, which seemingly makes it more likely to be sensitive to the URE manipulation, it is possible within a VET framework that URE can be high while anger is not. Thus, while one might logically expect anger to be heightened with increased URE, this need not be the case. Anger, for instance, is theorized to be a likely outcome of URE, but anger is not a necessary condition for URE to exist. In sum, then, it remains possible that the manipulation used in this study was unsuccessful. It also remains plausible that entitlement rage and anger were not ideal

variables for the manipulation check. Further research on the proper manipulation check variables for the scenarios developed herein would be beneficial.

As mentioned above, another limitation to this study was that the distribution of physical assault inclination was extremely low when compared to physical assault prevalence in community samples. For instance, Smith et al. (2018) reports lifetime physical assault prevalence rates of about 31% total for both men and women using a nationally representative sample while physical assault inclination in this study (which should arguably be higher than actual incidence rates) was only 12%. Similarly, psychological aggression inclination prevalence was also lower than expected. For Study 1, the prevalence rate was 72% across men and women, a 7% decrease compared to the 79% psychological prevalence rate in Straus et al. (1996)'s sample. The lowered rates for both physical assault and psychological aggression suggest that the transgression in the experimental scenario was not severe enough, particularly with regard to physical assault. Alternatively, it is plausible that social desirability plays a larger role in studies like the current one where participants are reporting *hypothetical inclination* to engage in physical assault and psychological aggression. Reporting on actual past behavior, while also potentially subject to social desirability bias, might not be quite as susceptible.

Another important limitation to note was the sheer number of conditions, which might have left this study underpowered to detect small effects. In retrospect, given that this was an initial test of URE, different choices in study design might have been warranted in the interest of increased power. With eight conditions, and interaction effects, a larger sample size would have been beneficial. Alternatively, the same sample size might have been better utilized with fewer conditions (i.e., manipulating just one or two variables instead of three). As previously noted, it is also plausible that the scenario used in this study

was too tepid to elicit anger and make URE salient to behavioral intentions. In that regard, utilizing alternative partner offenses (i.e., other than the office party scenario) could been useful. A final limitation of note concerned the gender interaction effects, which were confined to only male and female identifying genders. With a larger or more purposive sample, future research can speak to the effects of URE on IPV with regard to other gender identities as well.

In the interest of future research, it is also important for studies to move beyond hypothetical scenarios to examine actual relational experiences. Reporting on behavior in actual relationships overcomes some of the limitations of the current experimental study, such as failed manipulation checks, scenarios that are not anger inducing enough, or suppressed power due to too many conditions. Reporting on actual relational experience might also yield a more meaningful and consequential assessment of URE (relative to a manipulated URE level based on experimental condition). Additional advantages of studying actual relational experiences also come from more meaningful assessments of the VET constructs. Exploring actual relational experiences, for instance, enables assessment of past behaviors indicative of physical assault and psychological aggression as opposed to just inclination toward physical assault and psychological aggression.

Studies of actual behavior also enable more sophisticated tests of physical assault and psychological aggression. In Study 1, for instance, the nature of the measurement only enabled me to test prevalence of physical assault and psychological aggression. A study of actual behavior, however, enables tests of additional dimensions beyond prevalence, such as *frequency* and *severity* of violence. In the next chapter, I describe Study 2, which addressed some of the limitations that arose in Study 1 by implementing a design that examines

participants' reports on their actual romantic relationships, including past behaviors of physical assault and psychological aggression within those relationships.

Chapter 5: Study 2 Methodology

Purpose and Procedure

The main purpose of Study 2 was to further examine the fundamental propositions of VET. Whereas Study 1 tested aspects of VET through an experiment that employed hypothetical scenarios, Study 2 surveyed adults regarding their existing romantic relationships. Individuals who were either married or in a civil union were recruited through the crowd sourcing website, Prolific.co, and given an approximately 20-minute survey that asked a series of questions about their current romantic relationship. The survey solicited responses about their perceptions and behaviors regarding the relationship. The survey was created using the Qualtrics platform. Participants received $3.17 for completing the survey. This study was approved by the Human Subject Review Board at the University of California, Santa Barbara.

Participants

A total of 529 participants began the study. Participants were included in analyses if they completed over 70% of the survey, passed a data quality check (based on an open response item; see measures), and identified as either male or female. This resulted in a total of 508 participants included in analyses. Participants ranged in age from 20-75 years (M = 40.59, SD = 11.13), with 48% identifying as female and 52% as male. Participants were free to report multiple ethnic and racial identities. A majority (80%) identified as White or Caucasian, 13% as Black or African American, 5% as Asian or Asian American, 4% as Hispanic or Latino/a/x, 2% as Multiracial. Less than one percent identified as Indigenous, Native American or Alaska Native, Middle Eastern or North African, or preferred to self-describe. There were no participants who selected “Native Hawaiian or Other Pacific Islander” or “prefer not to answer” as a response option. Ninety-two percent of participants

identified as heterosexual, 4% as bisexual, 1% as gay, and 1% as lesbian. Less than 1% of participants identified as queer, pansexual, asexual, or preferred to self-describe.

Measures

See Appendix B for the full survey used in Study 2.

URE

URE (M = -1.22, SD = 4.65) was calculated through the formula described in Chapter 2 and reproduced here:

$$URE = [(Positive\ Externalities_P - Positive\ Externalities_S) + [(Exchange\ Benefits_S * Personal\ Cost_S) - (Exchange\ Benefits_P * Personal\ Cost_P)].$$

Table 12

Descriptive Statistics for URE by Gender

Gender	N	Minimum	Maximum	Mean	SD
Men	266	-19.96	14.01	-1.44	4.87
Women	242	-16.99	10.54	-.96	4.40
Total	508	-19.96	14.01	-1.21	4.65

The individual variables within the above formula were measured using the measures described next.

Positive Externalities. Positive externalities are traits that, when expressed in behavior, benefit another individual at no cost to oneself. Positive externalities are conceptually similar to *mate value*, which is "roughly, a person's overall desirability to their pool of potential mates" (Conroy-Beam et al., 2016, p. 2) based on their desirable traits (Buss, 1989; Conroy-Beam et al., 2016). Thus, positive externalities were measured through partner, self, and ideal partner mate value measures adapted from a scale developed by Conroy-Beam (in prep). This measure assessed 15 dimensions of mate value traits,

influenced in part by the mate preference questionnaires from Hill (1945) and Buss (1980), using 2 items for each dimension (30 items total). In the current study, I employed a single item to assess each of the 15 dimensions (15 items total) in efforts to reduce the potential for response fatigue among the respondents. Consider that participants were asked to complete the items three times—once each for self, partner, and the ideal partner. Thus, the single-item strategy keeps the total survey items for positive externalities down to 45 (instead of 90).

The items I selected for each dimension were those I considered to use commonly-understood language. For example, I retained "how often should your ideal romantic partner laugh?" over "how comical should your ideal romantic partner be?" The one exception I made concerned the items assessing "attractiveness of face" and "attractiveness of body." For these items, I combined these concepts to create a new item that instead asks about "physical attractiveness."

Mate values were calculated through the same three-step process described by Conroy-Beam et al. (2016). In this process, Conroy-Beam et al. used a heterosexual sample to compute mate value for the participant and the participant's partner by calculating the Euclidean distance between the participant or the participant's partner and the average preferred partner traits as reported by the opposite sex of the person being evaluated. For example, a female participant's mate value is calculated by comparing her traits to the average preferred partner traits as reported by *males.* If the Euclidean distance between this female individual's traits and the average preferred female partner traits was short, then this individual would be considered to have relatively high mate value. Thus, a smaller mate value number (i.e., shorter distance) indicates a *higher* mate value for the individual.

Unfortunately, there is no existing literature on mate value calculations with Euclidean distances for non-heterosexual participants. As my sample of non-heterosexual participants was small, I opted to adjust the strategy only for gay and lesbian identifying participants. For participants that identified their sexual orientation as gay, their traits were compared to the traits of the ideal male partner according to other participants who self-identified as gay. A similar strategy was employed with participants who identified their sexual orientation as lesbian where their mate value calculation took into account the ideal female partner preferences according to other participants who identified as lesbian. Although the strategy just described for mate value calculations has not been previously used, I deemed it appropriate because it maximizes participant inclusivity. Given the newness of this strategy, I ran the analyses testing the hypotheses and research questions both with and without LGBTQ+ identifying participants. Ultimately, analyses indicated that the results were nearly identical for samples that included or did not include LGBTQ+ participants. Thus, the final tests reported in this dissertation include participants identifying as LGBTQ+.

Table 13

Descriptive Statistics for Positive Externalities by Gender

Gender		N	Minimum	Maximum	Mean	SD
Men	Mate value (self)	266	3.13	18.29	8.37	2.96
	Mate value (partner)	266	2.72	17.41	7.92	2.62
Women	Mate value (self)	242	3.25	20.76	8.76	2.85
	Mate value (partner)	242	3.16	18.05	8.41	2.79
Total	Mate value (self)	508	3.13	20.76	8.56	2.91
	Mate value (partner)	508	2.72	18.05	8.15	2.71

In accordance with the URE formula, the positive externalities of the participant (i.e., their mate value score; $M = 8.56$, $SD = 2.91$) was subtracted from their partner's positive

externalities (i.e., their partner's mate value score; $M = 8.15$, $SD = 2.71$) so that a positive value indicates a discrepancy where the participant is higher than their partner in mate value. Of note, participants' mate values were, on average, higher than their partners'. See **Table 13** for the descriptive statistics of positive externalities.

Social Exchange. Social exchange is an act that benefits another individual at a cost to oneself (Tooby & Cosmides, 1996). Costs can be any expenditure of time, energy or resources from an individual to benefit another. In the context of romantic relationships, social exchange aligns with the concept of relationship maintenance. Relationship maintenance is defined by Canary and Stafford (1992) as the "actions and activities used to sustain desired relational definitions" (p. 5), thus implying a sense of investment on the part of the individual to benefit their partner. Consequently, social exchange for both the participant and the participant's partner was measured through a modified version of Stafford's (2011) *Relational Maintenance Behavior Measure Scale*. For space considerations, I used the highest loading item from Stafford's (2011) reported confirmatory factor analysis of each of the following six subscales: positivity (e.g., "acts positively"), understanding (e.g., "is understanding"), self-disclosure (e.g., "talks about his/her fears"), assurances (e.g., "talks about future events (e.g., having children, or anniversaries, or retirement, etc.)"), tasks (e.g., "shares in the joint responsibilities that face us"), and networks (e.g., "includes our friends in our activities"). As social exchange also encompasses the idea of shared resources, I developed one additional item to measure financial contribution (e.g., "contributes financially to our relationship"). Each item was written twice to capture both the participant's and the participant's partner's behavior so that participants answered a total of 14 questions (7 for self and 7 for partner social exchange). Participants responded to each item using a Likert-type scale ranging from 1 ("strongly

disagree") to 5 ("strongly agree"). A composite score for social exchange was constructed and entered into the URE equation for both the participant (α = .71, *M* = 5.77, *SD* = .78) and the participant's partner (α = .79, *M* = 5.64, *SD* = .95).

Table 14

Descriptive Statistics for Social Exchange by Gender

Gender		N	Minimum	Maximum	Mean	SD
Men	Social Exchange (partner)	266	1.86	7.00	5.70	.95
	Social Exchange (self)	266	2.14	7.00	5.82	.76
Women	Social Exchange (partner)	242	2.00	7.00	5.58	.95
	Social Exchange (self)	242	2.86	7.00	5.72	.80
Total	Social Exchange (partner)	508	1.86	7.00	5.64	.95
	Social Exchange (self)	508	2.14	7.00	5.77	.78

Personal Cost. As there was no existing measure for the personal cost of social exchange in a relationship, I created a scale composed of six items each for both the participant and the participant's partner. Example items for the scale included "In general, it is easy (i.e., comes at little personal cost) for [me/my partner] to contribute financially to our relationship" and "In general, it is easy (i.e., comes at little personal cost) for [me/my partner] to invest time into our relationship." A composite score was created for both the participant (α = .74, *M* = 2.16, *SD* = .74) and the participant's partner (α = .77, *M* = 2.36, *SD* = .82) to be substituted into the URE formula.

Table 15

Descriptive Statistics for Personal Cost by Gender

Gender		N	Minimum	Maximum	Mean	SD
Men	Personal Cost (partner)	266	1.00	5.17	2.36	.80
	Personal Cost (self)	266	1.00	5.00	2.13	.78
Women	Personal Cost (partner)	242	1.00	4.67	2.36	.84
	Personal Cost (self)	242	1.00	4.50	2.18	.71
Total	Personal Cost (partner)	508	1.00	5.17	2.36	.82
	Personal Cost (self)	508	1.00	5.00	2.16	.74

Conflict Tactics Scale

The CTS2 (Strauss et al., 1996) was used to measure the perpetration of the same two forms of IPV from Study 1—psychological aggression and physical assault. All questions related to the scales of psychological aggression ($\alpha = .77$, $M = 2.11$, $SD = .96$) and physical assault ($\alpha = .88$, $M = 1.22$, $SD = .58$) were used. As mentioned previously in Chapters 3 and 4, the CTS2 has Level 1 and Level 2 subgroupings of each type of violence so that it differentiates between more dangerous forms of violence (i.e., Level 2) and less severe forms of violence (i.e., Level 1).

There was a total of 8 psychological aggression items that were divided equally between measuring Level 1 and Level 2 psychological aggression. Example items for Level 1 psychological aggression include “I insulted or swore at my partner” and “I shouted or yelled at my partner.” Examples of Level 2 psychological aggression include “I destroyed something belonging to my partner” and “Threatened to hit or throw something at my partner.” The physical assault scale consisted of 12 items, 5 for Level 1 physical assault and 7 for Level 2 physical assault. Example items for Level 1 physical assault include “I grabbed my partner” and “I pushed or shoved my partner” and, for Level 2, “I choked my partner” and “I beat up my partner.”

For both psychological aggression and physical assault scales, participants read each item and were asked to assess the frequency of each behavior toward their romantic partner. Participants selected whether the behavior occurred “once in the past year”, “twice in the past year”, “3-5 times in the past year”, “6-10 times in the past year”, “11-20 times in the past year”, “more than 20 times in the past year”, “not in the past year but it did happen before”, or “this has never happened.”

Textbox

An open-ended response box was provided asking if there is anything else the participant would like to add. This question was provided to filter out any potential nonsensical responses from bots and was scanned for any important themes that stood out to participants.

Chapter 6: Study 2 Results and Discussion

Analysis Plan and Descriptive Statistics

Similar to Study 1, I conducted analyses to examine whether greater URE made it more likely to perpetuate physical assault (H2) or psychological aggression (H1) towards a romantic partner and whether either of these effects would be moderated by gender (RQ1 and RQ2, respectively). While in Study 1 I operationalized physical assault and psychological aggression by *prevalence*, for Study 2, I added two supplementary forms of analysis so that the *annual frequency* (i.e., the total number of violent acts in the last year) and *severity (*i.e., the distinction between levels of violence that would pose a greater risk of injury/harm) of each form of violence was also taken into account. Both of these supplementary forms of analyses are described in Straus (2004). In Study 1, annual frequency and violence severity were not possible to measure given the hypothetical nature of the study and the categorical classification of URE (via experimental condition), respectively. However, since Study 2 considers past behavior and has a continuous outcome measure for URE, both annual frequency and violence severity became possible measures to add to analyses for further nuance.

Thus, for Study 2, I scored the CTS2 in three different ways to capture the (a) prevalence, (b) severity, and (c) annual frequency of psychological aggression and physical assault in the study's sample. Each form is described in detail momentarily. Each type of scoring necessitated a different statistical test, yet all models run for this study considered the effects of URE, gender, and the interaction between URE and gender on both physical assault and psychological aggression. Further, all models controlled for age given the existing research that IPV perpetration tends to decrease throughout adulthood (Capaldi et

al., 2012). **Table 16** provides descriptive statistics for psychological aggression and physical assault by severity level and gender.

Table 16

Descriptive Statistics for Physical Assault and Psychological Aggression by Gender

Gender		N	Minimum	Maximum	Mean	SD
Man	Psych. Aggression (L1)	266	1.00	7.50	2.76	1.43
	Psych. Aggression (L2)	266	1.00	6.00	1.31	.68
	Phys. Assault (L1)	266	1.00	6.60	1.38	.88
	Phys. Assault (L2)	266	1.00	6.29	1.14	.57
Woman	Psych. Aggression (L1)	242	1.00	7.25	3.06	1.54
	Psych. Aggression (L2)	242	1.00	5.75	1.35	.73
	Phys. Assault (L1)	242	1.00	5.80	1.33	.73
	Phys. Assault (L2)	242	1.00	4.43	1.10	.37
Total	Psych. Aggression (L1)	508	1.00	7.50	2.90	1.49
	Psych. Aggression (L2)	508	1.00	6.00	1.33	.70
	Phys. Assault (L1)	508	1.00	6.60	1.36	.81
	Phys. Assault (L2)	508	1.00	6.29	1.12	.49

Prevalence

Prevalence was coded in the same way described in Study 1. A prevalence score recodes violence occurrence as a binary response, where no violence occurrence is coded as "0" and violence occurrence is coded as "1" to indicate what percent of the group engaged in one or more acts of violence during a given period (either in the past year or in the entire course of the relationship). Eighty-nine percent (89%) of participants indicated they had engaged in at least one act of psychological aggression during the course of their relationship, while 75% indicated they had perpetrated at least one act of psychological aggression in the last year. As a significantly larger number of participants indicated engaging in at least one act of psychological aggression during the course of their relationship, only acts of psychological aggression occurring in the past year were

considered in all three analyses of psychological aggression, echoing the default referent period recommended by Straus (2004).

Physical assault, however, was much rarer in the sample: 22% reported physical assault perpetration in the last year and 34% reported physical assault perpetration ever in the relationship. Consequently, acts of physical assault perpetrated during the entire course of the relationship were included in the calculation of prevalence. Given the dichotomous nature of the prevalence variable, logistic regression was used to test the effects of URE (H1/H2) and gender (RQ1/RQ2) on prevalence.

Prevalence with Severity

Prevalence with severity was coded in a manner that builds upon the strategy above by calculating prevalence with distinction to varying levels of violence severity. This results in violence prevalence coded into one of three mutually exclusive categories: "1" is coded as no violence prevalence, "2" is coded as Level 1 violence prevalence only, and "3" is coded as Level 2 violence prevalence. As done with the first scoring method, prevalence for psychological aggression was considered as one or more acts of psychological aggression in the past year, and prevalence for physical assault was considered as one or more acts of physical assault ever in the course of the relationship. Results demonstrated that 25% of participants did not engage in any psychological acts of aggression in the last year, 57% committed Level 1 acts of psychological aggression only, and 19% inflicted Level 2 acts of psychological aggression. For physical assault, 66% of participants reported no physical assault ever, 21% reported Level 1 physical assault perpetration, and 14% reported Level 2 physical assault perpetration. Analysis was completed using a multinomial logistic regression where the "no violence" subgroup served as the reference category. A follow-up

multinomial regression test was also conducted to differentiate between Level 1 and Level 2 violence, whereby Level 1 served as the reference category.

Annual Frequency

The final scoring method of the CTS2 was designed to reflect the annual frequency of violence in the last year for both psychological aggression and physical assault. This continuous score was calculated through two important steps. First, all violence response options were recoded to reflect the number of acts of violence indicated for that behavior. For example, if a participant indicated that a particular behavior did not happen before or did not happen in the last year, that item was coded as "0." Response options that indicated that the behavior happened once or twice were coded as "1" and "2", respectively. As recommended by Straus (2004), I used the midpoint for all response options that included a range. For example, the response item that a particular behavior happened 3-6 times in the last year was coded as "4." Once all values were recoded, the items were then summed to give an annual frequency score for psychological aggression (M = 11.38, SD = 16.77) and physical assault (M = 3.72, SD = 14.75). This yielded continuous outcome measures that made linear regression appropriate for analysis.

Results for Prevalence

Psychological Aggression Prevalence

As a reminder, H1 predicted that individuals with greater URE are more likely to perpetuate psychological aggression towards their romantic partner. RQ1 asked whether the effect hypothesized in H1 would be moderated by gender.

To test H1 and answer RQ1, I conducted a logistic regression where psychological aggression prevalence in the last year served as a dichotomous outcome variable (either "no psychological aggression" or "psychological aggression prevalence"). For psychological

aggression, the omnibus test using logistic regression revealed that the model was not statistically significant, $\chi^2(4) = 4.53$, $p > .05$, rejecting H1 and indicating no gender moderation effect (RQ1). Upon closer examination of the independent variables, only the main effect of gender is marginally significant ($p = .06$). This marginal effect indicates that women were 48% more likely than men to report engaging in acts of psychological aggression. While potentially informative, this finding must be interpreted with caution given not only its marginal significant but also the aforementioned non-significant omnibus test.

Table 17

Logistic Regression Results for Psychological Aggression Prevalence

	B	S.E.	Wald	df	Sig.	Exp(B)
Constant	1.29	.40	10.45	1.00	.00	3.64
URE	-.01	.07	.01	1.00	.91	.99
Age	-.01	.01	.92	1.00	.34	.99
Gender	.39	.21	3.53	1.00	.06	1.48
URE * Gender	.00	.05	.01	1.00	.92	1.00

Physical Assault Prevalence

As a reminder, H2 predicted that individuals with greater URE are more likely to perpetuate physical assault towards their romantic partner. RQ2 asked whether the effect hypothesized in H2 would be moderated by gender.

To test H2 and answer RQ2, I conducted a logistic regression where physical assault prevalence (ever) served as a dichotomous outcome variable (either "no physical assault" or "physical assault prevalence"). The logistic regression model was statistically significant, $\chi^2(4) = 21.54$, $p < .001$. Overall, the model explained 6% (Nagelkerke R^2) of the variance in physical assault perpetration and correctly classified 66% of cases. As shown in Table 6,

there were significant main effects found for URE (H2; $p < .01$) as well as the covariate age ($p < .01$), but not gender ($p > .05$). In addition, as discussed momentarily with regarding to RQ2, a significant URE x gender interaction was found ($p < .01$).

Table 18

Logistic Regression Results for Physical Assault Prevalence

	B	S.E.	Wald	df	Sig.	Exp(B)
Constant	.66	.40	2.75	1.00	.10	1.93
URE	.18	.06	8.34	1.00	.00	1.20
Age	-.03	.01	11.56	1.00	.00	.97
Gender	-.05	.19	.08	1.00	.78	.95
URE * Gender	-.12	.04	8.41	1.00	.00	.88

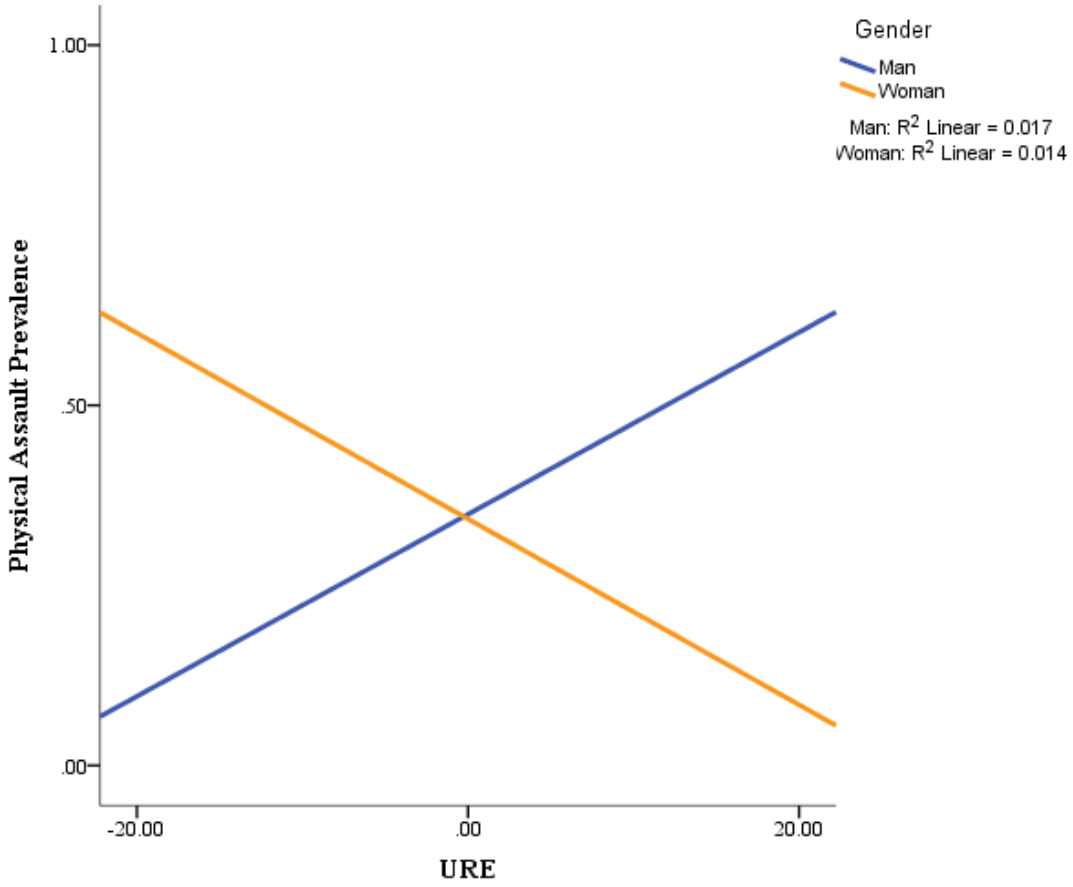
The significant main effect for URE provides support for H2. The main effect for the covariate age suggests that the likelihood of physical assault perpetration is 3% less likely for every one unit increase in age. Although the main effect for URE was significant and suggests that URE is positively related to physical assault prevalence (H2), the significant interaction term between URE and gender, which was the focus of RQ2, complicates interpretation of the URE main effect. Indeed, it is typically not recommended to interpret main effects if there is an interaction effect that runs in two opposite directions (Rosenthal & Rosnow, 1991), which, as shown in Figure 1, is the case here.

As can be seen in Figure 1, men with increased URE were more likely to engage in physical assault perpetration. Women, contrastingly, were *less* likely to engage in physical assault as their URE increases. Thus, there was only *partial support* for H2 which predicted that individuals with greater URE would be more likely to perpetuate physical assault towards their romantic partner. While an elevated level of URE does appear to make physical assault perpetration more likely for men, it unexpectedly, appears to make physical

assault perpetration less likely for women. In response to RQ2, then, gender appears to be an important moderator of URE's effect on physical assault perpetration.

Figure 1

Interaction between URE and Gender on Physical Assault Prevalence



Results for Prevalence and Severity

Psychological Aggression Prevalence and Severity

The multinomial logistic regression for psychological aggression in the last year demonstrated that model fit improved with the addition of the predictor variables compared to the model containing only the intercept, $\chi^2(8) = 27.24$, Nagelkerke $R^2 = .06$, $p < .01$. Parameter estimates (see **Table 19**) reveal that, contrary to hypotheses, neither URE nor a gender moderation effect (RQ1) was significant for L1 or L2 psychological aggression ($p >$

.05). Age and gender, however, demonstrated significant main effects for only Level 2 psychological aggression. For every increased year in age, participants were 5% less likely to engage in Level 2 psychological aggression. Further, females were 1.75 times more likely than males to carry out acts of more severe (i.e., level 2) psychological aggression. No predictors were significant for Level 1 psychological aggression.

However, these results do not provide a complete picture of gender or age effects on psychological aggression. For example, while gender was a significant main effect between the no psychological aggression group and the Level 2 psychological aggression group, I cannot yet say whether there is a main effect of gender if I were to compare the Level 1 and Level 2 psychological aggression groups directly to each other. If, for instance, the main effect of gender is not statistically significant between groups characterized by Level 1 and Level 2 psychological aggression, then results would suggest that dividing psychological aggression inclination into multiple levels of severity does not add further nuance. If, however, the main effect of gender was statistically significant between groups characterized by Level 1 and Level 2 psychological aggression, then I could more confidently report that results indicated that females were more likely than males to instigate Level 2 psychological aggression, but not Level 1. Thus, to round out this set of analyses and investigate whether there were any differences between Level 1 and Level 2 psychological aggression, a follow up multinomial regression was conducted with Level 2 psychological aggression serving as the reference category.

The omnibus test for the follow up multinomial regression was identical to the first since only the reference category changed; however, parameter estimates (see **Table 20**) confirmed that Level 2 psychological aggression significantly differed from both the no psychological aggression *and* Level 1 psychological aggression groups in terms of age ($p <$

.001). For every increased year in age, participants were also 5% less likely to engage in Level 2 psychological aggression than they were Level 1 psychological aggression. However, the gender effect was not significantly different from Level 1 to Level 2 psychological aggression, despite it being significantly different between the Level 2 and no psychological aggression group. Taken together, the results of both multinomial regressions for psychological aggression suggests that gender is not a reliable indicator. While it is possible that there is a gender difference in psychological aggression perpetration based on the significant difference found between the Level 2 and no psychological aggression groups, it is unclear how robust this finding is given the non-significant difference found between the Level 1 and Level 2 severity groups. Overall, then, the follow-up results suggest that the potential gender effect must be interpreted with extreme caution.

Table 19

Multinomial Logistic Regression Results for Psychological Aggression Prevalence by Severity

		B	Std. Error	Wald	df	Sig.	Exp(B)	95% CI LL	95% CI UL
2	Intercept	.31	.51	.38	1.00	.54			
	Age	.00	.01	.01	1.00	.91	1.00	.98	1.02
	URE	-.03	.07	.21	1.00	.65	.97	.85	1.11
	Gender	.33	.22	2.27	1.00	.13	1.39	.91	2.13
	URE * Gender	.03	.05	.29	1.00	.59	1.03	.93	1.13
3	Intercept	.89	.72	1.51	1.00	.22			
	Age	-.05	.02	12.00	1.00	.00	.95	.92	.98
	URE	.06	.09	.48	1.00	.49	1.07	.89	1.28
	Gender	.56	.28	3.92	1.00	.048	1.75	1.01	3.04
	URE * Gender	-.05	.06	.80	1.00	.37	.95	.84	1.07

1 “No psychological aggression in the last year” 2 “Level 1 psychological aggression only” 3 “Level 2 psychological aggression.” The reference category is: 1.

Table 20

Multinomial Logistic Regression Results for Psychological Aggression Prevalence by Severity (Follow up)

		B	Std. Error	Wald	df	Sig.	Exp(B)	95% CI LL	95% CI UL
1	Intercept	-.89	.72	1.51	1.00	.22			
	Age	.05	.02	12.00	1.00	.00	1.05	1.02	1.09
	URE	-.06	.09	.48	1.00	.49	.94	.78	1.13
	Gender	-.56	.28	3.92	1.00	.05	.57	.33	.99
	URE * Gender	.05	.06	.80	1.00	.37	1.06	.94	1.19
2	Intercept	-.57	.65	.78	1.00	.38			
	Age	.05	.01	14.87	1.00	.00	1.05	1.03	1.08
	URE	-.10	.08	1.34	1.00	.25	.91	.77	1.07
	Gender	-.23	.25	.88	1.00	.35	.79	.49	1.29
	URE * Gender	.08	.05	2.31	1.00	.13	1.08	.98	1.20

1 “No psychological aggression in the last year” 2 “Level 1 psychological aggression only” 3 “Level 2 psychological aggression.” The reference category is: 3.

Physical Assault Prevalence and Severity

A multinomial logistic regression indicated that model fit improved with the addition of the predictor variables compared to the model containing only the intercept, $\chi^2(8) = 22.66$, Nagelkerke $R^2 = .05$, $p < .05$. Parameter estimates (see **Table 21**) revealed that for Level 1 physical assault perpetration (ever), the main effect of age ($p < .05$) and the interaction between gender and URE were significant ($p < .05$). The main effect of URE was marginally significant ($p = .06$). The results are nearly identical for Level 2 physical assault (ever) with the exception that the main effect of URE reaches significance ($p < .01$), while the main effect of age ($p < .05$) and the interaction between URE and gender ($p < .01$) remain significant.

Table 21

Multinomial Logistic Regression Results for Physical Assault Prevalence by Severity

		B	Std. Error	Wald	df	Sig.	Exp(B)	95% CI LL	95% CI UL
2	Intercept	.17	.58	.09	1.00	.76			
	Age	-.03	.01	7.88	1.00	.01	.97	.95	.99
	URE	.15	.08	3.63	1.00	.06	1.16	1.00	1.34
	Gender	-.04	.23	.03	1.00	.86	.96	.61	1.51
	URE * Gender	-.10	.05	4.15	1.00	.04	.90	.82	1.00
3	Intercept	-.19	.67	.08	1.00	.77			
	Age	-.03	.01	5.69	1.00	.02	.97	.94	.99
	URE	.24	.09	7.52	1.00	.01	1.27	1.07	1.51
	Gender	-.06	.27	.05	1.00	.82	.94	.55	1.60
	URE * Gender	-.15	.06	6.80	1.00	.01	.86	.77	.96

Note. 1 “No physical assault ever” 2 “Level 1 physical assault only” 3 “Level 2 physical assault.” The reference category is: 1.

Likelihood ratios reveal a 3% decrease in both Level 1 and Level 2 physical assault perpetration for every year in age gained. Graphing the interaction effects for both Level 1 and Level 2 physical assault indicated identical trends to those in the previous logistic regression results (see Figure 2 and Figure 3). These results reiterate partial support for H2 and further suggest (in response to RQ2) that increased URE has opposite effects on male and female physical assault perpetration. While males appear more likely to engage in physical assault perpetration as their URE increases, females, unexpectedly, appear less likely to inflict physical assault towards their partner as URE increases. Given the nature of the interaction effect between URE and gender, the main effect of URE on physical assault was not interpreted.

Figure 2

Interaction between URE and Gender by Physical Assault Prevalence and Severity (No violence vs Level 1-only)

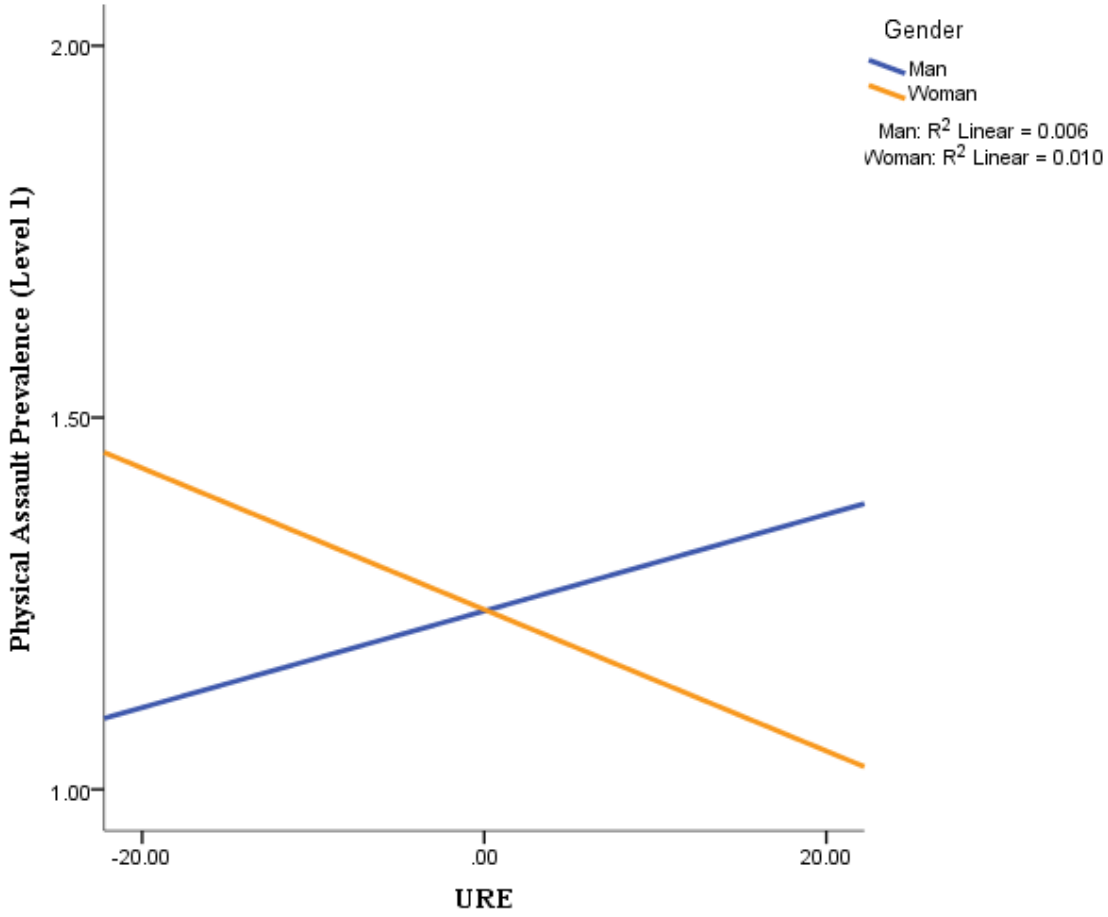
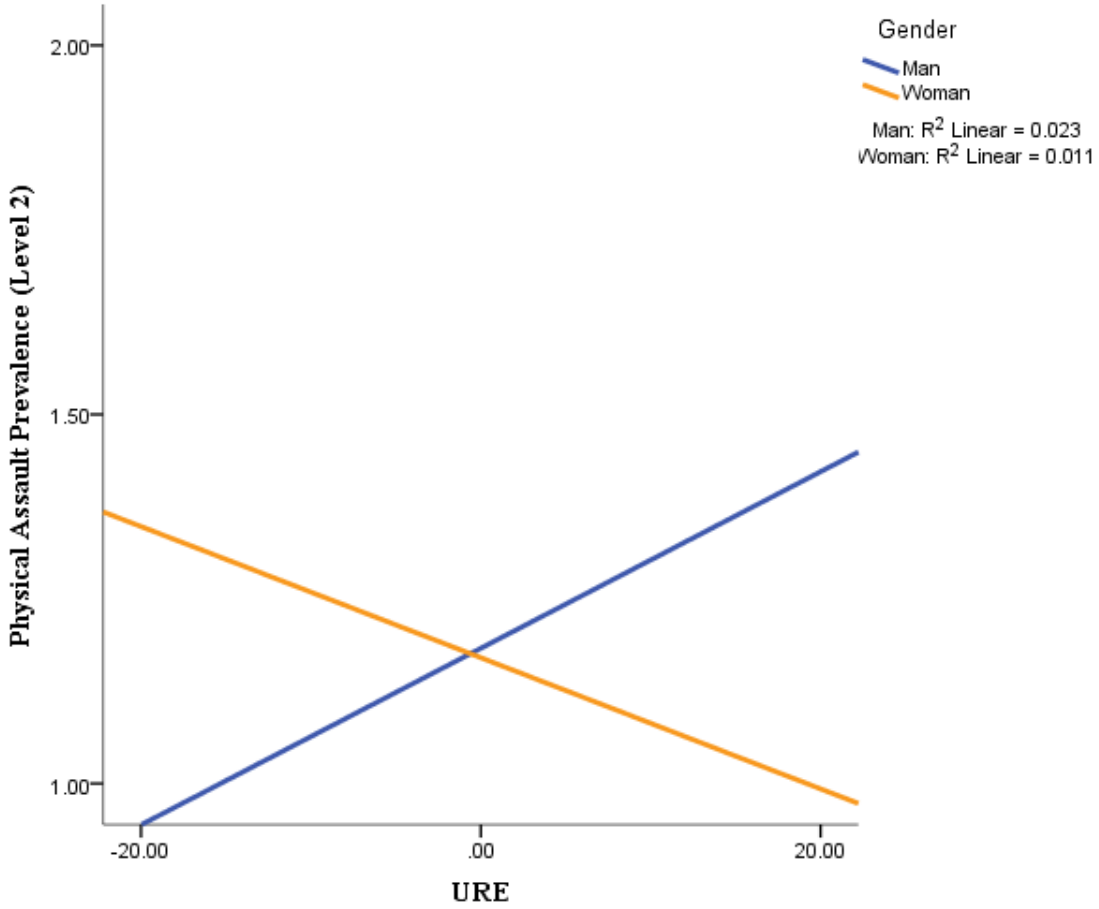


Figure 3

Interaction between URE and Gender by Physical Assault Prevalence and Severity (No violence vs Level 2)



A follow up multinomial regression (see Table 22) where Level 2 physical assault served as the reference category showed no significant difference between Level 1 and Level 2 physical assault in any predictor variables ($p > .05$). Given that the same variables were statistically significant for both Level 1 and Level 2 physical assault when each were compared to the no violence group, and that follow up testing indicated that both Level 1 and Level 2 are statistically equivalent to each other, I suggest that the effects of age, URE, and URE x gender is more generally applied to physical assault prevalence as opposed to a specific level of physical assault severity.

Table 22

Multinomial Logistic Regression Results for Physical Assault Prevalence by Severity (Follow up)

		B	Std. Error	Wald	df	Sig.	Exp(B)	95% CI LL	95% CI UL
1	Intercept	.19	.67	.08	1.00	.77			
	Age	.03	.01	5.69	1.00	.02	1.03	1.01	1.06
	URE	-.24	.09	7.52	1.00	.01	.79	.66	.93
	Gender	.06	.27	.05	1.00	.82	1.06	.63	1.81
	URE * Gender	.15	.06	6.80	1.00	.01	1.16	1.04	1.30
2	Intercept	.37	.80	.21	1.00	.64			
	Age	.00	.02	.00	1.00	.99	1.00	.97	1.03
	URE	-.09	.10	.87	1.00	.35	.91	.75	1.11
	Gender	.02	.32	.01	1.00	.94	1.02	.55	1.90
	URE * Gender	.05	.07	.53	1.00	.47	1.05	.92	1.20

Note. 1 “No physical assault ever” 2 “Level 1 physical assault only” 3 “Level 2 physical assault.” The reference category is: 3.

Results by Annual Frequency

Psychological Aggression Annual Frequency

For psychological aggression, multiple regression analysis indicated a significant model that included the four same independent variables (R^2 =.02, $F(4, 505) = 2.61$, $p <$ .05). Consistent with previous analyses, URE was not a significant predictor of psychological aggression nor was URE moderated by gender. These results lead to a rejection of H1. Moreover, in response to RQ2, there was no apparent gender moderation effect (RQ1). Significant main effects were found for gender ($\beta = .09$, $p < .05$) and age ($\beta = -.09$, $p < .05$). These results indicated that younger participants were more likely to report an increased annual frequency of psychological aggression in the last year. While the robustness of a gender effect was unclear with tests of prevalence, a potential gender effect becomes more apparent with tests of annual frequency. With this form of analysis, women tended to report more acts of psychological aggression than men.

Table 23

Regression Results for Psychological Aggression Annual Frequency

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	*Beta*	*t*	Sig.
(Constant)	12.42	3.59		3.46	.00
Age	-.14	.07	-.10	-2.15	.03
URE	.61	.49	.17	1.24	.22
Gender	3.26	1.49	.10	2.18	.03
URE * Gender	-.35	.32	-.14	-1.07	.28

Physical Assault Annual Frequency

The overall regression model was statistically significant, $F(4, 505) = 4.08$, $p < .01$, $R^2 = .03$. Physical assault in the last year was significantly predicted by age ($\beta = -.12$, $p < .01$), URE ($\beta = .38$, $p < .01$), and the interaction between URE and gender ($\beta = -.32$, $p < .05$). These results converged with those of the preceding analyses in that: (a) the annual frequency of physical assault decreases as participants age, (b) gender was not a significant predictor in the model, (c) the main effect of URE was not interpreted given the direction of the interaction effect, and (d) as URE increases for men, physical assault perpetration increases, while (e) this effect is the opposite for women, such that physical assault *decreases* as URE increases (H2; RQ2). A graph of the interaction is shown in **Figure 4**.

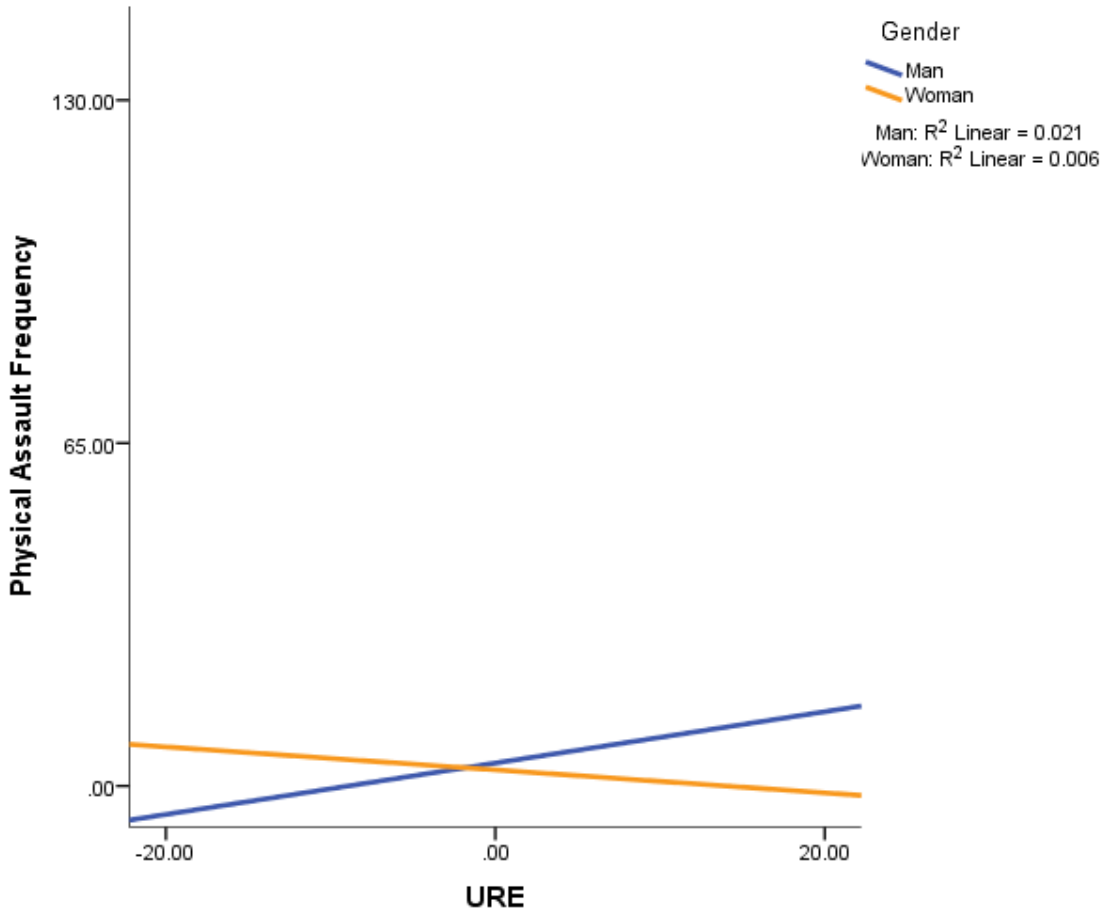
Table 24

Regression Results for Physical Assault Annual Frequency

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	*Beta*	*t*	Sig.
(Constant)	12.05	3.12		3.86	.00
Age	-.16	.06	-.12	-2.69	.01
URE	1.20	.42	.38	2.82	.01
Gender	-1.33	1.30	-.05	-1.03	.30
URE * Gender	-.70	.28	-.33	-2.47	.01

Figure 4

Interaction between URE and Gender on Physical Assault Annual Frequency



Overview of Study 2 Results and Discussion

Psychological Aggression

There was some minor evidence in Study 1 (with regard to H1) suggesting that URE might increase psychological aggression. No such evidence surfaced for Study 2. Across all three analyses, URE was not significantly associated with psychological aggression. Thus, all tests in Study 2 failed to support H1. Further, in response to RQ1, there was no evidence that URE was moderated by gender for psychological aggression. Only two predictors of psychological aggression demonstrated statistical significance in the Study 2 analyses: age and gender.

Age was a predictor of psychological aggression in two of the three analyses. While Study 1 did not find a main effect for age, Study 2 indicated that as participants grow older, they are less likely to engage in Level 2 psychological aggression. Follow-up testing further indicated that as individuals age, they are more likely to engage in Level 1 and simultaneously less likely to engage in Level 2 psychological aggression. These results coincide with Kim et al. (2008) which found in a 10-year longitudinal panel study that men were significantly likely to decrease the severity of psychological aggression over time, although the prevalence rates of psychological aggression remained stable over time, such that at least one incident of psychological aggression occurred during each of their time interval assessments (roughly every two years). The findings from this study together with those from previous literature suggest that psychological aggression prevalence in the form of at least one incident over the course of longer time interval (such as a year or two) is stable and common among most romantic couples; however, as individuals grow older, any incidence of psychological aggression enactment become increasingly likely to be in the less severe category of behavior (i.e., Level 1).

Gender was another significant predictor that emerged in analyses. A gender effect emerged in both tests of prevalence and annual frequency. However, in tests of prevalence, the interpretation of the gender effect was much more ambiguous. Gender was only marginally significant in tests of psychological aggression prevalence (without distinction to severity levels). For tests of prevalence that considered psychological aggression severity, results demonstrated that the gender effect only existed for Level 2 acts of psychological aggression (but not Level 1) when compared to the reference category of no psychological aggression. That is, women were 1.75 times more likely than men to engage in acts like destroying things or threatening to harm their partner, but no difference emerged for less severe acts of psychological aggression such as shouting or swearing at their partner. Follow-up testing, though, found no significant difference in the main effect of gender between Level 1 and Level 2 psychological aggression, indicating that neither men or women are more likely to engage in Level 1 psychological aggression compared to Level 2 psychological aggression (or vice versa). The lack of a significant gender effect between Level 1 and Level 2 psychological aggression perpetration makes interpreting the gender effect unclear. Most likely, then, the finding that women are more likely to perpetrate level 2 psychological aggression is unreliable.

While the gender effect did not clearly emerge through tests of prevalence, the gender effect comes into better focus when considering the results of tests by annual frequency. Tests that considered the annual frequency of psychological aggression indicated that women more frequently engaged in acts of psychological aggression than men, which is compatible with arguments made by family violence researchers (e.g. Straus, 2010) and Johnson's typology (e.g., Johnson, 2008) (as discussed in Chapter 1 and will be further discussed in Chapter 7). These findings also align with research conducted by Muñoz-Rivas

et al. (2007) who found that women (relative to men) more frequently engaged in acts of psychological violence toward their partners. This *could* suggest that the gender effect for psychological prevalence does exist, but it only comes into focus when considering tests of annual frequency. Again, though, it is advisable to treat these gender effects with caution given that they were not found consistently across all models.

Physical Assault

Study 2 offered consistent evidence that URE is significantly associated with physical assault (H2). Yet, in response to RQ2, it appears that the link between URE and physical assault is moderated by gender, such that as URE increases for men, physical assault perpetration increases. This effect is the opposite for women, however, such that as URE increases, physical assault *decreases*.

One possible explanation for the significant moderation effect found in Study 2 regarding physical assault concerns the controversial claim made by gender scholars that women are more likely than men to perpetrate physical assault as a means of self-defense or retaliation. Empirical evidence has both supported (e.g., Kernsmith, 2005; Makepeace, 1986; Ross, 2011) and not supported (e.g., Langhinrichsen-Rohling et al., 2012; Leisring, 2012) the claim that self-defense accounts for a majority of female perpetrated IPV. Part of this is most likely due to self-defense not being clearly defined by some scholars (e.g., Makepeace) or differentiated from retaliation by others (e.g., Harned, 2001). While scholars need to continue to work on better understanding the reasons for the mixed results on female self-defense motivation, the findings from Study 2 supports the idea that heterosexual female IPV perpetration is interconnected to male IPV perpetration.

In other words, female physical assault perpetration might be higher when they have lowered URE because they are retaliating or using self-defense as their primary motive for

physical assault. These women, then, may be perpetrating physical assault against physically-violent male partners (with heightened URE) who initiated violence *first*. Thus, the differing results with regard to RQ2 between Study 1 and Study 2 could be accounted for by considering that the females in Study 2 might be responding to real life circumstances that counteract any main effects of URE on physical assault perpetration.

This interpretation would support the argument made by gender researchers that heterosexual women's physical violence is rarely done in isolation (i.e., without provocation from male violence). Rather, women's physical violence might be predictive of men's physical violence behavior as women's violence behavior is driven by their self-defense/retaliation following a partner's violence. This would indicate that physical assault perpetration is fundamentally different for women than it is for men, and that as a consequence, URE operates in a much more nuanced way for men and women. When we consider relational conditions on the ground, low URE could increase risk of physical assault perpetration by *possibly* increasing risk of IPV victimization. If lower URE does indeed increase risk of IPV victimization, that suggests that at least some of the physical assault that women engage in is not appropriately considered IPV at all, as it is not actually violence. Revisiting the definition of violence in Chapter 1, violence must be essential (Hanby, 2017); therefore, acts of aggression carried out for survival are not considered violence. Moreover, this possibility raises the issue of whether perceptions of lower URE are a direct result of IPV victimization. Perhaps, female survivors of IPV are more likely to internalize violence against them such that they devalue their contributions to their romantic relationship, and as a result have lower URE assessments. As neither study measured IPV victimization, this point can only be investigated through further research.

This rationalization of the interaction effect assumes, however, that heterosexual males who have high URE tend to be in relationships with female partners who have low URE. That is to say, this interpretation assumes romantic partners have opposing URE perceptions where if one believes themselves to be under-benefited in a relationship, the other partner should believe themselves to be over-benefited. There is some evidence from Equity Theory that demonstrates support for this interpretation. Davidson (1984) found a modest, negative correlation (r = -.19) between partner's equity assessments such that if one partner believed themselves to be over-benefited, the other partner tended to believe themselves under-benefited. However, the magnitude of this effect was low, emphasizing the subjectivity of equity assessments and further need for investigation on this topic.

Another possibility could be that low URE for women has the same effect that high URE does for men. Perhaps, while high URE triggers male-perpetrated physical assault through a process steeped in anger and unfulfilled expectations, low URE might alternatively trigger female-perpetrated physical assault through a different set of processes, such as through jealousy or possessiveness. If further evidence supports this second interpretation, then VET would need subsequent revising to account for the cognitive processes that occur under conditions of low URE. This idea will be further expanded upon in the General Discussion (next chapter).

While both interpretations warrant further research, it is possible to interpret the lack of an interaction effect between gender and URE in Study 1 as potential support for the first interpretation that posits low URE in females as an indirect result of female self-defense/retaliation against male intimate partners with high URE. In Study 1, females who were given a hypothetical scenario tended to have heightened physical assault inclination in conditions with elevated URE (see **Table 7**). Thus, Study 1 may be tapping into the main

effects of URE on females through a lens that is less murky than Study 2 given that Study 1 separated participants from any real-life partner or relationship dynamics. In other words, females in Study 1 were responding to an imaginary partner's actions which makes any indication of physical assault inclination a result of URE manipulation rather than self-defense/retaliation.

It is also noteworthy to mention that no significant gender effect for physical assault emerged in any of the tests run in Study 1 or Study 2 which implies that men and women are comparable in their likelihood of enacting physical assault behaviors overall, aligning with arguments from family violence scholars (e.g., Straus, 2010).

In terms of age, it was consistently found in Study 2 to be a significant predictor of physical assault where physical assault perpetration *decreases* with age, supporting previous literature (Capaldi et al., 2012; Kim et al., 2008; Rodridguez et al., 2001). Interestingly, this finding contradicts earlier IPV literature that considered physical assault to inevitably get worse over time (Pagelow, 1981; Stets & Straus, 1989). More generally, the pattern of decreased violence with age is also consistent with the pattern of crime and violence which peaks in adolescence and then steadily declines (Blumstein et al., 1986; Sampson & Laub, 2003; Wiesner et al., 2008). Kim et al. (2008) reported in their 10-year longitudinal study that young couples tended to have higher physical and psychological aggression prevalence through their observed data rather than their self-reported data, suggesting younger individuals do not necessarily view aggressive behaviors as problematic. Rather, it seems, this perspective only emerges with greater maturity. It is also noteworthy that effects for age only emerged in Study 2. Study 1, which used experimental conditions to manipulate URE, did not show an age-based effect on physical assault. I discuss explanations for these differences between Studies 1 and 2 in the next chapter.

Overall, there were stark differences in Study 2 between psychological aggression and physical assault perpetration. Firstly, psychological aggression was much more prevalent across both studies than physical assault. For example, participants were roughly three times more likely to indicate having engaged in psychological aggression during the course of their relationship than physical assault. Second, aside from age, the significant predictors for physical assault were not the same as those that emerged for psychological aggression. While there was consistent evidence in Study 2 (and partial evidence in Study 1) that URE and the interaction between URE and gender were significant predictors for physical assault perpetration, no such evidence emerged for psychological aggression in Study 2. Similarly, while a consistent gender effect emerged for psychological aggression in Study 2 where women were more likely than men to engage in psychological aggression, gender on its own did not seem to be an important predictor for physical assault in either Study 1 or Study 2. These results seem to point to the idea that psychological aggression is a facet of IPV that is qualitatively different from physical assault and has potentially a unique set of triggers. I will further explore his possibility, and its relevance to theory and application, in the next chapter.

Limitations and Future Research

There are several important limitations of Study 2. First, this study used a community sample to measure IPV perpetration. Given that physical assault perpetration is a serious, yet relatively rare phenomenon, the distribution of physical assault perpetration was quite skewed, trending toward zero as predicted by Straus (2004). This made analyses more complicated and required several different complementary analyses to better interpret results. Future researchers should consider oversampling from populations with known

violence perpetration, such as clinical samples, to see if results from this study can be replicated.

Second, while research by Moffit et al. (1997) demonstrated that there is strong agreement between both perpetrator and survivor on IPV occurrence, the current study only examined the role of URE in IPV perpetration from the lens of IPV perpetrators. Future researchers interested in this topic should consider sampling participants that are survivors of IPV or both romantic partners to extend findings and examine the replicability of results. Other research questions that could be explored in future studies include whether couples tend to agree regarding each other's URE. Moreover, do URE scores for partners tend to run in opposite directions? That is, if one person in the relationship has high URE, does the other partner tend to have low URE? As was discussed previously with regard to the gender-based interaction effect for physical assault, the answer to this question may shed light on why heterosexual females with low URE were found to be more likely to perpetrate physical assault. I speculated that this result could be attributable to females being most likely to enact assault as retaliation or self-defense against male partners with high URE. However, only future research can better understand this phenomenon as it is also possible that low URE in women could directly trigger physical assault through a different set of processes, such as jealousy or possessiveness. In general, the results of this study indicate that future investigations of VET must take a more nuanced approach to gender.

Further, the results of this study suggest that psychological aggression is a component of IPV that is qualitatively different from physical assault and has potentially a unique set of triggers that is distinct, and not necessarily overlapping, with physical assault. While there is research that supports that different personality traits predict psychological aggression compared to physical assault (e.g., Carton & Egan, 2017), future research can

further consider the unique set of predictors between psychological aggression and physical assault, and whether entitlement, in any form, plays a role in psychological aggression. Finally, further tests will be needed to evaluate the validity of mate value calculations used for the LGBTQ+ sample given that I updated the approach to the existing mate value calculation strategy for participants who identify as gay or lesbian.

Chapter 7: General Discussion

Overall, results from Study 1 and Study 2 suggest that URE is associated with physical assault perpetration (H2), but not psychological aggression (H1). In Study 2, gender moderated the effect of URE's role on physical assault perpetration (RQ2). Gender did not, however, moderate the link between URE and psychological aggression in either study (RQ1). Overall, these results suggest that key ideas in VET, particularly regarding URE and physical assault, can contribute new perspective on the correlates of IPV. In this chapter, I discuss the results from both studies and their implications for the further development of VET and potential application for IPV treatment and prevention

It is puzzling at first to explain why URE was a predictor for physical assault (particularly in Study 2) but not for psychological aggression. Given that both forms of violence have been found to have similar motivations (Neal et al., 2015) and that psychological aggression has been reported to be one of the strongest predictors of physical assault in romantic relationships (Baker & Stith, 2008), I expected that perpetration of both forms of violence would increase with elevated URE assessments. However, the results of both studies seem to indicate that this was not the case. Instead, there must be other motivations for psychological aggression that go beyond punishment. For example, Neal et al. (2015) found that women who perpetrated psychological IPV were more likely to report their use of violence as motivated by a desire to get attention or gain power or control in the relationship than women who perpetrated physical IPV. Thus, it seems that other drivers that exclude relational entitlement motivate psychological IPV and that further work is necessary to better understand these motivations and whether entitlement is truly unrelated to psychological forms of IPV.

In regards to RQ1 and RQ2, there was no evidence in either Study 1 or Study 2 that URE was moderated by gender for psychological aggression perpetration. In conjunction with the null results for H1, this adds further evidence that URE is not a significant predictor for psychological aggression perpetration. For physical assault perpetration, however, Study 2 demonstrated consistent evidence that gender moderated the effects of URE where elevated URE was associated with increased risk for male physical assault perpetration but lowered risk for female assault perpetration. Indeed, for women, those most likely to report physical assault perpetration were those with the lowest levels of URE. Study 1, however, did not demonstrate a gender moderation effect for physical assault perpetration.

The implications of the differences between the results for psychological aggression and physical assault perpetration is important in that it demonstrates clear rationale for separating these forms of violence in research. Other scholars have also pointed to different risk factors for both psychological and physical violence. For example, Kim et al. (2008) demonstrated that antisocial behavior and depressive symptoms of either partner lead to changes over time in male psychological aggression, but these risk characteristics did not track exactly for male physical aggression. Female perpetration was not included in this study.

Thus, the findings of this dissertation build on existing evidence that the risk factors for some forms of violence do not overlap with others. This is critical because there are many empirical studies that merge psychological and physical manifestations of IPV when examining risk factors (e.g., Capaldi et al., 2012). As discussed in Chapter 1, Johnson's (e.g., 2008) typology of IPV is one of the more popular typologies of IPV. However, this typology only separates different forms of IPV by levels of control while simultaneously merging psychological and physical forms of IPV together. The results from this dissertation

suggest that this approach is potentially problematic, especially given that tests from Study 2 demonstrated clear differences in results between physical assault and psychological aggression perpetration.

The gender moderation effect for physical assault also has implications on further development of VET. Counter to expectations, women with lower URE were found to be more likely to report physically assaulting their intimate partner than women with higher URE. In the previous chapter, I postulated that this finding could either be interpreted as evidence that URE is associated indirectly with physical assault perpetration through male partners' initial violence enactment or that lower URE directly influences physical assault perpetration in unanticipated ways. Either interpretation has important implications for VET's conceptualization of the role of gender in the association between URE and IPV.

The first interpretation, which was discussed in more detail in the previous chapter, ultimately suggests that women's violence is yoked to men's violence. That is, men with high URE are more likely perpetrate violence against female partners, and in response, these same female partners, who theoretically have low URE, enact physical assault in retaliation/self-defense. This possibility opens endless avenues of research, some of which have already been discussed. Perhaps most important, this interpretation of the results, albeit speculative, raise the possibility that females with low URE who perpetrate physical assault are possibly more appropriately categorized as *IPV survivors*. In other words, if their assault is enacted in self-defense, that assault would not fit the criteria of IPV. As defined in Chapter 1, for aggression to be considered *violence*, there needs to be a "non-essential" element to the behavior. Thus, acts of survival do not constitute violence. This would then suggest that URE is an exclusive risk factor for physical forms of *male* IPV perpetration, aligning with arguments made by gender researchers. Further research on this matter may

also shed light on whether male's physical IPV perpetration *leads* to low URE in females such that females internalize violence against them to believe they do not contribute enough to their relationship or whether females had low URE before IPV victimization. The former possibility suggests that low URE is possibly an *outcome* to IPV rather than a predictor. Indirect evidence for this view emerges from literature linking IPV victimization with lowered self-esteem (e.g., Childress, 2013).

The second interpretation would suggest that, for women, lowered URE triggers internal processes that are most likely separate from those that happen under conditions of elevated URE for men. For example, it may be that while elevated URE triggers physical assault through anger and punitive sentiment for men, lower URE may trigger physical assault for females through processes related to jealousy or possessiveness. Females who feel over-benefited may worry about their partner leaving them for an alternative partner which sparks feelings of jealousy. Indeed, jealousy has been found to be associated with violent responses (Guerrero et al., 1995). Moreover, studies based on Equity Theory have shown that feelings such as anger can emerge from perceptions of over-benefitedness (e.g., Sprecher, 1986), especially for women (Hatfield et al., 1985).

Linking jealousy to female-perpetrated physical assault towards intimate partners has potentially important consequences for research of IPV, in general, and for future formulations of VET, in particular. Jealousy as it relates to gender has been traditionally linked to male perpetrated IPV by gender (e.g., Dobash & Dobash, 1979) and evolutionary (e.g., Wilson & Daly, 1993) scholars as well as by Johnson (2008) in his control-based typology of IPV. Linking jealousy to IPV as a female, rather than male, strategy would be contradictory to the understandings of these frameworks, although not necessarily unprecedented. A number of other scholars have presented evidence that females often enact

IPV based on jealousy (Fernandez-Fuertes and Fuertes, 2010; Jackson et al., 2000; Neal et al., 2015). I contend that researchers of IPV need to more carefully consider the role that jealousy might play in both male- and female-perpetrated IPV. Moreover, future iterations of VET will need to reconsider the role of URE in physical assault perpetration by evaluating how feelings of over-benefitedness (i.e., low URE) can potentially trigger physical assault, especially in women.

Other key routes for future inquiry emerge from the inconsistent finding from Studies 1 and 2. Study 1, for example, did not have a gender moderation effect for physical assault perpetration. This could potentially be explained by several factors, not the least of which being the differences in study design between the two studies. While Study 1 measured violence inclination through hypothetical scenarios using an experimental design, Study 2 measured past violence behavior in participants' current relationship using a cross-sectional survey design. Thus, the two studies necessitated different outcome measures of IPV—one based on hypothetical actions and the other based on past behavior. It is possible, then, that URE affects both men and women in similar ways, but "real" relational conditions (i.e., those stemming from actual relational experiences in Study 2) affect female physical assault perpetration through much stronger indirect forces. The different outcomes may also point towards the difference between what people want to do compared to what they actually do. Perhaps women with elevated URE may be more likely to *want* to perpetrate physical assault towards an intimate partner but exert better self-control than men. Desire to enact IPV is best captured by Study 1 and its use of hypothetical scenarios. Study 2, because it attempted to assess actual behavior would not be able to capture actions that were desired but not carried out. As noted earlier, it is perhaps only in situations of self-defense or retaliation that women may be moved towards actually perpetrating physical assault.

Finally, it may be that due to the cross-sectional survey design of Study 2, the association between URE and physical assault for women is in the opposite causal direction than expected. It could be, instead, that female physical assault perpetration affects URE levels such that it *leads* to feelings of guilt and over-benefit (i.e., high URE). Consequently, women may experience feelings of physical assault perpetration differently than men. For example, it may be that women who perpetrate physical assault begin with high levels of URE, but after physically hurting their partner, they experience feelings of remorse or guilt which directly leads to feelings of being over-benefited. The hypothetical nature of Study 1 would prevent any feelings of remorse since participants are asked to imagine what they would *want* to do to a hypothetical partner in the scenario provided. This could explain, then, why in Study 1, high URE is a predictor of IPV perpetration for both men and women, but in Study 2 low URE becomes a possible *outcome* of female IPV perpetration.

Another possibility that explains the differences between Study 1 and Study 2 could revolve around issues with power and validity, especially in Study 1. The distribution of violence inclination for both physical assault and psychological prevalence in Study 1 was lower than actual perpetrated violence in both community samples (e.g., Smith et al., 2018) and Study 2. This is surprising given that one might logically assume that rates of violence *inclination* would be greater than rates of violence *perpetration*. In other words, all violence perpetration, presumably, is preceded by violence inclination, but not all violence inclination should lead to violence perpetration. The low distribution in Study 1 could suggest that (a) Study 1 was not anger-inducing enough, (b) reporting violence inclination is more susceptible to social desirability bias than violence perpetration, or (c) violence is so often unpredictable and occurs in spur of the moment decisions that violence behavior truly outnumbers the more conscious and self-aware construct of violence inclination. Ultimately,

then, there are myriad ways to explain the differences between Study 1 and Study 2. Thus, further work will be necessary to better understand the validity of each of these possible explanations.

In terms of the main effect for age, it was unsurprising that Study 2 results demonstrated that age plays an important role in predicting physical and psychological IPV perpetration. Specifically, these results demonstrated that overall prevalence and frequency of physical assault declines with age. This is true for both Level 1 and Level 2 physical assault severity. Similarly, the severity and frequency of psychological aggression declines with increased age, although results indicate that at least some level of psychological aggression prevalence remains stable in relationships, regardless of age. These results align very closely with those from Kim et al. (2008) who found that over a ten-year span, physical assault prevalence and psychological aggression severity decreased over time for males toward their intimate partners, but psychological aggression prevalence remained consistent throughout this time period; specifically, it was found that at least one incident of psychological aggression occurred during each of their time interval assessments (roughly every two years). Considering these results with those of others who find that violence and crime more generally peaks in adolescence and steadily declines afterwards (Blumstein et al., 1986; Sampson & Laub, 2003; Wiesner et al., 2008), suggests that there may be some developmental processes involved in violence perpetration. Younger individuals might be more prone toward physical and psychological violence, especially in its more severe forms. An exception to this, however, is psychological aggression prevalence, which appears to be a relatively common and stable phenomenon across many romantic relationships. This implies that researchers who are interested in psychological forms of IPV need to consider more closely definitions of psychological IPV and how to measure it more clearly. It is

generally well accepted that psychological IPV can be just as harmful, if not more so, than physical forms of IPV (Coker et al., 2000). However, if at least some level of psychological aggression is extremely common, scholars need to work towards understanding and standardizing thresholds of psychological aggression to distinguish its more nefarious forms from those that may be a normal part of romantic relationships.

Importantly, the main effect of age that was found in Study 2 was not found in Study 1. This again might relate to the differences in study design between Study 1 and Study 2, especially in relation to the differences between violence inclination and actual behavior. As self-control generally gets better with age (Burton et al., 1999), perhaps older individuals are better able to control their violence inclination from becoming violence perpetration. Other possibilities to explain the difference in results relating to age between Study 1 and Study 2 could revolve around issues with power and validity for Study 1 discussed already in this chapter.

Turning to the effects of gender, neither study found significant main effects of gender on physical assault perpetration. In some ways, this is not surprising as there is substantial literature that demonstrates men and women tend to perpetrate similar rates of physical IPV (see Langhinrichsen-Rohling et al., 2012 for a review) especially when looking at IPV without control dynamics. Moreover, this finding aligns with Kelly and Johnson's (2008) argument that community samples tend to have gender symmetry in IPV perpetration as opposed to clinical samples which have more male perpetrated IPV. It is also important to keep in mind that I did not measure violence motivation, so I do not know whether there is a gender difference in self-defense/retaliation motive.

The gender symmetry effect was not apparent, however, for psychological aggression perpetration. The gender effect emerged most clearly in Study 2's test of annual

frequency which found that *women* engage more frequently in psychological aggression than men. This aligns closely with the findings of others. For example, Muñoz-Rivas et al. (2007) also found that women more frequently engaged in acts of psychological violence than men toward intimate partners. Similarly, Leisring (2012) observed that 95% of women in her study report perpetrating one act of psychological abuse (termed as emotional abuse in their study) against a romantic partner.

One possible explanation for why women are more likely to perpetrate psychological aggression is because of discrepancies in physical size that often exist between men and women. Neal et al. (2015) offers the explanation that because women are typically smaller in build than men, it may be more effective for them to gain power or control in their relationship through psychological aggression rather than physically. Moreover, they contend that women are most likely reinforced for their use of psychological aggression by actually gaining power in their relationship through these means rather than physical ones.

Another possible explanation is provided by Winstok and Straus (2011) who found evidence that men and women manage both status enhancement and risk reduction in different ways. In Winstok and Straus's (2011) hypothetical scenario study, men were found to be most likely to indicate physical and psychological aggression in response to provocation by male strangers and least likely to indicate physical and psychological aggression in response to their female intimate partner's provocation. Women, on the other hand, were most likely to indicate physical and psychological aggression inclination in response to provocation from their male intimate partner and were least likely to respond in such a way to male strangers' provocation. Based on these findings, the authors suggest that male aggression in response to that of a male stranger's is associated with status enhancement because it signals bravery and aligns with gender-related social expectations.

Similarly, male aggression toward female intimate partners is actually uncommon and deviates from the norm precisely for the same reason: it goes against social expectations and often leads to a social and personal cost. Winstok and Straus (2011) argue that women are generally aware of the social expectation for men to not hurt female intimate partners, and thus, physical or psychological aggression towards a male intimate partner is a form of risk reduction as they are a much less dangerous opponent than a stranger. It may be that a combination of social expectations for each gender and physical size discrepancies between men and women create a dynamic that can explain the gender effect found in this study (where women perpetrate, on average, more psychological aggression than men). Alternatively, there is the possibility that social expectations for men increase the biases that arise from social desirability, such that men underreport their hypothetical and past violence behavior toward female partners compared to women. Overall, the possible interpretations for the gender effect in this dissertation warrants future research on female perpetrated psychological violence.

Theoretical Implications

Broadly speaking, VET aims to offer new perspective on the primary drivers of IPV perpetration by complementing and extending existing theories. Through the proposed calculation for URE assessment, for example, VET contributes to Equity Theory by providing one possible explanation for what comprises equity assessments. Consider that the average distribution of URE centered around zero, meaning that most people in the sample were with intimate partners who met their expectations. In other words, most people reported feeling *equitable* in their relationship. Studies that test equity in romantic relationships demonstrate that most individuals in a romantic relationship perceive themselves as equitable in their relationship (e.g., Henningsen et al., 2009). URE

assessments, then, provide a new avenue for making equity assessments in romantic relationships. VET also builds on the Recalibrational Theory of Anger by providing further explanation of the expectations of treatment individuals have toward their relational partner, particularly an intimate partner. Specifically, through the proposed calculations of URE, VET seeks to inform what specific expectations individuals have toward their romantic partner (i.e., through their partner's positive externalities, exchange benefits, and personal cost), how these expectations are formed (i.e., through the positive externalities, exchange benefits and personal costs of oneself), and how they are tracked (i.e., through URE assessments).

In addition to the contributions that VET provides to existing theories, VET adds an additional risk factor to the existing literature for physical IPV perpetration, particularly for men, although possibly for women as well. As mentioned in Chapter 2, one of VET's chief strengths is that although it adds an additional risk to IPV perpetration to an already burgeoning list of IPV risk factors, it seeks to unify a number of risk factors under a single theoretical framework which consolidates some existing literature and provides new research avenues.

Clinical Implications

With more research, the results from both studies can have important implications for clinical settings. First, results from this study suggest that clinicians should consider risk/protective factors separately for each form of IPV. Evidence from Study 1 and Study 2, for instance, aligned with previous research to demonstrate that advanced age is a protective factor for physical assault perpetration, but not necessarily for psychological aggression. Keeping the forms of IPV separate in clinical evaluations can lead to more accurate and *detailed* assessments of IPV perpetration risk. In this same vein, clinical outcomes can also

be improved through IPV differentiation as it is likely that certain IPV treatment/prevention strategies are effective for only certain forms of IPV perpetration.

Moreover, better understanding the motives behind IPV perpetration can improve support for IPV prevention work. The finding that elevated URE is an important risk factor for men who perpetrate physical assault can directly inform tailored programming and enhance the effectiveness of current IPV prevention strategies. Case managers from programs that support other behavioral health issues and that demonstrate co-morbidity with IPV perpetration (such as substance use or mental health; Capaldi et al., 2012) can administer URE assessments to their clients to help flag individuals who have heightened URE and invite them for further follow up discussions. These discussions can be facilitated by clinicians to engage men specifically about their expectations for their intimate partner (and what to do when these expectations are unmet). These measurements can also be used to support women and extradite them from risky situations before violence has occurred. Other potential avenues for URE assessments can include opportunities through community engagement such as booths at community events or partnerships with primary care doctors.

Additionally, URE assessments can provide tools for IPV treatment work. For example, URE assessments could be used as a point of focus in cognitive behavioral therapy sessions for IPV perpetrators seeking treatment. Discussing how to manage unmet partner expectations and the origin of these expectations can provide clinicians a new approach to counseling sessions that may ultimately improve IPV recidivism rates. URE assessments could also be used as a metric to track progress over time for IPV perpetrators in couples therapy treatment programs. Typically, couples therapy treatment programs are not available in many states (and banned in some cases; Wagers & Radatz, 2020); however, this form of

therapy is a widening and empirically supported alternative approach that seeks to escape from the traditional one size fits all approach (Mills et al., 2019; Stith et al., 2004).

It is still unclear what the clinical implications are for the finding that women with low URE have an increased likelihood of IPV perpetration. Whether low URE in women signals risk of IPV perpetration only *or* perpetration and victimization, assessments of low URE in women can signal to clinicians and other specialists that there is an increased risk of IPV involvement for these individuals. Further work can inform which programs would be most appropriate for women with low URE as it relates to IPV resources for at-risk survivors and/or perpetrators.

Limitations and Future Directions

There are a number of important limitations to consider for both Study 1 and Study 2 to inform future directions for VET. First, while URE was a significant predictor for physical assault perpetration, URE only accounted for a small percentage of variance in models from both studies. Thus, URE's predictive power appears limited. This can potentially be addressed with alternative measures for the variables in the URE calculations, but it may be that URE's scope is simply limited in that it cannot predict certain forms of physical IPV that are non-punitive in nature. For example, Shorey, Cornelius, et al. (2011) found that 20% of women reported engaging in physical aggression because they found it sexually arousing. Similarly, in a meta-analysis of IPV motivations, Langhinrichsen-Rohling et al. (2012) reported that 11% of the studies they examined had participants who indicated sexual arousal as a motivating factor for violence perpetration. These findings speak more broadly to the point that violence, by its very nature, cannot always be rationalized as goal oriented. In such cases, the utility of a construct such as URE is negligible at best.

A second limitation to consider is that both studies used community samples. Future studies should consider sampling from populations with known rates of violence such as clinical samples. This is important because the rate of physical assault is much rarer in community samples, which makes recommendations for statistical testing default to tests of prevalence (Straus, 2004). With a clinical sample, there will be more of a normal distribution of violence which may yield different results and allow for more confidence with tests of annual frequency. Moreover, Kelly and Johnson (2008) argue that clinical samples perpetrate a qualitatively-different type of IPV than community samples. Thus, it is critical to investigate whether the results of these studies, especially the finding that elevated URE predicts male physical assault perpetration, holds up in different types of samples.

Third, both studies only measured IPV perpetration. Future work can also include reporting of IPV victimization. This could further inform the gender moderation effect found in Study 2 for physical assault. I put forth one possible interpretation that females with low URE were more prone to perpetrating physical assault because they were retaliating or acting in self-defense against male partners who physically assaulted them first. Including measures of IPV victimization in future work could test this hypothesis by clarifying whether women with low URE also report higher IPV victimization.

In addition to including measures of IPV victimization, the lingering questions from Study 2's gender moderation effect can be further answered through future work that samples dyads instead of individuals. For instance, studies that included both intimate partners could assess how common and in what contexts couples agree with URE assessments. If one partner is high in URE, for example, is the other partner low in URE? This type of work can also speak further to the types and patterns of violence most common when both partners have high URE. However, work that incorporates reports from both

intimate partners would be challenging as there would need to be extensive efforts to ensure the safety and confidentiality of each individual in the dyad.

Scholars can also consider whether URE shapes behavior with other types of relational partners. It might be possible that individuals have aggregate levels of URE, such they feel a sense of unfulfilled entitlement in all or many of their personal relationships. This generalized sense of URE might shape behavior in varying relational situations. For example, individuals with high levels of generalized URE might be especially prone to destructive interpersonal conflict with friends and works associations. If true, research can also examine some of the root causes of generalized URE (e.g., insecure attachment style, a history of chronic relational difficulty, narcissistic personality).

In this same vein, it may be that URE can shed light on some of the cognitive processes shaping violence in other various relationship types, such as those between parents and children. Previous literature has shown, for example, that parents are more likely to be aggressive toward their child when they perceive their child's misbehavior as purposely hostile toward them (Springer, 2001). Thus, parents may also create URE assessments, albeit most likely in a different formulation to the URE calculation proposed here, to track whether they are receiving the treatment they feel they deserve and whether violence risk increases when they do not. However, this also raises the question of whether there is a particular threshold of URE that needs to be met before violence potential arises? Also, does URE accumulate over time such that positive values of URE amplify when left unresolved? If so, how do behaviors such as forgiveness or constructive communication affect unresolved URE? The answers to these questions could produce important developments in the field of conflict resolution.

Future investigations of VET should also include other potential indicators in statistical testing of VET. For example, I would expect that many individuals with high URE opt to end their relationships and move on. One indicator that may influence whether an individual with high URE ends the relationship or not is the number and attractiveness of alternative partners. This can be captured through work on interdependence theory, specifically Rusbult and Buunk's (1993) work on the comparison level for alternatives (CL-alt), or through an evolutionary perspective such as Conroy-Beam et al.'s (2016) discussion on *mate value discrepancy partner-potential* which is a term that operationalizes the attractiveness and abundance of alternative mates compared to a current partner. A number of studies have demonstrated that people in relationships often change their behavior towards their partner based on their alternative options (e.g., Anderson & Emmers-Sommer, 2006; Conroy-Beam et al., 2015; Rusbult & Buunk, 1993). Considering the existing evidence on this matter, I would expect that people who perceive fewer alternative partners are less likely to end their relationship in circumstances of high URE.

Another potentially fruitful indicator to include in future tests of VET could be measures of proprietariness. As mentioned in Chapter 2, proprietariness is the tendency to view one's intimate partner as one's own private property. I theorized that URE when co-occurring with high levels of proprietariness may lead to particularly severe types of IPV as it can lead to both pre-emptive and reactive violence. Future research can test this hypothesis and investigate whether this combination aligns closely with conceptualizations of CCV (Kelly & Johnson, 2008).

Scholars interested in future development of VET should also consider alternative formulas for URE calculation alongside alternative measures for positive externalities, social exchange, and personal cost. These alternatives should be culturally sensitive and maximize

accuracy of URE assessments. One alternative calculation could calculate URE by averaging social exchange and positive externalities (rather than summing them together). This alternative calculation could be compared to the one used in this dissertation to ascertain whether one has more predictive validity. Different calculations of URE can ultimately provide more accurate assessments of entitlement and therefore be a better predictor of male physical IPV in clinical settings.

Moreover, more culturally sensitive measures can move away from a "one size fits all approach" to IPV assessment (Wagers & Radatz, 2020) and instead provide a more useful metric of IPV perpetration risk across a broad range of communities. The mate value assessments in this dissertation, for example, is one step in the right direction because the traits included in the assessments by Conroy-Beam et al. (in prep) were informed from a previous study that considered the mate preferences of over 37 cultures (Buss, 1989). The mate value measure is also flexible in the sense that mate value is compared to an "ideal" partner that is set by the population under study. In this way, the study's sample ultimately sets the ideal male partner's level of, say, "humor" or "artistry" so that mate value assessments will necessarily shift from culture to culture to accommodate different weightings on ideal partner traits. However, even the mate value measure used in this dissertation could be adapted to fit the population under study with proper context. For example, in Afghanistan, the notion of *ghairat* (loosely translated as "honor") is a culturally significant variable that would be very pertinent to mate value assessments. I would expect that including *ghairat* as a dimension of mate value would yield much more accurate assessments of positive externalities. Likewise, future iterations of social exchange measures could similarly yield more accurate assessments of URE with scales that were flexible (like

the measurement used for mate value) to assess the distinct weightings that various cultures place on certain behaviors.

Testing URE cross-culturally can also produce the added benefit of understanding how entitlement and equity is shaped and moderated in similar and different ways by culture. For example, societies that vary across patriarchal beliefs may find different gender effects with URE. Aside from its theoretical contributions, further investigating cultural variables may be particularly critical for local activists who seek change as these individuals may be able to use this knowledge to pinpoint and challenge aspects of culture that increase IPV perpetration.

A final consideration is that for both studies, analyses were limited to only male and female identifying participants. Larger samples with greater representation of other genders can investigate further the effects of URE on IPV perpetration and how the gender moderation effect found in this dissertation adjusts once other genders are taken into consideration. Similarly, both studies had a mostly heterosexual sample; future work should consider more closely how the effects of URE relate to other sexual orientations.

Final Summary

Through the proposed theoretical framework of VET, this dissertation sought to contribute to the vast body of work on IPV by testing the role of entitlement (and its fulfilment) on the physical and psychological manifestations of IPV. Across both studies, evidence surfaced that URE is an important factor for physical assault perpetration. Importantly, however, results also demonstrated that URE's effect on physical assault perpetration manifests differently for men and women. As was discussed throughout this chapter, the results reported in this dissertation have important implications for both theory and practice related to IPV. Numerous limitations and future avenues of research arose in

this dissertation which, if addressed, can provide important insights that will build from the findings in this manuscript.

On a final note, as scholars learn more about the impulses and risk factors that lead to violence, it is critical to recognize that these insights are not deterministic. No individual is fated to perpetrate IPV, nor is IPV perpetration in any form ever justified. VET and the studies reported in this dissertation were my attempt to contribute new insight into the factors that potentially contribute to IPV. Although this was an initial attempt, and while the results were mixed, this work suggests that constructs such as URE hold promise for offering new perspective on why IPV occurs in certain situations. It is my hope that scholars continue to explore new ideas regarding IPV so that we make continual progress toward eradicating it. Continued theory and research that ultimately informs prevention and treatment has the ability to shape and change countless lives before they are unnecessarily shattered by violence.

References

Abu-Ras, W., Ahmed, S., & Arfken, C. L. (2010). Alcohol use among U.S. Muslim college students: Risk and protective factors. *Journal of Ethnicity in Substance Abuse*, *9*(3), 206–220. https://doi.org/10.1080/15332640.2010.500921

Ackerman, R. A., Witt, E. A., Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., & Kashy, D. A. (2010). What does the narcissistic personality inventory really measure? *Assessment*, *18*(1), 67–87. https://doi.org/10.1177/1073191110382845

Adam, N. M., & Schewe, P. A. (2007). A multilevel framework exploring domestic violence against immigrant Indian and Pakistani women in the United States. *Journal of Muslim Mental Health*, *2*(1), 5–20. https://doi.org/10.1080/15564900701238468

Adams, D., & Cayouette, S. (2002). Emerge: A group education model for abusers. In E. Aldarondo & F. Mederos (Eds.), *Programs for men who batter: Intervention and prevention strategies in a diverse society* (pp. 4.1–4.32). Civic Research, Inc. https://www.academia.edu/45073440/Emerge_A_Group_Education_Model_for_Abuse

Adams, J. S. (1965). Inequity in social exchange. *Advances in Experimental Social Psychology*, *2*, 267–299. https://doi.org/10.1016/s0065-2601(08)60108-2

Afifi, T. D., Merrill, A. F., & Davis, S. (2016). The theory of resilience and relational load. *Personal Relationships*, *23*(4), 663–683. https://doi.org/10.1111/pere.12159

Afifi, W. A., & Cornejo, M. (2020). #CommunicationsoWEIRD: The question of sample representativeness in interpersonal communication research. In M. L. Doerfel & J. L. Gibbs (Eds.), *Building inclusiveness in organizations, institutions, and communities: Communication theory perspectives*. Routledge.

Ahmed, S., Abu-Ras, W., & Arfken, C. L. (2014). Prevalence of risk behaviors among U.S. Muslim college students. *Journal of Muslim Mental Health*, *8*(1). https://doi.org/10.3998/jmmh.10381607.0008.101

Al-Ansari, B., Thow, A.-M., Day, C. A., & Conigrave, K. M. (2015). Extent of alcohol prohibition in civil policy in Muslim majority countries: The impact of globalization. *Addiction, 111*(10), 1703–1713. https://doi.org/10.1111/add.13159

Aloia, L. S., & Solomon, D. H. (2015). The physiology of argumentative skill deficiency: Cognitive ability, emotional competence, communication qualities, and responses to conflict. *Communication Monographs*, *82*(3), 315–338. https://doi.org/10.1080/03637751.2014.989868

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). https://doi.org/10.1176/appi.books.9780890425596

Anderson, T. L., & Emmers-Sommer, T. M. (2006). Predictors of relationship satisfaction in online romantic relationships. *Communication Studies*, *57*(2), 153–172. https://doi.org/10.1080/10510970600666834

Arata, C. M., Langhinrichsen-Rohling, J., Bowers, D., & O'Farrill-Swails, L. (2005). Single versus multi-type maltreatment. *Journal of Aggression, Maltreatment & Trauma*, *11*(4), 29–52. https://doi.org/10.1300/j146v11n04_02

Aron, A., Aron, E. N., Tudor, M., & Nelson, G. (1991). Close relationships as including other in the self. *Journal of Personality and Social Psychology*, *60*(2), 241–253. https://doi.org/10.1037/0022-3514.60.2.241

Babcock, J. C., Armenti, N., Cannon, C., Lauve-Moon, K., Buttell, F., Ferreira, R., Cantos, A., Hamel, J., Kelly, D., Jordan, C., Lehmann, P., Leisring, P. A., Murphy, C., O'Leary, K. D., Bannon, S., Salis, K. L., & Solano, I. (2016). Domestic violence

perpetrator programs: A proposal for evidence-based standards in the United States. *Partner Abuse, 7*(4), 355–460. https://doi.org/10.1891/1946-6560.7.4.355

Babcock, J. C., Costa, D. M., Green, C. E., & Eckhardt, C. I. (2004). What situations induce intimate partner violence? A reliability and validity study of the Proximal Antecedents to Violent Episodes (PAVE) scale. *Journal of Family Psychology, 18*(3), 433–442. https://doi.org/10.1037/0893-3200.18.3.433

Babcock, J. C., Green, C. E., & Robie, C. (2004). Does batterers' treatment work? A meta-analytic review of domestic violence treatment. *Clinical Psychology Review, 23*(8), 1023–1053. https://doi.org/10.1016/j.cpr.2002.07.001

Baker, C. R., & Stith, S. M. (2008). Factors predicting dating violence perpetration among male and female college students. *Journal of Aggression, Maltreatment & Trauma, 17*(2), 227–244. https://doi.org/10.1080/10926770802344836

Bandura, A. (1977). *Social learning theory* (Vol. 1). Prentice-Hall.

Barkho, E., Fakhouri, M., & Arnetz, J. E. (2010). Intimate partner violence among Iraqi immigrant women in Metro Detroit: A pilot study. *Journal of Immigrant and Minority Health, 13*(4), 725–731. https://doi.org/10.1007/s10903-010-9399-4

Beck, C. J. A., Anderson, E. R., O'Hara, K. L., & Benjamin, G. A. H. (2013). Patterns of intimate partner violence in a large, epidemiological sample of divorcing couples. *Journal of Family Psychology, 27*(5), 743–753. https://doi.org/10.1037/a0034182

Birkhead, T. R., & Møller, A. P. (1998). *Sperm competition and sexual selection*. Academic Press.

Black, M. C. (2011). Intimate partner violence and adverse health consequences. *American Journal of Lifestyle Medicine, 5*(5), 428–439. https://doi.org/10.1177/1559827611410265

Blumstein, A., Cohen, J., Roth, J. A., & Visher, C. A. (Eds.). (1986). *Criminal careers and "career criminals"* (Vol. 1). National Academies Press. https://doi.org/10.17226/922

Brainerd, E. G., Hunter, P. A., Moore, D., & Thompson, T. R. (1996). Jealousy induction as a predictor of power and the use of other control methods in heterosexual relationships. *Psychological Reports, 79*(3, Suppl.), 1319–1325. https://doi.org/10.2466/pr0.1996.79.3f.1319

Breiding, M. J. (2015). Prevalence and characteristics of sexual violence, stalking, and intimate partner violence victimization—national intimate partner and sexual violence survey, United States, 2011. *American Journal of Public Health, 105*(4), 11–12. https://doi.org/10.2105/ajph.2015.302634

Breiding, M. J., Basile, K. C., Smith, S. G., Black, M. C., Mahendra, R., Frieden, T. R., Houry, D., & Mercy, J. A. (2015). *Intimate partner violence surveillance: Uniform defintions and recommended data elements*. Centers for Disease Control and Prevention. https://www.cdc.gov/violenceprevention/pdf/intimatepartnerviolence.pdf

Briggs, S. R., Cheek, J. M., & Buss, A. H. (1980). An analysis of the self-monitoring scale. *Journal of Personality and Social Psychology, 38*(4), 679–686. https://doi.org/10.1037/0022-3514.38.4.679

Brown, R. P., Budzek, K., & Tamborski, M. (2009). On the meaning and measure of narcissism. *Personality and Social Psychology Bulletin, 35*(7), 951–964. https://doi.org/10.1177/0146167209335461

Burgoon, J. K., Johnson, M. L., & Koch, P. T. (1998). The nature and measurement of interpersonal dominance. *Communication Monographs*, *65*(4), 308–335. https://doi.org/10.1080/03637759809376456

Burton, V. S., Evans, T. David., Cullen, F. T., Olivares, K. M., & Dunaway, R. Gregory. (1999). Age, self-control, and adults' offending behaviors. *Journal of Criminal Justice*, *27*(1), 45–54. https://doi.org/10.1016/s0047-2352(98)00035-x

Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: Does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology*, *75*(1), 219–229. https://doi.org/10.1037/0022-3514.75.1.219

Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *Behavioral and Brain Sciences*, *12*(1), 1–14. https://doi.org/10.1017/s0140525x00023992

Buss, D. M. (2002). Human mate guarding. *Neuroendocrinology Letters*, *23*(4, Suppl.), 23–29.

Buss, D. M., & Chiodo, L. M. (1991). Narcissistic acts in everyday life. *Journal of Personality*, *59*(2), 179–215. https://doi.org/10.1111/j.1467-6494.1991.tb00773.x

Buss, D. M., & Duntley, J. D. (2011). The evolution of intimate partner violence. *Aggression and Violent Behavior*, *16*(5), 411–419. https://doi.org/10.1016/j.avb.2011.04.015

Buzawa, E. S., Buzawa, C. G., & Stark, E. D. (2017). *Responding to domestic violence: The integration of criminal justice and human services* (5th ed.). Sage Publications, Inc.

Caldwell, J. E., Swan, S. C., Allen, C. T., Sullivan, T. P., & Snow, D. L. (2009). Why I hit him: Women's reasons for intimate partner violence. *Journal of Aggression,*

Maltreatment & Trauma, *18*(7), 672–697. https://doi.org/10.1080/10926770903231783

Canary, D. J., & Stafford, L. (1992). Relational maintenance strategies and equity in marriage. *Communication Monographs*, *59*(3), 243–267. https://doi.org/10.1080/03637759209376268

Capaldi, D. M., & Crosby, L. (1997). Observed and reported psychological and physical aggression in young, at-risk couples. *Social Development*, *6*(2), 184–206. https://doi.org/10.1111/j.1467-9507.1997.tb00101.x

Capaldi, D. M., Knoble, N. B., Shortt, J. W., & Kim, H. K. (2012). A systematic review of risk factors for intimate partner violence. *Partner Abuse*, *3*(2), 231–280. https://doi.org/10.1891/1946-6560.3.2.231

Carton, H., & Egan, V. (2017). The dark triad and intimate partner violence. *Personality and Individual Differences*, *105*(1), 84–88. https://doi.org/10.1016/j.paid.2016.09.040

Cascardi, M., & Vivian, D. (1995). Context for specific episodes of marital violence: Gender and severity of violence differences. *Journal of Family Violence*, *10*(3), 265–293. https://doi.org/10.1007/bf02110993

Catalá-Miñana, A., Walker, K., Bowen, E., & Lila, M. (2014). Cultural differences in personality and aggressive behavior in intimate partner violence offenders. *Journal of Interpersonal Violence*, *29*(14), 2652–2669. https://doi.org/10.1177/0886260513517301

Centers for Disease Control and Prevention. (2019a). *Risk and protective factors for perpetration*. https://www.cdc.gov/violenceprevention/intimatepartnerviolence/riskprotectivefactors.html

Centers for Disease Control and Prevention. (2019b). *Vital statistics rapid release births: Provisional data for 2018*. https://www.cdc.gov/nchs/data/vsrr/vsrr-007-508.pdf

Central Statistics Organization, Ministry of Public Health of Afghanistan, & ICF. (2017). *Afghanistan demographic and health survey 2015*. The Demographic and Health Surveys Program. https://dhsprogram.com/publications/publication-FR323-DHS-Final-Reports.cfm

Childress, S. (2013). A meta-summary of qualitative findings on the lived experience among culturally diverse domestic violence survivors. *Issues in Mental Health Nursing*, *34*(9), 693–705. https://doi.org/10.3109/01612840.2013.791735

Coker, A. L., Smith, P. H., McKeown, R. E., & King, M. J. (2000). Frequency and correlates of intimate partner violence by type: Physical, sexual, and psychological battering. *American Journal of Public Health*, *90*(4), 553–559. https://doi.org/10.2105/ajph.90.4.553

Colorado-Yohar, S., Tormo, M. J., Salmerón, D., Dios, S., Ballesta, M., & Navarro, C. (2012). Violence reported by the immigrant population is high as compared with the native population in southeast Spain. *Journal of Interpersonal Violence*, *27*(16), 3322–3340. https://doi.org/10.1177/0886260512441260

Conroy-Beam, D., Walter, K., & Duarte, K. (2021). *Probing the computational format of mate preferences using couple simulation* [Manuscript submitted for publication]. Department of Psychology, University of California, Santa Barbara

Conroy-Beam, D., Goetz, C. D., & Buss, D. M. (2015). Why do humans form long-term mateships? An evolutionary game-theoretic model. *Advances in Experimental Social Psychology*, *51*, 1–39. https://doi.org/10.1016/bs.aesp.2014.11.001

Conroy-Beam, D., Goetz, C. D., & Buss, D. M. (2016). What predicts romantic relationship satisfaction and mate retention intensity: Mate preference fulfillment or mate value discrepancies? *Evolution and Human Behavior*, *37*(6), 440–448. https://doi.org/10.1016/j.evolhumbehav.2016.04.003

Conroy-Beam, D., Roney, J. R., Lukaszewski, A. W., Buss, D. M., Asao, K., Sorokowska, A., Sorokowski, P., Aavik, T., Akello, G., Alhabahba, M. M., Alm, C., Amjad, N., Anjum, A., Atama, C. S., Atamtürk Duyar, D., Ayebare, R., Batres, C., Bendixen, M., Bensafia, A., … Zupančič, M. (2019). Assortative mating and the evolution of desirability covariation. *Evolution and Human Behavior*, *40*(5), 479–491. https://doi.org/10.1016/j.evolhumbehav.2019.06.003

Corral, C., & Calvete, E. (2014). Early maladaptive schemas and personality disorder traits in perpetrators of intimate partner violence. *Spanish Journal of Psychology*, *17*(e1). https://doi.org/10.1017/sjp.2014.1

Cottler, L. B., Ajinkya, S., Goldberger, B. A., Ghani, M. A., Martin, D. M., Hu, H., & Gold, M. S. (2014). Prevalence of drug and alcohol use in urban Afghanistan: Epidemiological data from the Afghanistan National Urban Drug Use Study (ANUDUS). *The Lancet Global Health*, *2*(10), 592–600. https://doi.org/10.1016/s2214-109x(14)70290-6

Cunradi, C. B., Caetano, R., & Schafer, J. (2002). Alcohol-related problems, drug use, and male intimate partner violence severity among US couples. *Alcoholism: Clinical and Experimental Research*, *26*(4), 493–500. https://doi.org/10.1111/j.1530-0277.2002.tb02566.x

Daly, M., & Wilson, M. (1988). *Homicide*. Transaction Publishers.

Davis, R. C., & Taylor, B. G. (1999). Does batterer treatment reduce violence? *Women & Criminal Justice*, *10*(2), 69–93. https://doi.org/10.1300/j012v10n02_05

Dehan, N., & Levi, Z. (2009). Spiritual abuse: An additional dimension of abuse experienced by abused Haredi (Ultraorthodox) Jewish wives. *Violence against Women*, *15*(11), 1294–1310. https://doi.org/10.1177/1077801209347619

Desmarais, S. L., Reeves, K. A., Nicholls, T. L., Telford, R. P., & Fiebert, M. S. (2012). Prevalence of physical violence in intimate relationships, part 2: Rates of male and female perpetration. *Partner Abuse*, *3*(2), 170–198. https://doi.org/10.1891/1946-6560.3.2.170

Deutsch, M. (1975). Equity, equality, and need: What determines which value will be used as the basis of distributive justice? *Journal of Social Issues*, *31*(3), 137–149. https://doi.org/10.1111/j.1540-4560.1975.tb01000.x

Devries, K. M., Child, J., Bacchus, L. J., Mak, J., Falder, G., Graham, K., Watts, C., & Heise, L. (2013). Intimate partner violence victimization and alcohol consumption in women: A systematic review and meta-analysis. *Addiction*, *109*(3), 379–391. https://doi.org/10.1111/add.12393

Devries, K. M., Mak, J. Y. T., García-Moreno, C., Petzold, M., Child, J. C., Falder, G., Lim, S., Bacchus, L. J., Engell, R. E., Rosenfeld, L., Pallitto, C., Vos, T., Abrahams, N., & Watts, C. H. (2013). The global prevalence of intimate partner violence against women. *Science*, *340*(6140), 1527–1528. https://doi.org/10.1126/science.1240937

Dobash, R. E., & Dobash, R. P. (1979). *Violence against wives: A case against the patriarchy*. The Free Press.

Dobash, R. P., Dobash, R. E., Wilson, M., & Daly, M. (1992). The myth of sexual symmetry in marital violence. *Social Problems*, *39*(1), 71–91. https://doi.org/10.2307/3096914

Dunbar, N. E. (2000). *Explication and initial test of dyadic power theory* [PhD Thesis].

Dutton, M. A., & Goodman, L. A. (2005). Coercion in intimate partner violence: Toward a new conceptualization. *Sex Roles*, *52*(11-12), 743–756. https://doi.org/10.1007/s11199-005-4196-6

Dutton, D. G., & Hart, S. D. (1992). Evidence for long-term, specific effects of childhood abuse and neglect on criminal behavior in men. *International Journal of Offender Therapy and Comparative Criminology*, *36*(2), 129–137. https://doi.org/10.1177/0306624x9203600205

Edward, D. A., Stockley, P., & Hosken, D. J. (2014). Sexual conflict and sperm competition. *Cold Spring Harbor Perspectives in Biology*, *7*(4). https://doi.org/10.1101/cshperspect.a017707

Elmquist, J., Hamel, J., Febres, J., Zapor, H., Wolford-Clevenger, C., Brem, M., Shorey, R. C., & Stuart, G. L. (2016). Motivations for psychological aggression among dating college students. *Partner Abuse*, *7*(2), 157–168. https://doi.org/10.1891/1946-6560.7.2.157

Emmons, R. A. (1987). Narcissism: Theory and measurement. *Journal of Personality and Social Psychology*, *52*(1), 11–17. https://doi.org/10.1037/0022-3514.52.1.11

Exline, J. J., Baumeister, R. F., Bushman, B. J., Campbell, W. K., & Finkel, E. J. (2004). Too proud to let go: Narcissistic entitlement as a barrier to forgiveness. *Journal of Personality and Social Psychology*, *87*(6), 894–912. https://doi.org/10.1037/0022-3514.87.6.894

Feder, L., & Wilson, D. B. (2005). A meta-analytic review of court-mandated batterer intervention programs: Can courts affect abusers' behavior? *Journal of Experimental Criminology*, *1*(2), 239–262. https://doi.org/10.1007/s11292-005-1179-0

Fehr, E., & Gächter, S. (2000). Cooperation and punishment in public goods experiments. *American Economic Review*, *90*(4), 980–994. https://doi.org/10.1257/aer.90.4.980

Fernández-Fuertes, A. A., & Fuertes, A. (2010). Physical and psychological aggression in dating relationships of Spanish adolescents: Motives and consequences. *Child Abuse & Neglect*, *34*(3), 183–191. https://doi.org/10.1016/j.chiabu.2010.01.002

Fiebert, M. S., & Gonzalez, D. M. (1997). College women who initiate assaults on their male partners and the reasons offered for such behavior. *Psychological Reports*, *80*(2), 583–590. https://doi.org/10.2466/pr0.1997.80.2.583

Fields, S. K. (2012). *Narcissism and intimate partner violence: An establishment of the link and investigation of multiple potential mediators* [MSc Thesis]. https://dc.etsu.edu/etd/1222/

Fiske, S. T. (2014). *Social beings: Core motives in social psychology* (3rd ed.). Wiley.

Foran, H. M., & O'Leary, K. D. (2008). Alcohol and intimate partner violence: A meta-analytic review. *Clinical Psychology Review*, *28*(7), 1222–1234. https://doi.org/10.1016/j.cpr.2008.05.001

Frederick, L. (2008). Questions about family court domestic violence screening and assessment. *Family Court Review*, *46*(3), 523–530. https://doi.org/10.1111/j.1744-1617.2008.00217.x

Frieze, I. H., & McHugh, M. C. (1992). Power and influence strategies in violent and nonviolent marriages. *Psychology of Women Quarterly*, *16*(4), 449–465. https://doi.org/10.1111/j.1471-6402.1992.tb00268.x

Frye, V., Manganello, J., Campbell, J. C., Walton-Moss, B., & Wilt, S. (2006). The distribution of and factors associated with intimate terrorism and situational couple

violence among a population-based sample of urban women in the United States. *Journal of Interpersonal Violence*, *21*(10), 1286–1313. https://doi.org/10.1177/0886260506291658

Goetz, A. T., Shackelford, T. K., Starratt, V. G., & Mckibbin, W. F. (2008). Intimate partner violence. In J. D. Duntley & T. K. Shackelford (Eds.), *Evolutionary forensic psychology* (pp. 65–78). Oxford University Press. https://doi.org/10.1093/acprof:oso/9780195325188.003.0004

Grisso, J. A., Schwarz, D. F., Hirschinger, N., Sammel, M., Brensinger, C., Santanna, J., Lowe, R. A., Anderson, E., Shaw, L. M., Bethel, C. A., & Teeple, L. (1999). Violent injuries among women in an urban area. *New England Journal of Medicine, 341*(25), 1899–1905. https://doi.org/10.1056/nejm199912163412506

Guerrero, L. K., Andersen, P. A., Jorgensen, P. F., Spitzberg, B. H., & Eloy, S. V. (1995). Coping with the green-eyed monster: Conceptualizing and measuring communicative responses to romantic jealousy. *Western Journal of Communication*, *59*(4), 270–304. https://doi.org/10.1080/10570319509374523

Hamberger, L. K., & Guse, C. E. (2002). Men's and women's use of intimate partner violence in clinical samples. *Violence against Women*, *8*(11), 1301–1331. https://doi.org/10.1177/107780102762478028

Hamberger, L. K., Lohr, J. M., Bonge, D., & Tolin, D. F. (1997). An empirical classification of motivations for domestic violence. *Violence against Women, 3*(4), 401–423. https://doi.org/10.1177/1077801297003004005

Hamby, S. (2017). On defining violence, and why it matters. *Psychology of Violence, 7*(2), 167–180. https://doi.org/10.1037/vio0000117

Hamby, S., Finkelhor, D., & Turner, H. (2013). Perpetrator and victim gender patterns for 21 forms of youth victimization in the National Survey of Children's Exposure to Violence. *Violence and Victims*, *28*(6), 915–939. https://doi.org/10.1891/0886-6708.vv-d-12-00067

Hatfield, E., Greenberger, D., Traupmann, J., & Lambert, P. (1982). Equity and sexual satisfaction in recently married couples. *The Journal of Sex Research*, *18*(1), 18–32. https://doi.org/10.1080/00224498209551131

Hatfield, E., Traupmann, J., Sprecher, S., Utne, M., & Hay, J. (1985). Equity and intimate relations: Recent research. In W. J. Ickes (Ed.), *Compatible and incompatible relationships* (pp. 91–118). Springer-Verlag. https://link.springer.com/content/pdf/10.1007%2F978-1-4612-5044-9_5.pdf

Henningsen, D. D., Claire, M., Serewicz, M., & Carpenter, C. (2009). Predictors of comforting communication in romantic relationships. *International Journal of Communication*, *3*, 351–368. https://ijoc.org/index.php/ijoc/article/download/75/312

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). Most people are not WEIRD. *Nature*, *466*(7302), 29. https://doi.org/10.1038/466029a

Hill, R. (1945). Campus values in mate selection. *Journal of Home Economics*, *37*, 554–558.

Holtzworth-Munroe, A. (1992). Social skill deficits in maritally violent men: Interpreting the data using a social information processing model. *Clinical Psychology Review*, *12*(6), 605–617. https://doi.org/10.1016/0272-7358(92)90134-t

Holtzworth-Munroe, A., Meehan, J. C., Herron, K., Rehman, U., & Stuart, G. L. (2000). Testing the Holtzworth-Munroe and Stuart (1994) batterer typology. *Journal of Consulting and Clinical Psychology*, *68*(6), 1000–1019. https://doi.org/10.1037/0022-006x.68.6.1000

Hu, Q., Schaufeli, W. B., & Taris, T. W. (2013). Does equity mediate the effects of job demands and job resources on work outcomes? *Career Development International*, *18*(4), 357–376. https://doi.org/10.1108/cdi-12-2012-0126

Hudson, J. W., & Henze, L. F. (1969). Campus values in mate selection: A replication. *Journal of Marriage and the Family*, *31*(4), 772–775. https://doi.org/10.2307/349321

Hui, C. H., & Triandis, H. C. (1986). Individualism-collectivism. *Journal of Cross-Cultural Psychology*, *17*(2), 225–248. https://doi.org/10.1177/0022002186017002006

Infante, D. A. (1987). Aggressiveness. In J. C. McCroskey & J. A. Daly (Eds.), *Personality and interpersonal communication* (pp. 157–192). Sage Publications, Inc.

Infante, D. A., Chandler, T. A., & Rudd, J. E. (1989). Test of an argumentative skill deficiency model of interspousal violence. *Communication Monographs*, *56*(2), 163–177. https://doi.org/10.1080/03637758909390257

Infante, D. A., & Rancer, A. S. (1982). A conceptualization and measure of argumentativeness. *Journal of Personality Assessment*, *46*(1), 72–80. https://doi.org/10.1207/s15327752jpa4601_13

Jackson, S. M., Cram, F., & Seymour, F. W. (2000). Violence and sexual coercion in high school students' dating relationships. *Journal of Family Violence*, *15*(1), 23–36. https://doi.org/10.1023/a:1007545302987

Jacobson, N. S., Gottman, J. M., Gortner, E., Berns, S., & Wu Shortt, J. (1996). Psychological factors in the longitudinal course of battering: When do the couples split up? When does the abuse decrease? *Violence and Victims*, *11*(4), 371–392. https://doi.org/10.1891/0886-6708.11.4.371

Johnson, M. P. (1993, November). Violence against women in the American family: Are there two forms? *Pre-Conference Theory Construction and Research Methodology Workshop*. Annual meeting of the National Council on Family Relations, Baltimore, MD.

Johnson, M. P. (1995). Patriarchal terrorism and common couple violence: Two forms of violence against women. *Journal of Marriage and the Family, 57*(2), 283–294. https://doi.org/10.2307/353683

Johnson, M. P. (2006a). Violence and abuse in personal relationships: Conflict, terror, and resistance in intimate partnerships. In A. L. Vangelisti & D. Perlman (Eds.), *The Cambridge handbook of personal relationships* (pp. 557–576). Cambridge University Press.

Johnson, M. P. (2006b). Conflict and control: Gender symmetry and asymmetry in domestic violence. *Violence against Women*, *12*(11), 1003–1018. https://doi.org/10.1177/1077801206293328

Johnson, M. P. (2008). *A typology of domestic violence: Intimate terrorism, violent resistance, and situational couple violence*. Northeastern University Press.

Johnson, M. P. (2011). Gender and types of intimate partner violence: A response to an anti-feminist literature review. *Aggression and Violent Behavior*, *16*(4), 289–296. https://doi.org/10.1016/j.avb.2011.04.006

Johnson, M. P., & Ferraro, K. J. (2000). Research on domestic violence in the 1990s: Making distinctions. *Journal of Marriage and Family*, *62*(4), 948–963. https://doi.org/10.1111/j.1741-3737.2000.00948.x

Johnson, M. P., & Leone, J. M. (2005). The differential effects of intimate terrorism and situational couple violence. *Journal of Family Issues*, *26*(3), 322–349. https://doi.org/10.1177/0192513x04270345

Jose, A., & O'Leary, K. D. (2009). Prevalence of partner aggression in representative and clinic samples. In K. D. O'Leary & E. M. Woodin (Eds.), *Psychological and physical aggression in couples: Causes and interventions.* (pp. 15–35). American Psychological Association. https://doi.org/10.1037/11880-001

Kelly, J. B., & Johnson, M. P. (2008). Differentiation among types of intimate partner violence: Research update and implications for interventions. *Family Court Review*, *46*(3), 476–499. https://doi.org/10.1111/j.1744-1617.2008.00215.x

Kernsmith, P. (2005). Exerting power or striking back: A gendered comparison of motivations for domestic violence perpetration. *Violence and Victims*, *20*(2), 173–185. https://doi.org/10.1891/vivi.2005.20.2.173

Kim, H. K., Laurent, H. K., Capaldi, D. M., & Feingold, A. (2008). Men's aggression toward women: A 10-year panel study. *Journal of Marriage and Family*, *70*(5), 1169–1187. https://doi.org/10.1111/j.1741-3737.2008.00558.x

Krizan Z. (2018). The Narcissism Spectrum Model: A Spectrum Perspective on Narcissistic Personality. In: Hermann A., Brunell A., Foster J. (Eds.) *Handbook of Trait Narcissism*. Springer, Cham. https://doi.org/10.1007/978-3-319-92171-6_2

Krug, E., Dahlberg, L., Mercy, J., Zwi, A., & Lozano, R. (2002). *World report on violence and health*. https://apps.who.int/iris/bitstream/handle/10665/42495/9241545615_eng.pdf

Kurzban, R., McCabe, K., Smith, V. L., & Wilson, B. J. (2001). Incremental commitment and reciprocity in a real-time public goods game. *Personality and Social Psychology Bulletin*, *27*(12), 1662–1673. https://doi.org/10.1177/01461672012712009

Kyriacou, D. N., Anglin, D., Taliaferro, E., Stone, S., Tubb, T., Linden, J. A., Muelleman, R., Barton, E., & Kraus, J. F. (1999). Risk factors for injury to women from domestic violence. *New England Journal of Medicine*, *341*(25), 1892–1898. https://doi.org/10.1056/nejm199912163412505

Langhinrichsen-Rohling, J. (2009). Controversies involving gender and intimate partner violence in the United States. *Sex Roles*, *62*(3-4), 179–193. https://doi.org/10.1007/s11199-009-9628-2

Langhinrichsen-Rohling, J., McCullars, A., & Misra, T. A. (2012). Motivations for men and women's intimate partner violence perpetration: A comprehensive review. *Partner Abuse*, *3*(4), 429–468. https://doi.org/10.1891/1946-6560.3.4.429

Langlands, R. L., Ward, T., & Gilchrist, E. (2009). Applying the good lives model to male perpetrators of domestic violence. *Behaviour Change*, *26*(2), 113–129. https://doi.org/10.1375/bech.26.2.113

Lee, Y.-S., & Hadeed, L. (2009). Intimate partner violence among Asian immigrant communities. *Trauma, Violence, & Abuse*, *10*(2), 143–170. https://doi.org/10.1177/1524838009334130

Leisring, P. A. (2012). Physical and emotional abuse in romantic relationships. *Journal of Interpersonal Violence*, *28*(7), 1437–1454. https://doi.org/10.1177/0886260512468236

Leonard, K. E., & Quigley, B. M. (1999). Drinking and marital aggression in newlyweds: An event-based analysis of drinking and the occurrence of husband marital

aggression. *Journal of Studies on Alcohol*, *60*(4), 537–545. https://doi.org/10.15288/jsa.1999.60.537

Leonard, K. E., & Quigley, B. M. (2016). Thirty years of research show alcohol to be a cause of intimate partner violence: Future research needs to identify who to treat and how to treat them. *Drug and Alcohol Review*, *36*(1), 7–9. https://doi.org/10.1111/dar.12434

Leone, J. M., Lape, M. E., & Xu, Y. (2013). Women's decisions to not seek formal help for partner violence: A comparison of intimate terrorism and situational couple violence. *Journal of Interpersonal Violence, 29*(10), 1850–1876. https://doi.org/10.1177/0886260513511701

Leslie, E., & Wilson, R. (2020). Sheltering in place and domestic violence: Evidence from calls for service during COVID-19. *Journal of Public Economics*, *189*. https://doi.org/10.1016/j.jpubeco.2020.104241

Love, H. A., Spencer, C. M., May, S. A., Mendez, M., & Stith, S. M. (2020). Perpetrator risk markers for intimate terrorism and situational couple violence: A meta-analysis. *Trauma, Violence, & Abuse, 21*(5), 922–931. https://doi.org/10.1177/1524838018801331

Makepeace, J. M. (1986). Gender differences in courtship violence victimization. *Family Relations*, *35*(3), 383–388. https://doi.org/10.2307/584365

Manchikanti Gómez, A. (2010). Testing the cycle of violence hypothesis: Child abuse and adolescent dating violence as predictors of intimate partner violence in young adulthood. *Youth & Society*, *43*(1), 171–192. https://doi.org/10.1177/0044118x09358313

Meier, L. L., & Semmer, N. K. (2012). Lack of reciprocity and strain: Narcissism as a moderator of the association between feeling under-benefited and irritation. *Work & Stress*, *26*(1), 56–67. https://doi.org/10.1080/02678373.2012.657038

Miller, B. A., Wilsnack, S. C., & Cunradi, C. B. (2000). Family violence and victimization: Treatment issues for women with alcohol problems. *Alcoholism: Clinical and Experimental Research*, *24*(8), 1287–1297. https://doi.org/10.1111/j.1530-0277.2000.tb02095.x

Mills, L. G., Barocas, B., Butters, R. P., & Ariel, B. (2019). A randomized controlled trial of restorative justice-informed treatment for domestic violence crimes. *Nature Human Behaviour*, *3*(12), 1284–1294. https://doi.org/10.1038/s41562-019-0724-1

Moffitt, T. E., Caspi, A., Krueger, R. F., Magdol, L., Margolin, G., Silva, P. A., & Sydney, R. (1997). Do partners agree about abuse in their relationship?: A psychometric evaluation of interpartner agreement. *Psychological Assessment*, *9*(1), 47–56. https://doi.org/10.1037/1040-3590.9.1.47

Muñoz-Rivas, M. J., Graña, J. L., O'Leary, K. D., & González, M. P. (2007). Aggression in adolescent dating relationships: Prevalence, justification, and health consequences. *Journal of Adolescent Health*, *40*(4), 298–304. https://doi.org/10.1016/j.jadohealth.2006.11.137

National Domestic Violence Hotline. (n.d.). *Understand relationship abuse*. The Hotline. https://www.thehotline.org/identify-abuse/understand-relationship-abuse/

Neal, A. M., Dixon, K. J., Edwards, K. M., & Gidycz, C. A. (2015). Why did she do it? College women's motives for intimate partner violence perpetration. *Partner Abuse*, *6*(4), 425–441. https://doi.org/10.1891/1946-6560.6.4.425

Neal, A. M., & Edwards, K. M. (2017). Perpetrators' and victims' attributions for IPV: A critical review of the literature. *Trauma, Violence, & Abuse*, *18*(3), 239–267. https://doi.org/10.1177/1524838015603551

Nettle, D., & Frankenhuis, W. E. (2019). The evolution of life-history theory: A bibliometric analysis of an interdisciplinary research area. *Proceedings of the Royal Society B: Biological Sciences*, *286*(1899). https://doi.org/10.1098/rspb.2019.0040

Nielsen, S. K., Hardesty, J. L., & Raffaelli, M. (2015). Exploring variations within situational couple violence and comparisons with coercive controlling violence and no violence/no control. *Violence against Women*, *22*(2), 206–224. https://doi.org/10.1177/1077801215599842

Nisbett, R. E., & Cohen, D. (1996). *Culture of honor: The psychology of violence in the South.* Westview Press.

O'Leary, K. D., & Maiuro, R. D. (Eds.). (2001). *Psychological abuse in violent domestic relations*. Springer.

Olsson, M., Gullberg, A., & Tegelström, H. (1996). Mate guarding in male sand lizards (lacerta agilis). *Behaviour*, *133*(5-6), 367–386. https://doi.org/10.1163/156853996x00503

Pagelow, M. D. (1981). Woman-battering: Victims and their experiences. In *Open WorldCat*. SAGE Publications, Inc.

Pan, H. S., Neidig, P. H., & O'Leary, K. D. (1994). Predicting mild and severe husband-to-wife physical aggression. *Journal of Consulting and Clinical Psychology*, *62*(5), 975–981. https://doi.org/10.1037/0022-006x.62.5.975

Pan, S., Wang, L., Koenig, H. G., & Wang, Z. (2016). Tobacco and alcohol use in Muslims compared with local Han population in Mainland China. *Journal of Psychiatry &*

Mental Disorders, *1*(1), 1003. https://austinpublishinggroup.com/psychiatry-mental-disorders/fulltext/jpmd-v1-id1003.php

Pence, E. L. (1999). Some thoughts on philosophy. In M. F. Shepard & E. L. Pence (Eds.), *Coordinating community responses to domestic violence: Lessons from Duluth and beyond* (pp. 24–40). Sage Publications, Inc. https://doi.org/10.4135/9781452231952.n2

Pence, E., & Paymar, M. (1993). *Education groups for men who batter: The Duluth model*. Springer Publishing Company. https://doi.org/10.1891/9780826179913

Peterson, C., Kearns, M. C., McIntosh, W. L., Estefan, L. F., Nicolaidis, C., McCollister, K. E., Gordon, A., & Florence, C. (2018). Lifetime economic burden of intimate partner violence among U.S. adults. *American Journal of Preventive Medicine, 55*(4), 433–444. https://doi.org/10.1016/j.amepre.2018.04.049

Pincus, A. L., Ansell, E. B., Pimentel, C. A., Cain, N. M., Wright, A. G. C., & Levy, K. N. (2009). Initial construction and validation of the pathological narcissism inventory. *Psychological Assessment, 21*(3), 365–379. https://doi.org/10.1037/a0016530

Price, B. J., & Rosenbaum, A. (2009). Batterer intervention programs: A report from the field. *Violence and Victims*, *24*(6), 757–770. https://doi.org/10.1891/0886-6708.24.6.757

Probst, C., Manthey, J., & Rehm, J. (2017). Understanding the prevalence of lifetime abstinence from alcohol: An ecological study. *Drug and Alcohol Dependence, 178*, 126–129. https://doi.org/10.1016/j.drugalcdep.2017.05.008

Raskin, R. N., & Hall, C. S. (1979). A narcissistic personality inventory. *Psychological Reports*, *45*(2), 590–590. https://doi.org/10.2466/pr0.1979.45.2.590

Robertson, K., & Murachver, T. (2007). It takes two to tangle: Gender symmetry in intimate partner violence. *Basic and Applied Social Psychology*, *29*(2), 109–118. https://doi.org/10.1080/01973530701331247

Rodriguez, E., Lasch, K., Chandra, P., & Lee, J. (2001). Family violence, employment status, welfare benefits, and alcohol drinking in the United States: What is the relation? *Journal of Epidemiology & Community Health*, *55*(3), 172–178. https://doi.org/10.1136/jech.55.3.172

Romero-Martínez, Á., Lila, M., & Moya-Albiol, L. (2016). Empathy impairments in intimate partner violence perpetrators with antisocial and borderline traits: A key factor in the risk of recidivism. *Violence and Victims*, *31*(2), 347–360. https://doi.org/10.1891/0886-6708.vv-d-14-00149

Rosenthal, R., & Rosnow, R. L. (1991). *Essentials of behavioral research: Methods and data analysis* (2nd ed.). Mcgraw-Hill. https://dash.harvard.edu/handle/1/34945148

Ross, J. M. (2011). Personality and situational correlates of self-reported reasons for intimate partner violence among women versus men referred for batterers' intervention. *Behavioral Sciences & the Law*, *29*(5), 711–727. https://doi.org/10.1002/bsl.1004

Ruddle, A., Pina, A., & Vasquez, E. (2017). Domestic violence offending behaviors: A review of the literature examining childhood exposure, implicit theories, trait aggression and anger rumination as predictive factors. *Aggression and Violent Behavior*, *34*, 154–165. https://doi.org/10.1016/j.avb.2017.01.016

Rusbult, C. E., & Buunk, B. P. (1993). Commitment processes in close relationships: An interdependence analysis. *Journal of Social and Personal Relationships*, 10(2), 175-204. https://doi.org/10.1177/026540759301000202

Ryan, K. M., Weikel, K., & Sprechini, G. (2008). Gender differences in narcissism and courtship violence in dating couples. *Sex Roles, 58*(11–12), 802–813. https://doi.org/10.1007/s11199-008-9403-9

Sabourin, T. C., Infante, D. A., & Rudd, J. (1993). Verbal aggression in marriages: A comparison of violent, distressed but nonviolent, and nondistressed couples. *Human Communication Research, 20*(2), 245–267. https://doi.org/10.1111/j.1468-2958.1993.tb00323.x

SAMHSA. (2019). *Key substance use and mental health indicators in the United States: Results from the 2018 national survey on drug use and health*. SAMHSA. https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHNationalFindingsReport2018/NSDUHNationalFindingsReport2018.pdf

Sampson, R. J., & Laub, J. H. (2003). Life-course desisters? Trajectories of crime among delinquent boys followed to age 70. *Criminology, 41*(3), 555–592. https://doi.org/10.1111/j.1745-9125.2003.tb00997.x

Saunders, D. G. (1986). When battered women use violence: Husband-abuse or self-defense? *Violence and Victims, 1*(1), 47–60. https://doi.org/10.1891/0886-6708.1.1.47

Saunders, D. G. (1988). Other "truths" about domestic violence: A reply to McNeely and Robinson-Simpson. *Social Work, 33*(2), 179–183. https://doi.org/10.1093/sw/33.2.179

Schaufeli, W. (2006). The balance of give and take: Toward a social exchange model of burnout. *International Journal of Social Psychology, 19*(1), 75–119.

https://www.cairn.info/revue-internationale-de-psychologie-sociale-2006-1-page-75.htm

Schechter, S. (1982). *Women and male violence: The visions and struggles of the Battered Women's Movement*. South End Press. https://books.google.com/books?id=rVQrxDKihxwC&lpg=PP9&ots=JdSFqzLUU6&lr&pg=PP1#v=onepage&q&f=false4bT0dk#v=onepage&q&f=false

Schneider, C., & Brimhall, A. S. (2013). From scared to repaired: Using an attachment-based perspective to understand situational couple violence. *Journal of Marital and Family Therapy*, *40*(3), 367–379. https://doi.org/10.1111/jmft.12023

Schulman, M. A. (1979). *Survey of spousal violence against women in Kentucky*. Office of Justice Programs. https://www.ojp.gov/ncjrs/virtual-library/abstracts/survey-spousal-violence-against-women-kentucky

Sell, A., Tooby, J., & Cosmides, L. (2009). Formidability and the logic of human anger. *Proceedings of the National Academy of Sciences*, *106*(35), 15073–15078. https://doi.org/10.1073/pnas.0904312106

Shorey, R. C., Cornelius, T. L., & Idema, C. (2011). Trait anger as a mediator of difficulties with emotion regulation and female-perpetrated psychological aggression. *Violence and Victims*, *26*(3), 271–282. https://doi.org/10.1891/0886-6708.26.3.271

Shorey, R. C., Febres, J., Brasfield, H., & Stuart, G. L. (2011). A descriptive investigation of proximal factors to female perpetrated psychological aggression in dating relationships. *Partner Abuse*, *2*(2), 131–146. https://doi.org/10.1891/1946-6560.2.2.131

Siegrist, J. (2002). Effort-reward imbalance at work and health. In P. L. Perrewe & D. C. Ganster (Eds.), *Historical and current perspectives on stress and health* (Vol. 2, pp.

261–291). Emerald Group Publishing. https://doi.org/10.1016/s1479-3555(02)02007-3

Smith, S. G., Zhang, X., Basile, K. C., Merrick, M. T., Wang, J., Kresnow, M., & Chen, J. (2018). *The National Intimate Partner and Sexual Violence Survey: 2015 data brief – Updated release*. https://www.cdc.gov/violenceprevention/pdf/2015data-brief508.pdf

Smyth, K. F., Goodman, L., & Glenn, C. (2006). The full-frame approach: A new response to marginalized women left behind by specialized services. *American Journal of Orthopsychiatry*, *76*(4), 489–502. https://doi.org/10.1037/0002-9432.76.4.489

Snead, A. L., Bennett, V. E., & Babcock, J. C. (2018). Treatments that work for intimate partner violence: Beyond the Duluth Model. In E. Jeglic & C. Calkins (Eds.), *New frontiers in offender treatment* (pp. 269–285). Springer. https://doi.org/10.1007/978-3-030-01030-0_14

Spencer, C. M., Stith, S. M., & Cafferky, B. (2020). What puts individuals at risk for physical intimate partner violence perpetration? A meta-analysis examining risk markers for men and women. *Trauma, Violence, & Abuse,* Advance online publication. https://doi.org/10.1177/1524838020925776

Sprecher, S. (1986). The relation between inequity and emotions in close relationships. *Social Psychology Quarterly*, *49*(4), 309–321. https://doi.org/10.2307/2786770

Springer, C. A. (2001). *The role of attribution of intent in child abuse* [Doctoral Dissertation, Memphis State University]. Dissertation Abstracts International, 61, 3862.

Stafford, L. (2011). Measuring relationship maintenance behaviors: Critique and development of the revised relationship maintenance behavior scale. *Journal of Social and Personal Relationships*, *28*(2), 278–303. https://doi.org/10.1177/0265407510378125

Stairmand, M., Polaschek, D. L. L., & Dixon, L. (2020). Putting coercive actions in context: Reconceptualizing motives for intimate partner violence perpetration. *Aggression and Violent Behavior*, *51*, 101388. https://doi.org/10.1016/j.avb.2020.101388

Stark, E. (2006). Commentary on Johnson's "Conflict and control: Gender symmetry and asymmetry in domestic violence." *Violence against Women*, *12*(11), 1019–1025. https://doi.org/10.1177/1077801206293329

Stets, J. E., & Straus, M. A. (1989). The marriage license as a hitting license: A comparison of assaults in dating, cohabiting, and married couples. *Journal of Family Violence*, *4*(2), 161–180. https://doi.org/10.1007/bf01006627

Stith, S. M., Rosen, H., McCollum, E. E., & Thomsen, C. J. (2004). Treating intimate partner violence within intact couple relationships: Outcomes of multi-couple versus individual couple therapy. *Journal of Marital and Family Therapy*, *30*(3), 305–318. https://doi.org/10.1111/j.1752-0606.2004.tb01242.x

Straus, M. A. (1993). Physical assaults by wives: A major social problem. In R. J. Gelles & D. R. Loseke (Eds.), *Current controversies on family violence* (pp. 67–87). Sage Publications, Inc. http://www.498a.org/contents/dv/WomenDomesticViolence.pdf

Straus, M. A. (2004). Prevalence of violence against dating partners by male and female university students worldwide. *Violence against Women*, *10*(7), 790–811. https://doi.org/10.1177/1077801204265552

Straus, M. A. (2008). Dominance and symmetry in partner violence by male and female university students in 32 nations. *Children and Youth Services Review*, *30*(3), 252–275. https://doi.org/10.1016/j.childyouth.2007.10.004

Straus, M. A. (2010). Thirty years of denying the evidence on gender symmetry in partner violence: Implications for prevention and treatment. *Partner Abuse*, *1*(3), 332–362. https://doi.org/10.1891/1946-6560.1.3.332

Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The revised conflict tactics scales (CTS2). *Journal of Family Issues*, *17*(3), 283–316. https://doi.org/10.1177/019251396017003001

Swogger, M. T., Walsh, Z., & Kosson, D. S. (2007). Domestic violence and psychopathic traits: Distinguishing the antisocial batterer from other antisocial offenders. *Aggressive Behavior*, *33*(3), 253–260. https://doi.org/10.1002/ab.20185

Taris, T. W., Kalimo, R., & Schaufeli, W. B. (2002). Inequity at work: Its measurement and association with worker health. *Work & Stress*, *16*(4), 287–301. https://doi.org/10.1080/0267837021000054500

Tolan, P., Gorman-Smith, D., & Henry, D. (2006). Family violence. *Annual Review of Psychology*, *57*(1), 557–583. https://doi.org/10.1146/annurev.psych.57.102904.190110

Tolmacz, R., & Mikulincer, M. (2011). The sense of entitlement in romantic relationships—Scale construction, factor structure, construct validity, and its associations with attachment orientations. *Psychoanalytic Psychology*, *28*(1), 75–94. https://doi.org/10.1037/a0021479

Tooby, J., & Cosmides, L. (1996). Friendship and the banker's paradox: Other pathways to the evolution of adaptations for altruism. In W. G. Runciman, J. M. Smith, & R. I.

M. Dunbar (Eds.), *Evolution of social behaviour patterns in primates and man* (pp. 119–143). Oxford University Press. https://www.cep.ucsb.edu/papers/friendship.pdf

Tooby, J., Cosmides, L., & Price, M. E. (2006). Cognitive adaptations forn-person exchange: The evolutionary roots of organizational behavior. *Managerial and Decision Economics*, *27*(2-3), 103–129. https://doi.org/10.1002/mde.1287

Utne, M. K., Hatfield, E., Traupmann, J., & Greenberger, D. (1984). Equity, marital satisfaction, and stability. *Journal of Social and Personal Relationships*, *1*(3), 323–332. https://doi.org/10.1177/0265407584013005

Vagi, K. J., Rothman, E. F., Latzman, N. E., Tharp, A. T., Hall, D. M., & Breiding, M. J. (2013). Beyond correlates: A review of risk and protective factors for adolescent dating violence perpetration. *Journal of Youth and Adolescence*, *42*(4), 633–649. https://doi.org/10.1007/s10964-013-9907-7

Vissing, Y. M., Straus, M. A., Gelles, R. J., & Harrop, J. W. (1991). Verbal aggression by parents and psychosocial problems of children. *Child Abuse & Neglect*, *15*(3), 223–238. https://doi.org/10.1016/0145-2134(91)90067-n

Wagers, S., & Radatz, D. L. (2020). Emerging treatment models and programs in intimate partner violence treatment: An introduction. *Partner Abuse*, *11*(3), 202–227. https://doi.org/10.1891/pa-2020-0015

Waits, K. (1998). Battered women and their children: Lessons from one woman's story. *Houston Law Review*, *35*, 29. http://www.thelizlibrary.org/liz/waits.html

Walster, E., Walster, G. W., & Traupmann, J. (1978). Equity and premarital sex. *Journal of Personality and Social Psychology*, *36*(1), 82–92. https://doi.org/10.1037/0022-3514.36.1.82

Walters, G. D. (2007). Measuring proactive and reactive criminal thinking with the PICTS. *Journal of Interpersonal Violence*, *22*(4), 371–385. https://doi.org/10.1177/0886260506296988

Warshaw, C., Brashler, P., & Gil, J. (2009). Mental health consequences of intimate partner violence. In C. Mitchell & D. Anglin (Eds.), *Intimate partner violence: A health-based perspective* (pp. 147–171). Oxford University Press. http://www.nationalcenterdvtraumamh.org/wp-content/uploads/2015/10/Mitchell-Chapter-12.pdf

Watson, P. J., & Biderman, M. D. (1993). Narcissistic personality inventory factors, splitting, and self-consciousness. *Journal of Personality Assessment*, *61*(1), 41–57. https://doi.org/10.1207/s15327752jpa6101_4

Weitzman, S. (2000). *"Not to people like us": Hidden abuse in upscale marriages*. Basic Books.

Wiesner, M., Capaldi, D. M., & Kim, H. K. (2008). Arrest trajectories across a 17-year span for young men: Relation to dual taxonomies and self-reported offense trajectories. *Criminology*, *45*(4), 835–863. https://doi.org/10.1111/j.1745-9125.2007.00099.x

Wilson, M. I., & Daly, M. (1992). Who kills whom in spouse killings? On the exceptional sex ratio of spousal homicides in the United States. *Criminology*, *30*(2), 189–216. https://doi.org/10.1111/j.1745-9125.1992.tb01102.x

Wilson, M., & Daly, M. (1993). An evolutionary psychological perspective on male sexual proprietariness and violence against wives. *Violence and Victims*, *8*(3), 271–294. https://doi.org/10.1891/0886-6708.8.3.271

Wilson, M., & Daly, M. (1996). Male sexual proprietariness and violence against wives. *Current Directions in Psychological Science*, *5*(1), 2–7. https://doi.org/10.1111/1467-8721.ep10772668

Wilson, M., & Daly, M. (1998). Lethal and nonlethal violence against wives and the evolutionary psychology of male sexual proprietariness. In R. E. Dobash & R. P. Dobash (Eds.), *Rethinking violence against women* (pp. 199–230). Sage Publications, Inc. https://doi.org/10.4135/9781452243306.n8

Winstok, Z., & Straus, M. A. (2011). Gender differences in intended escalatory tendencies among marital partners. *Journal of Interpersonal Violence*, *26*(18), 3599–3617. https://doi.org/10.1177/0886260511403750

Winstok, Z., Weinberg, M., & Smadar-Dror, R. (2017). Studying partner violence to understand gender motivations - or vice-versa? *Aggression and Violent Behavior*, *34*, 120–127. https://doi.org/10.1016/j.avb.2017.01.022

World Health Organization. (2013). *Global and regional estimates of violence against women: Prevalence and health effects of intimate partner violence and non-partner sexual violence*. https://apps.who.int/iris/handle/10665/85239

Yakubovich, A. R., Stöckl, H., Murray, J., Melendez-Torres, G. J., Steinert, J. I., Glavin, C. E. Y., & Humphreys, D. K. (2018). Risk and protective factors for intimate partner violence against women: Systematic review and meta-analyses of prospective-longitudinal studies. *American Journal of Public Health*, *108*(7), 1–11. https://doi.org/10.2105/AJPH.2018.304428

Yau, J. H. Y., Wong, J. H. Y., & Fong, D. Y. T. (2021). Economic abuse as a form of intimate partner violence: A literature review of the instruments and mental well-

being outcomes. *Violence and Victims*, *36*(4), 479–492. https://doi.org/10.1891/VV-D-19-00082

Yllo, K., Bograd, M., & McHugh, M. C. (1989). Feminist perspectives on wife abuse. *Violence and Victims*, *4*(1), 63–66. https://doi.org/10.1891/0886-6708.4.1.63

Yoon, E., Adams, K., Hogge, I., Bruner, J. P., Surya, S., & Bryant, F. B. (2015). Development and validation of the Patriarchal Beliefs Scale. *Journal of Counseling Psychology*, *62*(2), 264–279. https://doi.org/10.1037/cou0000056

Zarling, A., Bannon, S., & Berta, M. (2019). Evaluation of acceptance and commitment therapy for domestic violence offenders. *Psychology of Violence*, *9*(3), 257–266. https://doi.org/10.1037/vio0000097

Zietsch, B. P., & Sidari, M. J. (2019). A critique of life history approaches to human trait covariation. *Evolution and Human Behavior*, *41*(6). https://doi.org/10.1016/j.evolhumbehav.2019.05.007

Appendix A: Study 1 Survey

Start of Block: Captcha

Q343 Please select the button below to make sure you are not a robot.

End of Block: Captcha

Start of Block: Demographics

Q2 **What gender do you identify with?**

- ○ Man (1)
- ○ Woman (2)
- ○ Trans woman, trans feminine, or transgender male to female (3)
- ○ Trans man, trans masculine, or transgender female to male (5)
- ○ Non-binary/Gender Non-conforming, Genderqueer, or fluid (4)
- ○ Prefer not to answer (6)
- ○ Prefer to self-describe (7)

_____

Q3 **What is your age (in years)?**

_____

Q296 **What is your current relational status?**

- ○ Not seeing anyone (1)
- ○ Casually dating (4)
- ○ Seriously dating (5)
- ○ Engaged (6)
- ○ Married (7)
- ○ Widowed (8)
- ○ Other (9) _____

Display This Question:

If What is your current relational status? = Casually dating

And What is your current relational status? = Seriously dating

And What is your current relational status? = Engaged

And What is your current relational status? = Married

Q127 **How long (in years) have you been in your current relationship? Please put your best estimate if you do not know.**

_____

Q128 **What is your sexual orientation?**

- ○ Heterosexual (1)
- ○ Bisexual (2)
- ○ Gay (7)
- ○ Lesbian (3)
- ○ Asexual (4)
- ○ Pansexual (8)
- ○ Queer (9)
- ○ Undecided (10)
- ○ I prefer not to answer (5)
- ○ Prefer to self-describe: (6)

_____

Q129 Which of the following best describes your race/ethnicity? (select all that apply)

- ☐ Indigenous, Native American or Alaska Native (1)
- ☐ Asian or Asian American (10)
- ☐ Black or African American (2)
- ☐ Hispanic or Latino/a/x (3)
- ☐ Middle Eastern or North African (4)
- ☐ Native Hawaiian or Other Pacific Islander (5)
- ☐ White or Caucasian (6)
- ☐ Multiracial (7)
- ☐ Prefer not to answer (8)
- ☐ Prefer to self-describe: (11)

_____

End of Block: Demographics

Start of Block: Condition 1 (PE high, EB high, PC high)

Q253 **Please read and imagine yourself in the hypothetical scenario below. Then, respond to the questions following the scenario:**

Your relationship: A mutual friend has introduced you to someone who you hit it off with romantically. After multiple months of dating, you two decide to move in together to a small apartment downtown. At first in the relationship, you two seemed like a very even match, but after about a year, you start realizing that you are much more physically attractive, intelligent, financially stable, and positive than this person. You also notice that you invest all the time and energy that you have available into your relationship. Plus, you invest overall more time and energy than your partner into the relationship. You love this person and you believe they are better than the other options available. So, when you think about your future with this person, you would like to make this relationship work, despite whatever future issues arise.

End of Block: Condition 1 (PE high, EB high, PC high)

Start of Block: Condition 2 (PE low, EB high, PC high)

Q331 **Please read and imagine yourself in the hypothetical scenario below. Then, respond to the questions following the scenario:**
Your relationship: A mutual friend has introduced you to someone who you hit it off with romantically. After multiple months of dating, you two decide to move in together to a small apartment downtown. At first in the relationship, you two seemed like a very even match, but after about a year, you start realizing that you are much less physically attractive, intelligent, financially stable, and positive than your partner. However, you also notice that you invest all the time and energy that you have available into your relationship. Plus, you invest overall more time and energy than your partner does into the relationship. You love this person and you believe they are better than the other options available. So, when you think about your future with this person, you would like to make this relationship work, despite whatever future issues arise.

End of Block: Condition 2 (PE low, EB high, PC high)

Start of Block: Condition 3 (PE high, EB low, PC high)

Q336 **Please read and imagine yourself in the hypothetical scenario below. Then, respond to the questions following the scenario:**

Your relationship: A mutual friend has introduced you to someone who you hit it off with romantically. After multiple months of dating, you two decide to move in together to a small apartment downtown. At first in the relationship, you two seemed like a very even match, but after about a year, you start realizing that you are much more physically attractive, intelligent, financially stable, and positive than your partner. You also notice that you invest all the limited time and energy that you have available into your relationship, although in comparison, your partner invests overall more time and energy than you do into the relationship. You love this person and you believe they are better than the other options available. So, when you think about your future with this person, you would like to make this relationship work, despite whatever future issues arise.

End of Block: Condition 3 (PE high, EB low, PC high)

Start of Block: Condition 4 (PE High, EB high, PC low)

Q341 **Please read and imagine yourself in the hypothetical scenario below. Then, respond to the questions following the scenario:**
Your relationship: A mutual friend has introduced you to someone who you hit it off with romantically. After multiple months of dating, you two decide to move in together to a small apartment downtown. At first in the relationship, you two seemed like a very even match, but after about a year, you start realizing that you are much more physically attractive, intelligent, financially stable, and positive than your partner. While you do not invest all the time and energy you have available into your relationship, you notice that you invest overall more time and energy than your partner does into the relationship. You love this person and you believe they are better than the other options available. So, when you think about your future with this person, you would like to make this relationship work, despite whatever future issues arise.

End of Block: Condition 4 (PE High, EB high, PC low)

Start of Block: Condition 5 (PE hi, EB low, PC low)

Q346 **Please read and imagine yourself in the hypothetical scenario below. Then, respond to the questions following the scenario:**
Your relationship:
A mutual friend has introduced you to someone who you hit it off with romantically. After

multiple months of dating, you two decide to move in together to a small apartment downtown. At first in the relationship, you two seemed like a very even match, but after about a year, you start realizing that you are much more physically attractive, intelligent, financially stable, and positive than your partner. However, you also notice that you do not invest all the time and energy you have available into your relationship. Plus, you invest overall less time and energy than your partner does into the relationship. You love this person and you believe they are better than the other options available. So, when you think about your future with this person, you would like to make this relationship work, despite whatever future issues arise.

End of Block: Condition 5 (PE hi, EB low, PC low)

Start of Block: Condition 6 (PE low, EB low, PC hi)

Q351 **Please read and imagine yourself in the hypothetical scenario below. Then, respond to the questions following the scenario:**
Your relationship: A mutual friend has introduced you to someone who you hit it off with romantically. After multiple months of dating, you two decide to move in together to a small apartment downtown. At first in the relationship, you two seemed like a very even match, but after about a year, you start realizing that you are much less physically attractive, intelligent, financially stable, and positive than your partner. You also notice that you invest all the limited time and energy that you have available into your relationship, although in comparison your partner invests overall more time and energy than you do into the relationship. You love this person and you believe they are better than the other options available. So, when you think about your future with this person, you would like to make this relationship work, despite whatever future issues arise.

End of Block: Condition 6 (PE low, EB low, PC hi)

Start of Block: Condition 7 (PE low, EB high, PC low)

Q356 **Please read and imagine yourself in the hypothetical scenario below. Then, respond to the questions following the scenario:**
Your relationship: A mutual friend has introduced you to someone who you hit it off with romantically. After multiple months of dating, you two decide to move in together to a small apartment downtown. At first in the relationship, you two seemed like a very even match. Now it has been one year since you entered a relationship with this person and you have

come to realize that you are much less physically attractive, intelligent, financially stable, and positive than your partner. While you do not invest all the time and energy you have available into your relationship, you have taken note that you invest overall more time and energy than your partner does into the relationship. You love your partner, and when you consider your future with them, you decide that your partner is better than the alternatives available to you. So, you would like to make your relationship work, no matter the future issues that arise with them.

End of Block: Condition 7 (PE low, EB high, PC low)

Start of Block: Condition 8 (PE low, EB low, PC low)

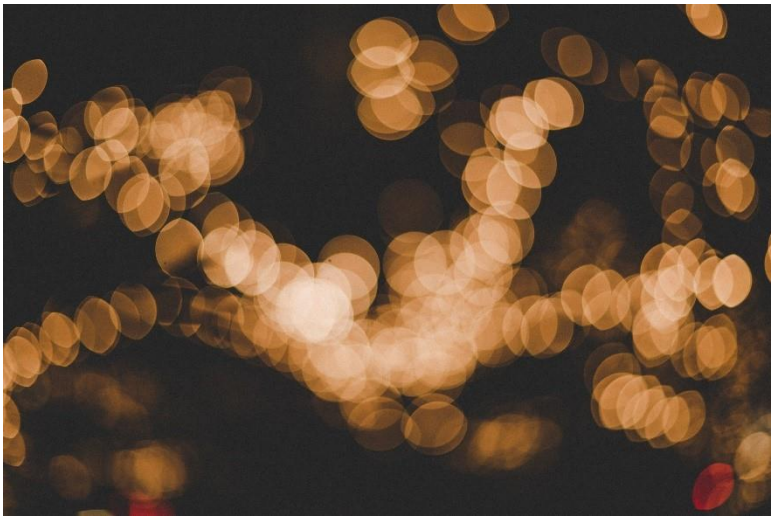
Q361 **Please read and imagine yourself in the hypothetical scenario below. Then, respond to the questions following the scenario:**
Your relationship: A mutual friend has introduced you to someone who you hit it off with romantically. After multiple months of dating, you two decide to move in together to a small apartment downtown. At first in the relationship, you two seemed like a very even match, but after about a year, you start realizing that you are much less physically attractive, intelligent, financially stable, and positive than your partner. You also notice that you do not invest all the time and energy you have available into your relationship. Plus, you invest overall less time and energy than your partner does into the relationship. You love this person and you believe they are better than the other options available. So, when you think about your future with this person, you would like to make this relationship work, despite whatever future issues arise.

End of Block: Condition 8 (PE low, EB low, PC low)

Start of Block: Scenario

Q363 **The Scenario:**
Today is your company's annual holiday party that you have been looking forward to attending with your partner for weeks. At the party, everything seems to be going well and everyone seems to be getting along with your significant other. However, mid-way through the event, you notice that your partner is enthusiastically chatting with and enjoying the company of a very attractive coworker whom you've had very limited interaction with in the

past. You also notice your partner is laughing and joking with this person more than they ever do with you, and at one point, they even lightly touch the other person on the shoulder.



End of Block: Scenario

Start of Block: Conflict Tactics Scale 2

Q304 How would you feel like reacting towards your romantic partner once you are in private with them? This is regardless to how you are likely to actually act.

	1 (not at all likely) (1)	2 (somewhat likely) (2)	3 (moderately likely) (3)	4 (likely) (4)	5 (very likely) (5)
Explain my side to my partner (1)	○	○	○	○	○
Insult or swear at my partner (11)	○	○	○	○	○
Respect my partner's feelings (12)	○	○	○	○	○
Push or shove my partner (13)	○	○	○	○	○
Slam my partner against a wall (14)	○	○	○	○	○
Destroy something belonging to my partner (15)	○	○	○	○	○
Beat up my partner (16)	○	○	○	○	○
Burn or scald my partner on purpose (17)	○	○	○	○	○
Kick my partner (18)	○	○	○	○	○

Throw something at my partner that could hurt (19)	○	○	○	○	○
Twist my partner's arm or hair (20)	○	○	○	○	○
Grab my partner (21)	○	○	○	○	○
Slap my partner (22)	○	○	○	○	○
Use a knife or gun on my partner (23)	○	○	○	○	○
Threaten to hit or throw something at my partner (24)	○	○	○	○	○
Accuse my partner of being a lousy lover (25)	○	○	○	○	○
Call my partner fat or ugly (26)	○	○	○	○	○
Say something to spite my partner (27)	○	○	○	○	○
Stomp out of the room or house during the argument (28)	○	○	○	○	○

Shout at my partner (29)	○	○	○	○	○
Agree to a solution that my partner suggests to work through the issue (30)	○	○	○	○	○
Suggest a solution to work through the issue (31)	○	○	○	○	○
Tell my partner I was sure we could work it out (32)	○	○	○	○	○
Show my partner I care about them (33)	○	○	○	○	○
Choke my partner (34)	○	○	○	○	○
Punch or hit my partner with something that could hurt (35)	○	○	○	○	○

End of Block: Conflict Tactics Scale 2

Start of Block: PANAS

Q283 This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate how you would feel if you were in the scenario just described.

	Very slightly or not at all (1)	A little (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
Upset (1)	○	○	○	○	○
Distressed (3)	○	○	○	○	○
Jittery (4)	○	○	○	○	○
Nervous (5)	○	○	○	○	○
Ashamed (6)	○	○	○	○	○
Guilty (7)	○	○	○	○	○
Irritable (8)	○	○	○	○	○
Hostile (9)	○	○	○	○	○

Angry (10)	○	○	○	○	○
Enraged (11)	○	○	○	○	○

End of Block: PANAS

Start of Block: Entitlement Measure

Q294 Please answer how much the following statements describe you.

	Not at all like me (0) (1)	1 (2)	2 (3)	3 (4)	4 (5)	Very much like me (5) (6)
It irritates me when people don't notice how good a person I am (1)	○	○	○	○	○	○
I get mad when people don't notice all that I do for them (2)	○	○	○	○	○	○
I get annoyed by people who are not interested in what I say or do (3)	○	○	○	○	○	○
I typically get very angry when I'm unable to get what I want from others (4)	○	○	○	○	○	○
I will never be satisfied until I get all that I deserve (5)	○	○	○	○	○	○
When I do things for other people, I expect them to do things for me (6)	○	○	○	○	○	○
I get angry when criticized (7)	○	○	○	○	○	○

I can get pretty angry when others disagree with me (8)	○	○	○	○	○	○

End of Block: Entitlement Measure

Start of Block: Realism

Q294 Next, we are trying to understand how realistic this scenario was for you. How easy or difficult was it for you to imagine yourself in this scenario?

- ○ I had a hard time imagining myself in this scenario (1)
- ○ I had somewhat of a hard time imagining myself in this scenario (2)
- ○ I could moderately imagine myself in this scenario (3)
- ○ I could imagine myself in this scenario (4)
- ○ I could very much imagine myself in this scenario (5)

End of Block: Realism

Start of Block: Textbox

Q295 Is there anything else you would like to tell us?

_____

End of Block: Textbox

Start of Block: Conclusion

Q282 Thank you for taking the time to complete this survey. Your participation is very appreciated and your responses can help us understand intimate partner violence further and how to create appropriate intervention work in future clinical work. If any of these questions upset you and you'd like to talk with someone, please consider using the resources below:

National Domestic Violence Hotline (1.800.799.SAFE)
National call center refers to local resources; Spanish plus 160 other languages available; no caller ID used.

National Suicide Prevention Lifeline (1.800.273.TALK)
Support and assistance 24/7 for anyone feeling depressed, overwhelmed or suicidal.

SAMHSA Treatment Referral Helpline, 1-877-SAMHSA7 (1-877-726-4727)
Get general information on mental health and locate treatment services in your area. Speak to a live person, Monday through Friday from 8 a.m. to 8 p.m. EST.

The Crisis Support Services of Nevada Call Center is an organization that provides free counseling and psychological services to anyone in the US. They can be reached by phone (1-800- 273-8255) 24 hours a day, every day or you can visit their website at https://cssnv.org/about/.

End of Block: Conclusion

Appendix B: Study 2 Survey

Start of Block: Captcha

Q373 Please select the button below to make sure you are not a robot.

End of Block: Captcha

Start of Block: Demographics

Q372 **Please enter your Prolific ID:**

_____

Q377 In which country do you currently reside?

▼ United States of America (1) ... Zimbabwe (1357)

Q375 What is your current relational status?

- ○ Single (1)
- ○ In a relationship (4)
- ○ Engaged (5)
- ○ Widowed (6)
- ○ Married (7)
- ○ Divorced (8)
- ○ Separated (9)
- ○ Never Married (10)
- ○ Rather Not Say (11)
- ○ In a civil partnership/civil union or similar (12)

Q272 What gender do you identify with?

- ○ Man (1)
- ○ Woman (2)
- ○ Trans woman, trans feminine, or transgender male to female (3)
- ○ Trans man, trans masculine, or transgender female to male (5)
- ○ Non-binary/Gender Non-conforming, Genderqueer, or fluid (4)
- ○ Prefer not to answer (6)
- ○ Prefer to self-describe (7)

_____

Q3 What is your age (in years)?

_____

Q127 How long (in years) have you been in your current relationship? Please put your best estimate if you do not know.

_____

Q275 What is your sexual orientation?

- ○ Heterosexual (1)
- ○ Bisexual (2)
- ○ Gay (7)
- ○ Lesbian (3)
- ○ Asexual (4)
- ○ Pansexual (8)
- ○ Queer (9)
- ○ Undecided (10)
- ○ I prefer not to answer (5)
- ○ Prefer to self-describe: (6)

_____

Q277 Which of the following best describes your race/ethnicity? (select all that apply)

- ☐ Indigenous, Native American or Alaska Native (1)
- ☐ Asian or Asian American (10)
- ☐ Black or African American (2)
- ☐ Hispanic or Latino/a/x (3)
- ☐ Middle Eastern or North African (4)
- ☐ Native Hawaiian or Other Pacific Islander (5)
- ☐ White or Caucasian (6)
- ☐ Multiracial (7)
- ☐ Prefer not to answer (8)
- ☐ Prefer to self-describe: (11) _____

Q347 What is the highest level of school you have completed or the highest degree you have received?

- ○ Some elementary or grade school (i.e., grades K - 5) (1)
- ○ Some junior high or middle school (i.e., grades 6-8) (2)
- ○ Some high school (i.e., grades 9-12) (3)
- ○ High School Diploma/GED (4)
- ○ Technical or Vocational Training/Degree (5)
- ○ Associate's degree (AA) (6)
- ○ Bachelor's degree (BA, BS) (7)
- ○ Master's degree or Higher (MA, MS, PHD) (8)

Q348 What is your present religion, if any?

- Protestant (1)
- Roman Catholic (2)
- Mormon (3)
- Orthodox such as Greek or Russian Orthodox (4)
- Jewish (5)
- Muslim (6)
- Buddhist (7)
- Hindu (8)
- Atheist (9)
- Agnostic (10)
- Something else (11) _____
- Nothing in particular (12)

End of Block: Demographics

Start of Block: Entitlement Measure

Q145 Please answer how much the following statements describe you:

Q294 It irritates me when people don't notice how good a person I am

- Strongly agree (7)
- Somewhat agree (8)
- Neither agree nor disagree (9)
- Somewhat disagree (10)
- Strongly disagree (11)

Q295 I get mad when people don't notice all that I do for them

- Strongly agree (6)
- Somewhat agree (7)
- Neither agree nor disagree (8)
- Somewhat disagree (9)
- Strongly disagree (10)

Q296 I get annoyed by people who are not interested in what I say or do

- Strongly agree (6)
- Somewhat agree (7)
- Neither agree nor disagree (8)
- Somewhat disagree (9)
- Strongly disagree (10)

Q297 I typically get very angry when I'm unable to get what I want from others

- Strongly agree (6)
- Somewhat agree (7)
- Neither agree nor disagree (8)
- Somewhat disagree (9)
- Strongly disagree (10)

Q298 I will never be satisfied until I get all that I deserve

- Strongly agree (6)
- Somewhat agree (7)
- Neither agree nor disagree (8)
- Somewhat disagree (9)
- Strongly disagree (10)

Q299 When I do things for other people, I expect them to do things for me

- Strongly agree (6)
- Somewhat agree (7)
- Neither agree nor disagree (8)
- Somewhat disagree (9)
- Strongly disagree (10)

Q300 I get angry when criticized

- Strongly agree (6)
- Somewhat agree (7)
- Neither agree nor disagree (8)
- Somewhat disagree (9)
- Strongly disagree (10)

Q301 I can get pretty angry when others disagree with me

- Strongly agree (6)
- Somewhat agree (7)
- Neither agree nor disagree (8)
- Somewhat disagree (9)
- Strongly disagree (10)

End of Block: Entitlement Measure

Start of Block: Mate Preferences

Q194 For the following questions, we are interested in what you desire in an **ideal long-term partner (e.g. committed, romantic relationship)**.

Below are a number of qualities a potential long-term partner might possess. Please think about your ideal long-term partner in comparison to all adults (ages 18-75) within your country.

For some questions, you might prefer your ideal partner to possess more of a quality compared to the average person. For other questions, you might prefer your ideal partner to be similar to the average adult. And for some questions, you might prefer your ideal partner to possess much less of a quality than the average person in your country.

To clarify how common or rare these qualities are, we have included for reference the rough numbers of people (out of 100) who are higher or lower than each value on each quality.

Please consider each quality below and rate how much of each quality you would prefer in an **ideal long-term (committed, romantic) partner.**

Q195 How **romantic** should your ideal romantic partner be?

- Extremely unromantic (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely romantic(Top 1 out of 100 people) (11)

Q197 How **driven** should your ideal romantic partner be?

- Extremely apathetic (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely driven (Top 1 out of 100 people) (11)

Q199 How **artistic** should your ideal romantic partner be?

- Extremely unartistic (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely artistic (Top 1 out of 100 people) (11)

Q201 How **positive** should your ideal romantic partner be?

- Extremely negative (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely positive(Top 1 out of 100 people) (11)

Q203 How **healthy** should your ideal romantic partner be?

- Extremely unhealthy overall (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely healthy overall (Top 1 out of 100 people) (11)

Q205 How often should your ideal romantic partner **laugh**?

- Laughs extremely rare (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Laughs extremely often (Top 1 out of 100 people) (11)

Q207 How **intelligent** should your ideal romantic partner be?

- Extremely unintelligent (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely intelligent (Top 1 out of 100 people) (11)

Q209 How much should your ideal romantic partner **like kids?**

- Strongly dislikes kids (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Strongly likes kids (Top 1 out of 100 people) (11)

Q211 How **generous** should your ideal romantic partner be?

- Extremely selfish (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely generous (Top 1 out of 100 people) (11)

Q213 How **physically attractive** should your ideal romantic partner's be?

- Extremely physically unattractive (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely physically attractive (Top 1 out of 100 people) (11)

Q215 How **religious** should your ideal romantic partner be?

- ○ Not at all religious (Bottom 1 out of 100 people) (1)
- ○ (Bottom 3 out of 100 people) (2)
- ○ (Bottom 8 out of 100 people) (3)
- ○ (Bottom 18 out of 100 people) (4)
- ○ (Bottom 32 out of 100 people) (5)
- ○ Average (Top 50 out of 100 people) (6)
- ○ (Top 32 out of 100 people) (7)
- ○ (Top 18 out of 100 people) (8)
- ○ (Top 8 out of 100 people) (9)
- ○ (Top 3 out of 100 people) (10)
- ○ Extremely religious (Top 1 out of 100 people) (11)

Q217 How **financially stable** should your ideal romantic partner be?

- Extremely financially unstable (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely financially stable (Top 1 out of 100 people) (11)

Q219 How **good in bed** should your ideal romantic partner be?

- Extremely bad in bed (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely good in bed (Top 1 out of 100 people) (11)

Q221 How **respected by others** should your ideal romantic partner be?

- Extremely disrespected by others (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely respected by others (Top 1 out of 100 people) (11)

Q223 How good should your romantic partner's **relationship with their family** (e.g., parents, siblings, etc.) be?

- ○ Extremely bad relationship with their family (Bottom 1 out of 100 people) (1)
- ○ (Bottom 3 out of 100 people) (2)
- ○ (Bottom 8 out of 100 people) (3)
- ○ (Bottom 18 out of 100 people) (4)
- ○ (Bottom 32 out of 100 people) (5)
- ○ Average (Top 50 out of 100 people) (6)
- ○ (Top 32 out of 100 people) (7)
- ○ (Top 18 out of 100 people) (8)
- ○ (Top 8 out of 100 people) (9)
- ○ (Top 3 out of 100 people) (10)
- ○ Extremely good relationship with their family (Top 1 out of 100 people) (11)

End of Block: Mate Preferences

Start of Block: Mate Value (partner rated)

Q130 For the following questions, we are interested in what **your actual long-term partner** is like.

Below are a number of qualities that your partner may or may not possess. Please think about your partner in comparison to all adults (ages 18-75) within your country.

For some questions, your partner might possess a lot of a quality compared to the average person. For other questions, your partner might be similar to the average adult. And for some questions, your partner might possess much less of a quality than the average person in your country.

To clarify how common or rare these qualities are, we have included for reference the rough numbers of people (out of 100) who are higher or lower than each value on each quality.

Please consider each quality below and rate how much of each quality your partner has compared to all adults within your country. For each question, please try to be as honest and accurate as possible. Rate based on what **your partner is actually like right now**, not how you wish they will be in the future

Q131 How **romantic** is your current partner?

- Extremely unromantic (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely romantic(Top 1 out of 100 people) (11)

Q133 How **driven** is your current partner?

- Extremely apathetic (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely driven (Top 1 out of 100 people) (11)

Q135 How **artistic** is your current partner?

- Extremely unartistic (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely artistic (Top 1 out of 100 people) (11)

Q137 How **positive** is your current partner?

- Extremely negative (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely positive(Top 1 out of 100 people) (11)

Q139 How **healthy** is your current partner?

- Extremely unhealthy overall (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely healthy overall (Top 1 out of 100 people) (11)

Q140 How often does your current partner **laugh**?

- Laughs extremely rare (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Laughs extremely often (Top 1 out of 100 people) (11)

Q143 How **intelligent** is your current partner?

- Extremely unintelligent (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely intelligent (Top 1 out of 100 people) (11)

Q147 How much does your current partner **like kids?**

- Strongly dislikes kids (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Strongly likes kids (Top 1 out of 100 people) (11)

Q149 How **generous** is your current partner?

- Extremely selfish (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely generous (Top 1 out of 100 people) (11)

Q151 How **physically attractive** is your current partner?

- Extremely physically unattractive (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely physically attractive (Top 1 out of 100 people) (11)

Q153 How **religious** is your current partner?

- ○ Not at all religious (Bottom 1 out of 100 people) (1)
- ○ (Bottom 3 out of 100 people) (2)
- ○ (Bottom 8 out of 100 people) (3)
- ○ (Bottom 18 out of 100 people) (4)
- ○ (Bottom 32 out of 100 people) (5)
- ○ Average (Top 50 out of 100 people) (6)
- ○ (Top 32 out of 100 people) (7)
- ○ (Top 18 out of 100 people) (8)
- ○ (Top 8 out of 100 people) (9)
- ○ (Top 3 out of 100 people) (10)
- ○ Extremely religious (Top 1 out of 100 people) (11)

Q156 How **financially stable** is your current partner?

- Extremely financially unstable (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely financially stable (Top 1 out of 100 people) (11)

Q158 How **good in bed** is your current partner?

- ○ Extremely bad in bed (Bottom 1 out of 100 people) (1)
- ○ (Bottom 3 out of 100 people) (2)
- ○ (Bottom 8 out of 100 people) (3)
- ○ (Bottom 18 out of 100 people) (4)
- ○ (Bottom 32 out of 100 people) (5)
- ○ Average (Top 50 out of 100 people) (6)
- ○ (Top 32 out of 100 people) (7)
- ○ (Top 18 out of 100 people) (8)
- ○ (Top 8 out of 100 people) (9)
- ○ (Top 3 out of 100 people) (10)
- ○ Extremely good in bed (Top 1 out of 100 people) (11)

Q160 How **respected by others** is your current partner?

- Extremely disrespected by others (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely respected by others (Top 1 out of 100 people) (11)

Q162 How good is your current partner's **relationship with their family** (e.g., parents, siblings, etc.)?

- ○ Extremely bad relationship with their family (Bottom 1 out of 100 people) (1)
- ○ (Bottom 3 out of 100 people) (2)
- ○ (Bottom 8 out of 100 people) (3)
- ○ (Bottom 18 out of 100 people) (4)
- ○ (Bottom 32 out of 100 people) (5)
- ○ Average (Top 50 out of 100 people) (6)
- ○ (Top 32 out of 100 people) (7)
- ○ (Top 18 out of 100 people) (8)
- ○ (Top 8 out of 100 people) (9)
- ○ (Top 3 out of 100 people) (10)
- ○ Extremely good relationship with their family (Top 1 out of 100 people) (11)

End of Block: Mate Value (partner rated)

Start of Block: Mate Value (self rated)

Q163 For the following questions, we are interested in what **you** are like.

Below are a number of qualities that you may or may not possess. Please think about yourself in comparison to all adults (ages 18-75) within your country.

For some questions, you might possess a lot of a quality compared to the average person. For other questions, you might be similar to the average adult. And for some questions, you might possess much less of a quality than the average person in your country.

To clarify how common or rare these qualities are, we have included for reference the rough numbers of people (out of 100) who are higher or lower than each value on each quality.

Please consider each quality below and rate how much of each quality you have compared to all adults within your country. For each question, please try to be as honest and accurate as possible. Rate based on what **you are actually like right now**, not how you wish to be in the future.

Q164 How **romantic** are you?

- Extremely unromantic (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely romantic(Top 1 out of 100 people) (11)

Q166 How **driven** are you?

- Extremely apathetic (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely driven (Top 1 out of 100 people) (11)

Q168 How **artistic** is your current partner?

- Extremely unartistic (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely artistic (Top 1 out of 100 people) (11)

Q170 How **positive** are you?

- Extremely negative (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely positive(Top 1 out of 100 people) (11)

Q172 How **healthy** are you?

- Extremely unhealthy overall (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely healthy overall (Top 1 out of 100 people) (11)

Q174 How often do you **laugh**?

- Laughs extremely rare (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Laughs extremely often (Top 1 out of 100 people) (11)

Q176 How **intelligent** are you?

- Extremely unintelligent (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely intelligent (Top 1 out of 100 people) (11)

Q178 How much do you **like kids?**

- Strongly dislikes kids (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Strongly likes kids (Top 1 out of 100 people) (11)

Q180 How **generous** are you?

- Extremely selfish (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely generous (Top 1 out of 100 people) (11)

Q182 How **physically attractive** are you?

- Extremely unattractive face (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely attractive face (Top 1 out of 100 people) (11)

Q184 How **religious** are you?

- Not at all religious (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely religious (Top 1 out of 100 people) (11)

Q186 How **financially stable** are you?

- Extremely financially unstable (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely financially stable (Top 1 out of 100 people) (11)

Q188 How **good in bed** are you?

- Extremely bad in bed (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely good in bed (Top 1 out of 100 people) (11)

Q190 How **respected by others** are you?

- Extremely disrespected by others (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely respected by others (Top 1 out of 100 people) (11)

Q192 How good is your **relationship with your family** (e.g., parents, siblings, etc.)?

- Extremely bad relationship with their family (Bottom 1 out of 100 people) (1)
- (Bottom 3 out of 100 people) (2)
- (Bottom 8 out of 100 people) (3)
- (Bottom 18 out of 100 people) (4)
- (Bottom 32 out of 100 people) (5)
- Average (Top 50 out of 100 people) (6)
- (Top 32 out of 100 people) (7)
- (Top 18 out of 100 people) (8)
- (Top 8 out of 100 people) (9)
- (Top 3 out of 100 people) (10)
- Extremely good relationship with their family (Top 1 out of 100 people) (11)

End of Block: Mate Value (self rated)

Start of Block: Violent Communication

Q15 No matter how well a couple gets along, there are times when they disagree, get annoyed with the other person, want different things from each other, or just have spats or fights because they are in a bad mood, are tired or for some other reason. Couples also have

many different ways of trying to settle their differences. This is a list of things that might happen when you have differences. Please mark how many times you did each to these things in the past year in your relationship.

Please note, your responses will remain completely confidential.

Q14 I explained my side of a disagreement to my partner

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q17 I insulted or swore at my partner

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q18 I showed my partner I cared even though we disagreed

- Once in the past year (1)
- Twice in the past year (2)
- 3-5 times in the past year (3)
- 6-10 times in the past year (4)
- 11-20 times in the past year (5)
- More than 20 times in the past year (6)
- Not in the past year, but it did happen before (7)
- This has never happened (8)

Q20

I threw something at my partner that could hurt

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q21 I twisted my partner's arm or hair

- Once in the past year (1)
- Twice in the past year (2)
- 3-5 times in the past year (3)
- 6-10 times in the past year (4)
- 11-20 times in the past year (5)
- More than 20 times in the past year (6)
- Not in the past year, but it did happen before (7)
- This has never happened (8)

Q23 I showed respect for my partner's feelings about an issue

- Once in the past year (1)
- Twice in the past year (2)
- 3-5 times in the past year (3)
- 6-10 times in the past year (4)
- 11-20 times in the past year (5)
- More than 20 times in the past year (6)
- Not in the past year, but it did happen before (7)
- This has never happened (8)

Q24 I pushed or shoved my partner

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q25

I used a knife or gun on my partner

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q328 I called my partner fat or ugly

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q329 I punched or hit my partner with something that could hurt

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q330 I destroyed something belonging to my partner

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q331 I choked my partner

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q332 I shouted or yelled at my partner

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q334 I slammed my partner against a wall

- Once in the past year (1)
- Twice in the past year (2)
- 3-5 times in the past year (3)
- 6-10 times in the past year (4)
- 11-20 times in the past year (5)
- More than 20 times in the past year (6)
- Not in the past year, but it did happen before (7)
- This has never happened (8)

Q335 I said I was sure we could work out a problem

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q336 I beat up my partner

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q337 I grabbed my partner

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q338 I stomped out of the room or house or yard during a disagreement

- Once in the past year (1)
- Twice in the past year (2)
- 3-5 times in the past year (3)
- 6-10 times in the past year (4)
- 11-20 times in the past year (5)
- More than 20 times in the past year (6)
- Not in the past year, but it did happen before (7)
- This has never happened (8)

Q339 I slapped my partner

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q340 I suggested a compromise to a disagreement

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q341 I burned or scalded my partner on purpose

- Once in the past year (1)
- Twice in the past year (2)
- 3-5 times in the past year (3)
- 6-10 times in the past year (4)
- 11-20 times in the past year (5)
- More than 20 times in the past year (6)
- Not in the past year, but it did happen before (7)
- This has never happened (8)

Q342 I accused my partner of being a lousy lover

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q343 I did something to spite my partner

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q344 I threatened to hit or throw something at my partner

- Once in the past year (1)
- Twice in the past year (2)
- 3-5 times in the past year (3)
- 6-10 times in the past year (4)
- 11-20 times in the past year (5)
- More than 20 times in the past year (6)
- Not in the past year, but it did happen before (7)
- This has never happened (8)

Q345 I kicked my partner

- ○ Once in the past year (1)
- ○ Twice in the past year (2)
- ○ 3-5 times in the past year (3)
- ○ 6-10 times in the past year (4)
- ○ 11-20 times in the past year (5)
- ○ More than 20 times in the past year (6)
- ○ Not in the past year, but it did happen before (7)
- ○ This has never happened (8)

Q346 I agreed to try a solution to a disagreement my partner suggested

- Once in the past year (1)
- Twice in the past year (2)
- 3-5 times in the past year (3)
- 6-10 times in the past year (4)
- 11-20 times in the past year (5)
- More than 20 times in the past year (6)
- Not in the past year, but it did happen before (7)
- This has never happened (8)

End of Block: Violent Communication

Start of Block: Transgression History

Q260 My partner frequently upsets me

- Strongly agree (16)
- Agree (17)
- Somewhat agree (18)
- Somewhat disagree (20)
- Disagree (21)
- Strongly disagree (22)

Q261 My partner often does things that hurt me

- Strongly agree (4)
- Agree (5)
- Somewhat agree (6)
- Somewhat disagree (8)
- Disagree (9)
- Strongly disagree (10)

Q262 My relationship is often strained due to my partner's actions

- Strongly agree (4)
- Agree (5)
- Somewhat agree (6)
- Somewhat disagree (8)
- Disagree (9)
- Strongly disagree (10)

Q263 I often feel wronged by my partner

- Strongly agree (4)
- Agree (5)
- Somewhat agree (6)
- Somewhat disagree (8)
- Disagree (9)
- Strongly disagree (10)

Q264 My partner has a history of making mistakes in our relationship

- Strongly agree (4)
- Agree (5)
- Somewhat agree (6)
- Somewhat disagree (8)
- Disagree (9)
- Strongly disagree (10)

End of Block: Transgression History

Start of Block: Cost Discrepancy

Q29 I can inflict greater costs on my partner than my partner can on me

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

Q31 I can hurt my partner more than my partner can hurt me

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

Q32 I can make my partner's life more difficult than my partner can do to me

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

Q33 I can retaliate against my partner more effectively than they can to me

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

Q34 Compared to my partner, I am more powerful in the relationship

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

Q35 If my partner and I were to divorce/break-up, they would be much more worse off than me

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

End of Block: Cost Discrepancy

Start of Block: Relationship Maintenance (Partner)

Q67

Please indicate the extent to which you believe your spouse currently performs in order to maintain your romantic relationship, e.g., over the past two weeks. He/she/they:

Q68 Acts positively with me

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

Q72 Is understanding with me

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

Q76 Talks about his/her fears with me

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

Q83 Talks about future events concerning our relationship (e.g., having children, or anniversaries, or retirement, etc.) with me

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

Q87 Shares in the joint responsibilities that face us

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

Q91 Includes our friends in our activities

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

Q351 Contributes financially to our relationship

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

End of Block: Relationship Maintenance (Partner)

Start of Block: Personal Cost (partner)

Q335 Each of the behaviors you read above can vary in difficulty for each individual and, subsequently, can come at more of a personal cost to the person. For example, if both friend A and friend B gave you $10, but friend A had $100 dollars in their wallet and friend B only had $10 in their wallet, we would say that friend B incurred more of a personal cost to give you that $10. Similarly, some individuals may find it much easier than others to maintain and invest in relationships given their personality, resources, or time.

Now, please think of the behaviors you reported on above and consider how much of a personal cost these behaviors are for your partner *regardless* of whether they actually perform any of these behaviors.

Then, respond to the statement below reflecting how much you agree or disagree.

Q336 In general, it is easy (i.e., comes at little personal cost) for my partner to contribute financially to our relationship.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

Q356 In general, it is easy (i.e., comes at little personal cost) for my partner to spend money on me.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

Q352 In general, it is easy (i.e., comes at little personal cost) for my partner to invest time into our relationship.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

Q357 In general, my partner has ample time to spend with me.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

Q353 Given my partner's personality, it is easy (i.e., comes at little personal cost) for them to treat me well.

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

Q358 Given how my partner naturally acts, it is easy (i.e., comes at little personal cost) for them to make me feel like they care about me.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

End of Block: Personal Cost (partner)

Start of Block: Relationship Maintenance (self)

Q302 Now, please indicate the extent to which you believe *you* currently perform in order to maintain your romantic relationship, e.g., over the past two weeks:

Q303 Act positively with your partner

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

Q305 Be understanding with your partner

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

Q307 Talk about your fears with your partner

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

Q311 Talk about future events (e.g., having children, or anniversaries, or retirement, etc.) with your partner

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

Q313 Share in the joint responsibilities that face you both

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

Q315 Include friends in activities

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

Q367 Contribute financially to your relationship

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

End of Block: Relationship Maintenance (self)

Start of Block: Personal Cost (Self)

Q382 Each of the behaviors you read above can vary in difficulty for each individual and, subsequently, can come at more of a personal cost to the person. For example, if both friend A and friend B gave you $10, but friend A had $100 dollars in their wallet and friend B only had $10 in their wallet, we would say that friend B incurred more of a personal cost to give you that $10. Similarly, some individuals may find it much easier than others to maintain and invest in relationships given their personality, resources, or time.

Now, please think of the behaviors you reported on above and consider how much of a personal cost these behaviors are for yourself *regardless* of whether you actually perform any of these behaviors.

Then, respond to the statement below reflecting how much you agree or disagree.

Q383 In general, it is easy (i.e., comes at little personal cost) for me to contribute financially to our relationship.

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

Q384 In general, it is easy (i.e., comes at little personal cost) for me to spend money on my partner.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

Q385 In general, it is easy (i.e., comes at little personal cost) for me to invest time into my relationship.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

Q386 In general, I have ample time to spend with my partner.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

Q387 Given my personality, it is easy (i.e., comes at little personal cost) for me to treat them well.

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

Q388 Given how I naturally act, it is easy (i.e., comes at little personal cost) for me to make my partner feel like I care about them.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

End of Block: Personal Cost (Self)

Start of Block: Textbox

Q377 Is there anything else you would like to tell us?

_____

End of Block: Textbox

Start of Block: Conclusion

Q265 Thank you for taking the time to complete this survey. Your participation is very appreciated and your responses can help us understand intimate partner violence further and how to create appropriate intervention work in future clinical work. If any of these questions upset you and you'd like to talk with someone, please consider using the resources below:

National Domestic Violence Hotline (1.800.799.SAFE)

National call center refers to local resources; Spanish plus 160 other languages available; no caller ID used.

National Suicide Prevention Lifeline (1.800.273.TALK)

Support and assistance 24/7 for anyone feeling depressed, overwhelmed or suicidal.

SAMHSA Treatment Referral Helpline, 1-877-SAMHSA7 (1-877-726-4727)

Get general information on mental health and locate treatment services in your area. Speak to a live person, Monday through Friday from 8 a.m. to 8 p.m. EST.

The Crisis Support Services of Nevada Call Center is an organization that provides free counseling and psychological services. They can be reached by phone (1-800- 273-8255) 24 hours a day, every day or you can visit their website at https://cssnv.org/about/.

Regardless of your relationship dynamics, we wish to remind you that you are worthy and deserving of love and respect. We wish you and your romantic partner a healthy and loving road ahead.

End of Block: Conclusion