What Works for Me May Not Work for You:

Predicting Self-Compassionate Responding Using an Interactionist Approach

by

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## Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required revisions, as accepted by my examiners.

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**Abstract**

**Objective:** Self-compassion has both trait and state-like properties (Kelly & Stephen, 2016), yet little research has investigated how dispositional and contextual factors interact to influence someone's ability to be self-compassionate in a given moment. One contextual factor known to influence self-compassion is how "shared" or common one's problems seem to be (i.e., common humanity; Leary, Tate, Adams, Allen, & Hancock, 2007). The current study investigated whether contextual cues of common humanity moderated the effects of trait self-compassion and self-criticism on state self-compassion following a negative self-relevant event. **Method:** One-hundred-and-two undergraduates (89 females) completed a trait measure of self-criticism and self-compassion; underwent an induced negative self-relevant event and manipulation; and then completed the State Self-Compassion Scale, the State Shame Scale, and a measure of state affect. Following the negative event, participants received a contextual cue that led them to believe that a peer had experienced a similar event (Common Humanity condition) or had not (Alone condition). **Results:** Condition moderated the effects of both trait self-compassion and self-criticism on state self-compassion. Higher trait self-compassion was a stronger predictor of adaptive responses to the negative event (i.e., higher state self-compassion, higher positive affect, and lower shame) in the Common Humanity condition than in the Alone condition. However, higher trait self-criticism was related to more maladaptive responses (e.g., lower state self-compassion and positive affect) in the Common Humanity condition compared to the Alone condition. **Discussion:** The current study supported the importance of applying an interactionist perspective to the study of self-compassion and self-criticism and results suggest that interpersonal contexts that may facilitate self-compassionate responding for self-compassionate individuals, could in fact thwart self-compassion for those who are more self-critical.

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**Literature Review and Introduction**

**The Trajectory of Self-Compassion Research**

Beginning in the mid-twentieth century, psychologists and researchers became interested in incorporating Buddhist practices into western psychology (see Aich, 2013). Of particular interest was the concept of compassion (e.g., Davidson & Harrington, 2002), which finds its roots in the Buddhist tradition of *metta* or loving-kindness. *Metta* consists of four mental states that are seen as necessary for living a life without misery and suffering (Hofmann, Grossman, & Hinton, 2011). As a core component of *metta*, compassion involves being aware of the suffering of the self and others and possessing a desire to alleviate that suffering (Gilbert, 2005).

Neff's (2003a) seminal article on self-compassion brought widespread attention to the concept of compassion within social psychology. Neff conceptualized self-compassion as a way of relating to oneself during hardship and identified three core features: Self-kindness towards one's distress as opposed to self-judgement, mindful awareness of personal struggles instead of over-identifying with negative thoughts and feelings, and awareness that suffering is a part of the common human experience rather than feeling isolated by one's negative experiences. Within social psychology, the concept of high self-esteem has historically dominated the research on positive self-attitudes (see Baumeister, Campell, Krueger, & Vohs, 2003 for a review), but Neff (2003a) championed self-compassion as a healthier alternative to self-esteem.

**Differentiating self-compassion from self-esteem**. Self-esteem is defined by the value individuals place on themselves; high self-esteem refers to a favourable global view of oneself and low self-esteem to an unfavourable view (Baumeister et al., 2003). High self-esteem has been linked to many positive outcomes including school/job success (e.g., Zimmerman, Copeland, Shope, & Dielam, 1997), better relationships (e.g., Lakey, Tardiff, & Drew, 1994),

leadership (e.g., LePine & Van Dyne, 1998), reduced vulnerability for mental illness (e.g., Murrell, Meeks, & Walker, 1991), and happiness (e.g., Diener & Diener, 1995). However, the heterogeneous nature of high self-esteem has also been highlighted. Some researchers differentiate 'true self-esteem' from 'contingent self-esteem.' Unlike true self-esteem, contingent self-esteem is related to narcissism, is dependent on external accomplishments, and often fluctuates over time (Baumeister et al., 2003; Ryan & Brown, 2006). As researchers started to acknowledge the different types of self-esteem, they also began to focus more on the "dark side" of high self-esteem (Baumeister, Smart, & Boden, 1996). High self-esteem has also been associated with greater prejudice for people outside of one's inner circle (e.g., Aberson, Healy, & Romero, 2000); increased aggression towards those who threaten favourable views of the self (Baumeister et al., 1996), and unrealistically positive self-views that may make it difficult to identify areas of needed growth (Paulhus, 2002).

Increasing recognition of the potential pitfalls of high self-esteem has helped to motivate the inclusion of self-compassion in both research and applied settings (e.g., Leary et al., 2007; Welford & Langmead, 2015). Unlike some forms of high self-esteem, feelings of self-compassion are not contingent upon success. Instead self-compassion is an unconditional form of caring for oneself, which most often surfaces in the face of personal failures, inadequacies, or suffering (Neff, 2003a). Self-compassion is also not associated with narcissism (Neff & Vonk, 2008). In fact, individuals who are higher in self-compassion are more likely to recognize their role in negative events. Yet at same time, self-compassionate individuals also experience fewer negative emotions and harsh judgements about their shortcomings (Leary et al., 2007). Self-compassion thus does not appear to be akin to self-pity (Neff & Vonk, 2008), which may help to explain why highly self-compassionate individuals are also more motivated to learn from their

mistakes and self-improve (Breines & Chen, 2012). Finally, self-compassion is not only a helpful way of relating to oneself but is also linked with beneficial ways of relating to others. Neff and Pommier (2012) found that, among community adults, acting compassionately towards one's self during suffering was associated with more altruism, forgiveness, and empathy for others. Additionally, Longe et al.'s (2010) fMRI study suggested that cultivating compassion towards oneself and to others may activate similar brain regions. Taken together, these preliminary findings suggest that a more general 'compassionate mindset' may underlie self-compassionate responding.

**Self-compassion as beneficial for self-critics.** The idea of a compassionate mindset or mentality was first proposed in Gilbert's (2000) evolutionary theory of social mentalities. Gilbert (2000) argues that humans have evolved to play a range of distinct social roles including eliciting care, giving care, finding a mate, forming alliances, and competing for resources. When enacting a given social role, individuals process their social environments in a particular way through their cognitions and emotions, and then choose a behavioural response that will impact "the mind of the [social] other" (Gilbert, 2000, p. 15). For example, if the social role is to elicit care, someone may notice another person in their vicinity and call for help, signaling to that other person that they should approach. The distinct combinations of cognitions, affect, and behaviours that allow for the fulfilment of each social role are accordingly called social mentalities.

In earlier versions of his theory, Gilbert (2000) focused on two key social mentalities: the caregiving/supporting mentality and the competitive/social-ranking mentality. The caregiving mentality prompts protection and attention towards an object of care (e.g., an infant or kin member) in order to increase the latter's chances of survival and subsequent reproduction (Gilbert, 2005). On the other hand, the goal of the competitive mentality is to navigate the social

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hierarchy in a way that maximizes resource acquisition (e.g., mates, food, allies) while also preserving one's safety. As such the competitive mentality can involve using threats, shaming, put downs, and other types of attacking strategies, as well as forms of submissive behaviour towards dominant others. (Gilbert, 2000).

External social signals are usually the trigger for activating different social mentalities. For example, noticing signs of aggression in a nearby stranger may stimulate the competitive mentality whereas signs of distress in a kin member may activate the caregiving mentality. However, Gilbert (2000, 2005) postulates that over time humans have also become sensitive to their own internal social signals. As a result, social signals can also affect the way individuals relate to themselves, triggering internal 'self-talk' as well as changes in affect, cognitions, and behaviour. For example, experiencing distress may trigger caregiving/compassionate self-talk.

***The tripartite affect regulatory system.*** Gilbert (2005, 2009) hypothesized that at least three interacting affect regulatory (or emotion regulation) systems underpin social mentalities. Neurobiological research supports Gilbert's theory of a tripartite affect system, although in much more complexity than what is presented below (see Dupue & Morrone-Strupinsky, 2005). All living creatures have evolved with a system that allows them to detect and respond to threats within their environments. The threat system is thus thought to be one of the three affect regulatory systems and it appears to be related to the neuromodulator serotonin (Fisher & Hariri, 2013) as well as the stress hormone cortisol (Gilbert, 2005). When the threat system is activated people feel emotions of anxiety, anger or disgust, which result in behavioural responses of fight, flight, or submission (Gilbert 2005, 2009).

A second system, known as the soothing system, evolved through attachment relationships in mammals and parent caring behaviours often activate the soothing system of the

infant (Gilbert, 2009). The soothing system appears to be linked to the neurohormone oxytocin (Gilbert, 2005), as the oxytocin system is believed to play a key role in the formation of affiliative bonds (Feldman, 2012). Activation of the soothing system results in positive feelings of relaxation, contentment, and safeness, and the soothing system is associated with caring behaviours (both giving and receiving) and pro-social behaviours (Gilbert 2005, 2009).

Neuroscience research suggests that the soothing system is not the only system that leads to positive affect (Dupue & Morrone-Strupinsky, 2005). Activation of the drive (or seeking) system also produces positive emotions but the evolutionary function of the drive system is to motivate and reward the acquisition of essential resources. The drive system usually results in emotions of desire, anticipation, and pleasure and leads to activating or goal-seeking behaviours. Parallels are often drawn between the drive system and dopaminergic system (Gilbert 2005, 2009), as dopamine appears to be related to motivation, reward, and pleasure behaviours (Bressan & Crippa, 2005). While both the soothing and the drive system result in positive emotions, the positive feelings of the drive system are characterized by greater arousal. They are also more contingent upon acquiring resources or achieving and are thus more fleeting in nature (Gilbert, 2009). Buddhist traditions also make a similar distinction between the happiness of the soothing affiliative system and the pleasure of the drive system, noting that pleasure is dependent on external, and changing, circumstances, whereas happiness is a more internal and long-lasting state (Goleman, 2003).

In Gilbert's theory of social mentalities, the three affect systems are always interacting and regulating one another, and thus they can be activated by different mentalities in different contexts. However, the competitive mentality is often thought to activate the threat and drive system, whereas the caregiving mentality is more typically associated with the soothing

affiliative system (Gilbert, 2005). Of particular interest to Gilbert (2009) is those individuals who demonstrate a relatively chronic, and typically harmful, pattern in their affect systems, namely an overactive threat system paired with an underactive soothing system.

*Presence of self-criticism.* Using an attachment-based perspective, Gilbert (2005) suggests that individuals raised in households that lacked warmth and safety, tend to develop overactive threat systems, and dominant competitive mentalities. As a result, during social interactions, the continued activation of the threat system results in frequent emotional/behavioural responses of anger/fight, anxiety/flight, and/or defeat/submission. For example, a child who grew up with her achievements often being criticized or ignored by her parents may come to expect rejection or criticism from her peers. As a result, she may experience a lot of anxiety during social interactions and try to avoid being among her peers (Gilbert, 2004).

In addition, it appears that early environments also play an important role in the ways that one relates to oneself. Indeed, Gilbert (2005) highlighted that threatening home environments are also linked to high levels of trait self-criticism. When another person is viewed as threatening and dominant (e.g., a parent), the competitive mentality often triggers submissive behaviour towards the social threat, but fighting behaviour towards the self (Gilbert & Irons, 2005). For example, Forrest and Hokanson (1975) found that individuals with depression, who have elevated levels of self-criticism (Zuroff & Mongrain, 1987), administered more electric shocks to themselves after exposure to aggression from others than non-depressed individuals. The authors suggest that this pattern of responding may point to a developmental history whereby depressed individuals learn that the optimal way of dealing with aggression from others is through self-attacking. Relatedly, persistent threats from dominant others are associated with higher levels of self-blaming (Gilbert & Irons, 2005). As well, research suggests that high self-

critics are also more likely to accept and submit to self-attacks, and show less resiliency than controls when responding to their own self-attacks (Whelton & Greenberg, 2005).

Given the high levels self-blame and self-attacking that often accompany self-criticism, a great deal of research has on focused on trait self-criticism as s vulnerability factor for depression. Blatt, D'Aflfitti, & Quinlan (1976) distinguished between two personality-based risk factors for depression: dependency and self-criticism. Dependency is thought to originate from disrupted developmental trajectories in social relatedness, and is characterized by feeling dependent on others, loneliness, helplessness, and fears of being rejected or abandoned. Self-criticism on the other hand, is seen as arising from developmental disruptions in establishing autonomy and a sense of self-identity. It is thus more internally directed and predisposes individuals to feelings of insecurity and hopelessness; ambivalence towards self and others; worries about failing to meet standards; and excessive concern over social status. Blatt et al., (1976) theorized that both types of vulnerabilities may be present in a given individual, which empirical research supports (Zuroff, Mongrain, & Santor, 2004). Negative parenting behaviours such as maltreatment, low care, and high standards have also been linked to both dependency and self-criticism supporting the idea that early developmental experiences can affect both how one relates to others in their life as well as how they relate to themselves (Kopala-Sibley & Zuroff, 2014).

Overall, however, the self-critical dimension of depression appears to have more widespread negative effects. Self-criticism is a well-known transdiagnostic vulnerability factor for psychopathology and higher levels of self-criticism have been associated with a variety of negative outcomes including higher relationship dissatisfaction, more negative life events, poor coping skills, difficulty with goal pursuit, and job burnout (see Kopala-Sibley & Zuroff, 2017 for

a review). In youth, self-criticism mediates the relationship between negative developmental experiences and depressive symptoms, whereas dependency does not (e.g., Kopala-Sibley, Zuroff, Hankin, & Abela, 2015). As well, Zuroff and Mongrain (1987) found that self-criticism was related to depressive feelings of worthlessness, guilt, and failing to meet standards after rejection experiences with others and after personal failure experiences. These findings suggest that self-critics (i.e., individuals high in trait self-criticism) are more likely to not only respond to personal experiences of failure with self-blame but are also more likely to respond to rejection or loss experiences with *other* people in *self*-attacking ways.

      ***Absence of self-soothing.*** Gilbert (2005) postulated that individuals high in trait self-criticism are characterized not only be an overactive threat system and dominant competitive mentality but also by an underactive soothing system. When children are the recipients of frequent warmth and caring behaviours, they have regularly activated soothing systems. This regular activation leads to the elaboration and development of the soothing system so that it is easily accessible, and can be used to down-regulate the threat system during times of distress. Activation of the soothing system also primes the caregiving mentality, so that an individual grows up with feelings of care and concern for other individuals in their lives and for themselves (Gilbert, 2005). However, for self-critical individuals, memories of being cared for may not be present or may be difficult to access. As a result, the caregiving mentality is often weakly developed, making it difficult for self-critical individuals to feel soothed or receive care from both others and themselves (Gilbert, 2009; Gilbert & Irons, 2005).

      In fact, later work by Gilbert, McEwan, Matos, & Rivis (2011) has highlighted how individuals who are highly self-critical may not only have difficulty receiving care and compassion, but may actually fear these displays of kindness. The authors outline how positive

affiliative emotions can come to be associated with negative memories. For example, feelings of warmth (from self and others) may have become linked with feelings of grief or loneliness due to the absence of warm feelings during childhood. Other individuals who are highly fearful of self-compassion voice concerns that being self-compassionate is a form of weakness or that self-compassion may be dangerous because it "lets one's guard down" (Gilbert & Proctor, 2006, p. 371).

Gilbert's theory of social mentalities, coupled with the empirical research on self-criticism, makes clear the importance of alleviating the deleterious effects of self-criticism. As such researchers and clinicians have started to view self-compassion as a possible antidote to self-criticism, and are investigating ways to help individuals who are highly self-critical cultivate self-compassion (e.g., Gilbert & Proctor, 2006; Gilbert, 2009; Kelly, Zuroff, & Shapira, 2009; Kelly, Zuroff, Foa, & Gilbert, 2010).

**Self-Compassion in its Own Right**

Research and theory on self-compassion has developed extensively since the pioneering works of Neff and Gilbert and the concept has spread to a diverse range of research areas (Neff & Knox, in press). In western psychology, empirical research on self-compassion tends to take one of two forms. Building on work with self-criticism, clinical research tends to examine self-compassion as a protective factor against psychopathology and also tests the efficacy of compassion-based interventions for various mental disorders. Within social psychology, research has primarily investigated the beneficial correlates of high trait self-compassion.

**Clinical interventions.** Currently, the compassion-based interventions with the strongest evidence base are Gilbert's (2010) Compassion-Focused Therapy (CFT) and Neff and Germer's (2013) Mindful Self-Compassion (MSC) program. CFT was designed to help self-critical

individuals become more aware of their critical mindset and to move them towards a more caring and compassionate way of relating to themselves. Patients are taught skills, such as compassionate imagery and breathing, that aim to alleviate feelings of shame and increase feelings of compassion towards the self (Gilbert, 2009). MSC on the other hand is described as a hybrid program available for both community and clinical populations. Greater mindfulness skills are seen as one of the primary methods through which self-compassion can be cultivated and thus the program provides skills-training in both compassion and mindfulness exercises (e.g., loving-kindness meditations, self-compassionate letter writing; Neff & Germer, 2013).

Preliminary evidence supports the efficacy of CFT for a range of mental health disorders (e.g., Braehler et al., 2013; Judge, Cleghorn, McEwan, & Gilbert, 2012; Kelly, Wisniewski, Martin-Wagar, & Hoffman, 2017) and initial research suggests that MSC may also be efficacious with clinical populations (Gaswinkler, 2018). More clinical research has been conducted with CFT, but both interventions have preliminary evidence to support their efficacy for 1) reducing psychiatric symptoms, such as depression and anxiety, and 2) increasing self-compassion and other positive indicators of psychological wellbeing (Leaviss & Uttely, 2015; Neff & Germer, 2013). CFT also appears to also have particularly promising benefits for individuals high in self-criticism and shame (Leaviss & Uttely, 2015).

**Correlates of trait self-compassion.** Other research on self-compassion has primarily focused on positive outcomes related to high trait self-compassion. Neff (2003a) predicted that trait self-compassion would be related to better psychological functioning, and this prediction has since received widespread empirical support. Self-compassion is inversely related to psychopathology, with a meta-analysis finding a large effect size (MacBeth & Gumley, 2012). In addition, higher trait self-compassion is positively associated with correlates of psychological

wellbeing such as happiness, gratitude, optimism, and emotional intelligence (see Neff & Germer (2017) for a review). Self-compassion also appears to be related to psychological wellness across the lifespan, with cross-sectional research suggesting benefits for adolescents and youth (e.g., Neff & McGehee, 2010) as well as older adults (e.g., Homan, 2016). In addition, more recent work has found positive relationships between trait self-compassion and psychological wellbeing for minority groups, such as gender minorities (Keng & Liew, 2016), and for individuals with cultural backgrounds other than North American (e.g., Yang, 2016).

Besides its links to improved psychological wellbeing, high trait self-compassion has been associated with a wide range of other positive outcomes including healthier body image (e.g., Homan, & Tylka, 2015), less caregiver burnout (e.g., Olson, Kemper, & Mahan, 2015), more adaptive coping mechanisms (e.g., Allen & Leary, 2010), improved physical wellbeing (Hall, Row, Wuensch, & Godley, 2013), positive relationship behaviours (Neff & Beretvas, 2012), and greater job satisfaction (Abaci & Arda, 2013). Of note, research on self-compassion is still growing, with Neff (2017) anticipating that there will continue to be "an intense interest in studying the mental, emotional, and physical health benefits of self-compassion in a wide variety of life domains" (p. 6).

Since the publication of Neff's (2003a) seminal article on self-compassion, research and interest in the concept has grown exponentially and the general benefits of trait self-compassion and compassion-based interventions are now well-established. However, to further deepen our understanding of self-compassion, the concept also needs to be explored from a more contemporary perspective that reflects some of the recent developments in personality research.

**Interactionism in Social Personality Research**

Most fields in psychology are united in their goal of trying to understand why people do what they do. Historically, the two dominant explanations for human behaviour have been either the person or the situation (Furr & Funder, 2018). Personality psychology developed around the idea that who a person is, that is their personality, can stably predict their behaviour across various situations. On the other hand, social psychology has more often emphasized the importance of the situation or the context as the key determinant of behaviour (Wagerman & Funder, 2009). The person vs. situation debate has a long history (e.g., see Furr & Funder, 2018 for a review), however, contemporary social and personality psychologists mostly seem to agree that, "We are all interactionists now" (Corr & Matthews, 2009. p. xxiv). Research has moved away from pitting the situation and the person against one another, to trying to figure out ways to investigate the interaction between both factors.

**Within-person variability.** Historically, personality researchers focused on how differences between individuals predicted behaviour, typically without consideration of the situational context. However, in the midst of the situation-personality debate, surprising research findings suggested that an individual's behaviour differs from occasion to occasion as much as their emotions, and that on average, there is greater behaviour variability when people are compared to themselves than when they are compared to other people (Fleeson, 2001). While personality research has also confirmed that trait approaches still deserve attention, as the averaging of a person's behaviours over longer periods of time do show stable patterns (Fleeson, 2004), research on within-subject variability (or state personality) is becoming more and more prominent (Furr & Funder, 2018). Within-person measures of personality allow for predictions of more idiosyncratic and dynamic behaviour. Unique opportunities presented by personality

state research include understanding both the flexibility and the stability of personality traits as well as greater possibilities for investigating the consequences of personality via manipulation of personality states (Fleeson, 2017). Importantly for interactionist work, state personality research also typically places much more emphasis on the characteristics of the situation when trying to explain intra-individual variability in personality (e.g., Sandstrom, Lathia, Mascolo, & Rentfrow, 2017; Sauerberger & Funder, 2017).

      **Social-cognitive variables.** Another early approach to interactionism was research on person variables that were rooted in specific contexts. Social-cognitive variables focus on individuals' cognition, affect, and motivation and thus can also offer an explanatory mechanism for why certain behaviours accompany specific personality traits (Fleeson & Jayawickreme, 2015). A classic example of a social-cognitive variable is self-efficacy, or one's belief in their ability to succeed in specific situations. Bandura (1999) posits that self-efficacy plays a pivotal role in both directly and indirectly affecting behaviour, and so when trying to understand why someone acted a certain way, gathering information about the individual's perceived self-efficacy, goal aspirations, and outcome expectancies is important.

      Mischel and Shoda's (1995) Cognitive Affective System Theory of Personality is also a well-known account of social-cognitive variables. The theory states that features of a situation will activate different cognitive and affective reactions based on people's prior experiences. Therefore, a person's subjective experience of a situation – their encoding, expectancies, subjective values, affect, goals, and self-regulatory plans – will all help to determine their behaviour within that situation. For example, in a hospital setting, because of a previous negative experience, a person may only focus on features of the situation that are anxiety provoking. Focusing on those features could activate beliefs about how medical settings are threatening;

expectancies of a negative outcome and low perceived self-efficacy; feelings of anxiety; and perhaps a self-regulatory plan of escape and avoidance. The theory argues that by understanding what social cognitive variables (or "mediating units") are activated in a situation, researchers will be better able to explain the resulting behaviour.

A synthesis. More recent interactionist work has tried to include some combination of trait, state, and social cognitive variables within personality theory. Of note is Fleeson and Jayawickreme's (2015) Whole Trait Theory which states that every personality trait contains two pieces: a descriptive component (i.e., Trait$_{DES}$) and an explanatory component (i.e., Trait$_{EXP}$). The descriptive component of Whole Trait Theory, measures personality states over a sufficient period of time in order to provide a measure of both between-person and within-person personality levels. The explanatory component then includes social cognitive variables to help explain and predict why and when certain personality states will be enacted. Taken together, Fleeson and Jawawickreme argue that the goal of the theory is to both describe personality in way that recognizes both the stable and flexible components of personality and then to identify social-cognitive variables that can help explain the enactment of personality states within specific contexts. Overall, Whole Trait Theory exemplifies the new focus on interactionism within contemporary personality research and theory.

**Interactionism in Self-Compassion Research**

As reviewed above, the majority of research on self-compassion has focused on how trait differences in self-compassion relate to psychosocial functioning or on the efficacy of compassion-based clinical interventions. Neither of these lines of research has typically taken an interactionist approach; however, recently there have been hints of growing interest in interactionism within the self-compassion field. Of note is research focusing on within-person

variability in self-compassion, the effect of brief interventions on state self-compassion, and person-by-treatment interactions in clinical work. These emerging research interests place a greater focus on person-by-situation interactions within the self-compassion field; however, there are still unanswered questions, particularly with regards to how contextual factors might impact someone's ability to be self-compassionate in a given moment.

**Within-persons variability.** Self-compassion was originally defined as a trait variable (Neff, 2003a) but with the growing recognition of within-person variability in personality traits (e.g., Fleeson, 2001, 2004), recent research has demonstrated that self-compassion also has both trait and state-like properties. Using a daily diary method for 4 days, Breines, Toole, and Chen (2014) found that higher mean levels of daily trait appearance-related self-compassion (i.e., self-compassion for distress related to one's physical appearance) were related to less disordered eating across days. However, using the intraclass correlation (ICC), Breines et al., (2014) noted that 37% of the variance in appearance-related self-compassion occurred at the within-persons level. As such, within-person levels of self-compassion were also used as a predictor and results revealed that when participants were more self-compassionate than usual (i.e., than their personal mean level over the four days), they also reported lower daily levels of disordered eating. Similarly, Kelly and Stephen (2016) also found that within-persons variance accounted for 37% of the variance in self-compassion over a period of seven days. Results demonstrated that when participants were more self-compassionate than usual, they ate more intuitively, and were more satisfied and appreciative of their bodies. Finally, Kelly and Tasca (2016) examined patients with eating disorders who completed questionnaires every three weeks during 12 weeks of treatment. They found that state levels accounted for 45% of the variance in self-compassion, and that within-person self-compassion levels sequentially predicted lower levels of shame during

treatment (which was related to less severe eating pathology). Specifically, when patients were more self-compassionate than they were at the previous assessment point, their feelings of shame were lower.

Taken together, these initial studies were key in demonstrating that 1) levels of state self-compassion do indeed fluctuate across short periods of time and that 2) within-person measures of self-compassion have predictive power. However, none of the above studies investigated what factors - in particular, what contextual factors - may be associated with changing levels of self-compassion.

**Experimental inductions and clinical interventions.** Other research has focused on the effect of brief experimental self-compassion inductions, which demonstrate that state levels of self-compassion can be manipulated (and thus changed) over a short period of time. Compared to control conditions, experimental self-compassion inductions have been related to host of improved outcomes including less negative affect about negative self-relevant events (Leary et al., 2007), reduced distress about disclosure of a negative event for individuals who are highly fearful of receiving compassion from others (Dupasquier, Kelly, Moscovitch, & Vidovic, 2018), reduced state anxiety about a speech task for high social anxiety individuals (Harwood & Kocovski, 2017), and greater self-improvement motivation (Breines & Chen, 2012). As noted above, many of these studies have found person-by-intervention interactions, where the experimental induction of self-compassion appears to be more beneficial for certain individuals than others.

Clinical interventions occur over longer periods of time so within-person predictors are less typical (but see Kelly & Tasca, 2016); however, self-compassion researchers have also become more interested in person-by-treatment interactions. Kelly and Carter (2015) found that a

self-help CFT intervention for binge eating disorder was less effective at reducing eating disorder symptoms for individuals high in fear of self-compassion (relative to the sample mean) and Kelly, Carter, Zuroff, and Borairi (2013) found that higher baseline fear of self-compassion combined with lower self-compassion in eating disorder patients predicted worse outcomes over 12 weeks of treatment. In contrast, however, Kelly et al., (2010) found that a self-help CFT intervention to improve the self-regulation of cigarette smoking was more effective for participants who were higher in trait self-criticism – and thus likely to be more fearful of self-compassion – than the sample mean. These various person-by-intervention effects suggest mixed results for individuals who typically struggle with being self-compassionate. Depending on the population and the intervention, certain treatments may be more or less beneficial for individuals who have dispositional difficulties with being self-compassionate.

On the whole, research on self-compassion has only recently started to embrace the interactionist approach that has come to dominate the broader fields of social and personality psychology. Using experimental and daily diary methodologies, research focusing on state self-compassion has demonstrated predictable within-person fluctuations in self-compassion levels over a short period of time. In addition, clinical and experimental studies have found that self-compassion levels can increase over time. However, person-by-intervention interactions have also emerged whereby interventions that promote self-compassion may yield different outcomes based on the personality trait of the participant. These results highlight the need for self-compassion interactionist work that seeks to understand variability in self-compassion with a focus on both personality and context.

**The Current Study**

Over the past decade, research on self-compassion has continually highlighted that one of the best ways to cope with negative events is to act kindly towards oneself rather than critically. The myriad of benefits that accompany self-compassion is clear when examining individuals high in the trait (e.g., Neff, 2017) and also for those individuals who have learned how to become more self-compassionate through intervention (Leaviss & Uttely, 2015; Neff & Germer, 2013). With research demonstrating that self-compassion has both trait- and state-like properties, it is to be expected that an individual's ability to be self-compassionate in a given moment will be affected by both personality and contextual factors. However, in the majority of self-compassion research there has been little attention paid to how factors in one's social environment affect state self-compassion and whether contextual factors may moderate the effects of the stable personality traits that predispose individuals to acting more or less self-compassionately across situations. The current study addresses this gap by examining how personality and contextual factors interact to predict the extent to which an individual responds self-compassionately to a negative self-relevant event.

**Factors that Influence the Ability to be Self-Compassionate**

Identifying the impact of contextual variables on behaviour does not preclude an examination of trait personality. The two personality variables that are most likely to influence someone's ability to be self-compassionate in a given moment are trait self-criticism and trait self-compassion.

**Self-criticism.** Highly self-critical individuals often have histories of abuse or maltreatment, and in part due to these histories, can come to develop a dominant competitive mentality (Gilbert, 2005). Clinical research has repeatedly demonstrated that high self-critics

have difficulty feeling safe or soothed within themselves and in social situations (Gilbert & Irons, 2005). In addition, correlational work has confirmed that high self-criticism is typically associated with low self-compassion (e.g., Neff, 2003b) and an elevated fear of receiving compassion from others (e.g., Hermanto et al., 2016). For this reason, compassion-based interventions such as CFT, were developed specifically to help self-critical individuals learn to access feelings of soothing and safeness.

Self-critics' positive affect is typically contingent upon achievements such as accomplishing a task or receiving praise, and thus their positive feelings are often fleeting. In addition, self-critics are prone to noticing threats or danger in their environment (such as criticism, rejection, or failure) and often respond to these personally distressing events with marked negative affect, self-attacking, and avoidance (Gilbert, 2000, 2005). Based on self-critics' high threat sensitivity, and their difficulties generating feelings of compassion and safeness within themselves, it is expected that highly self-critical individuals would find it especially difficulty to be self-compassionate following a negative self-relevant event, where rejection, criticism, or failure threats are present.

**Self-criticism in context.** While there is no research directly examining how contextual factors interact with trait self-criticism to predict self-compassionate responses to negative events, research has examined how self-critical individuals typically respond within various interpersonal contexts. Early research on self-criticism highlighted that self-critics are less likely to believe that social support is available to them and less likely to ask for support (Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000; Mongrain, 1998), and these findings have been confirmed in more recent daily diary studies (Dunkely, Ma, Lee, Preacher, & Zuroff, 2014; Dunkely, Zuroff, & Blankstein, 2003; Zuroff, Sadikaj, Kelly & Leybman, 2015). While this

research has focused almost exclusively on self-critics' perception of their support system, recent research with partners and friends of low self-esteem individuals, a construct that is closely related to high self-criticism (Starrs, Dunkley, & Moroz, 2017), has found evidence to suggest that in certain instances, low self-esteem individuals' perception of less available social support may reflect the objective reality (Cortes & Wood, 2018; Forest & Wood, 2012).

While it is clear that self-critics perceive and possibly receive less social support than low self-critics, other research has highlighted that self-critical individuals also tend to respond in maladaptive ways to the support systems they do have. In accordance with social mentality theory, self-critics are more likely to fear and distrust displays of compassion from others in their life. For example, when visualizing a compassionate other, self-critical individuals display physiological signs of being threatened rather than soothed (Rockliff, Gilbert, McEwan, Lightman & Glover, 2008). Similarly, related research has suggested that the types of social support likely to be beneficial may depend on individuals' level of self-esteem. Marigold, Cavallo, Holmes, and Wood (2014) found that while high self-esteem individuals are receptive to different types of support, low self-esteem individuals seem to only be receptive to certain forms of support, and, unfortunately, support providers are more likely to provide low self-esteem individuals with the "wrong" type of support.

Overall, self-critics appear more likely to view typically positive social interactions and cues in a negative light. This may be especially problematic for self-critics given that they are very sensitive to negative interpersonal interactions. Longitudinal research using within-person methods has demonstrated that self-critical individuals have especially heightened increases in sadness following negative social interactions, and the authors argue that this interpersonal sensitivity may be an important reason why self-critics also tend to experience greater

interpersonal stress (Dunkley, Mandel, & Ma, 2014; Mandel, Dunkely, & Starrs, 2018). Finally, a unique relationship also appears to exist between self-criticism and attachment stability. Dunkely, Berg, and Zuroff (2012) found that self-criticism was related to higher daily levels of attachment fears, but perhaps most interestingly, self-criticism was also related to more unstable levels of fear of closeness and fear of loss. The greater instability in attachment fears that self-critics experience could suggest that their feelings of attachment may be somewhat dependent on whether they perceive approval or disapproval from close others on a day-to-day basis.

Taken together, experimental and correlational research supports social mentality theory's main assertion that the way individuals act *intra*personally is closely related to how they act interpersonally. Within the interpersonal context, a bidirectional pattern appears to emerge. Self-critics perceive - and perhaps in certain situations receive - less social support but they socially distance themselves from support as well (Mongrain, 1998). They are threatened by and sensitive to negative interactions but also more likely to view even typically comforting interactions in a negative and dangerous light (e.g., Rockliff et al., 2008). Finally, their attachments to others appear to be generally unstable, likely heightening their sensitivity to the possibility of future negative interactions.

**Self-compassion.** Compared to self-critics, self-compassionate individuals tend to display a vastly different pattern of responses to distressing events. According to Gilbert's (2005) theory of social mentalities, individuals who are higher in trait self-compassion are thought to embody a dominant caregiving mentality. As such, in times of personal distress, individuals who are high in self-compassion are sensitive to their own suffering and often work to alleviate their distress through self-kindness (Gilbert, 2015). Highly self-compassionate individuals have been found to respond to negative self-relevant events with less negative affect, greater positive

feelings towards others, improved coping skills, and greater motivation for improvement (Leary et al., 2007; Breines & Chen, 2012; Neff, Hsieh, & Dejitterat; 2005; Kreemers, van Hooft, & van Vianen, 2018). Their positive emotions are less driven by external circumstances; thus, they are able to persist with self-kindness and soothing even during negative situations that threaten their self-esteem (Leary et al., 2007; Neff, 2003a). The pattern of responses that self-compassionate individuals exhibit during personal distress is thought to be one of the key reasons why self-compassion is consistently linked to psychological well-being (Neff & Germer, 2017). Based on the existing research, and self-compassionate individuals' tendency to act kindly and non-judgmentally towards themselves during negative self-relevant events, their state self-compassion should still be high following a personal failure.

**_Self-compassion in interpersonal contexts._** Unlike self-criticism, self-compassion has been linked to higher levels of perceived social support (Stallman, Ohan, & Chiera, 2017). Daily diary studies have also found that giving and receiving more support than usual is related to higher levels of daily self-reassurance/compassion (Hermanto, Zuroff, Kelly, & Leybman, 2017) and during times of increased stress, higher self-compassion levels predict greater received support (Waring, Dupasquier, Stephen, & Kelly, 2017). Self-compassion may also act as a protective factor during negative interpersonal interactions. Kelly, Miller, and Stephen (2016) investigated the impact of trait and state self-compassion levels on intuitive eating, body appreciation, body image concerns, and negative affect when individuals were interacting with body-focused others. Results demonstrated that for participants higher in trait self-compassion, frequent interactions with body-focused others did not have deleterious effects, however, for participants with lower self-compassion, frequent interactions were harmful. In addition, Yarnell

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and Neff (2012) found that during times of interpersonal conflict, individuals higher in self-compassion were more likely to resolve their conflicts with compromise-based solutions.

Self-compassion may also enhance positive interpersonal outcomes. Self-compassionate individuals are more likely to provide romantic partners with care and support (Neff & Beretvas, 2013), be forgiving (Neff & Pommier, 2012), and feel socially connected (Neff, 2003b). Importantly, preliminary research also supports social mentality theory's prediction that individuals with greater self-compassion are more likely to feel safe and secure in their relationships (Kelly & Dupasquier, 2016; Zuroff, Kelly, Leybman, Sadikaj, & Gilbert, 2012). Overall, self-compassion appears to help promote positive social interactions while also being related to resiliency within negative interpersonal contexts.

In line with the broader interactionist approach and social mentality theory, contextual research on both self-compassion and self-criticism suggests that although both concepts are self-focused attitudes, they appear to have unique relationships with interpersonal variables. Self-compassion is linked to more adaptive and positive interpersonal outcomes, whereas self-criticism is related to heightened negative outcomes in the interpersonal context. The main limitation of the majority of this interpersonal research is its correlational nature. As such, it is unclear how much the context, the person, and/or the interaction between the two contribute to positive or negative outcomes. Research using experimental methods is needed to further understand how contextual factors may interact with trait self-criticism and self-compassion to predict the ability to respond more or less self-compassionately during times of suffering.

**Contextualizing compassion: Common failures.** As outlined above, one of the interpersonal contexts in which differences between self-critical and self-compassionate individuals is most likely to arise is during a negative social interaction where rejection or

criticism is present. As such the current study wanted to investigate how interpersonal contextual factors during this type of negative self-relevant event might impact an individuals' response to the event, and especially their ability to be self-compassionate in the moments following the event.

One factor known to influence self-compassion is how "shared" or common one's problems seem to be. When individuals come to recognize that many people share similar struggles, it is believed that they are less likely to feel isolated and disconnected from others, and better able to gain perspective on their own personal challenges (Neff & Germer, 2017). While individuals high in self-compassion are more likely to view their problems as ones that many people face (as Common Humanity is a core aspect of trait self-compassion), factors external to the individual can also signal the commonness of certain failures or negative events. In fact, research shows that cues that prompt individuals to recall the common nature of their problems can help to induce self-compassion (Leary et al., 2007). While in the past, research has examined how the personality traits of self-compassion and self-criticism affect a person's response to a challenging event, the present study will expand on this research by incorporating an interactionist framework. Specifically, the study will examine whether contextual factors – specifically, the presence or absence of cues of common humanity – interact with these two personality traits to predict responses to a negative event.

**Personality Traits and Situational Responses**

By definition, an interactionist approach does not pit the situation against the person but instead is most interested in the way that both factors interact to predict responding. While testing interactionist effects in experimental research is relatively new to the self-compassion field (and even psychology in general), theories that predict the interaction between someone's

personality and their broader environment have existed for many years. One theory that is particularly relevant to the present research question is self-verification (or self-consistency) theory (see Swann, 2012 for a review), which attempts to explain the unique relationships that arise between personality and social environments. Broadly speaking, self-verification theory suggests that people have a strong motivation to confirm their personal views of themselves within their social worlds. A sense of self is thought to develop from observing how others treat you and a stable sense of self is believed to arise around mid-childhood. After that point, self-views are used to make predictions about social interactions and to guide behavior in a way that allows for consistency and coherence between one's sense of self and their relationships with other people (Swann, 2012).

Research on self-verification theory has demonstrated that people prefer social feedback that confirms rather than disconfirms their self-views, even if their self-views are negative. For example, Swann and Read (1981) had individuals read a passage containing an evaluation from another person. Participants who generally viewed themselves as likeable spent more time reading the passage when they believed the evaluation was positive, while participants who thought of themselves as unlikable spent more time reading the passage when they thought the evaluation was negative. People also appear to be actively drawn to self-verifying information. Individuals will actively solicit self-confirming views from others (Swann, Wenzlaff, Krull, & Pelham, 1992) especially if they believe that the way the other person views them is discrepant from how they view themselves (Swann & Read, 1981). In addition, Swann, Wenzlaff, & Tafarodi (1992) demonstrated that people will choose to interact with a self-verifying evaluator rather than complete an unrelated activity, but will choose to participate in an unrelated activity rather than receive non-verifying feedback.

Self-verification theory may help to explain some of the interpersonal effects observed within the self-compassion and self-criticism literatures. For example, self-critics are more likely to be self-attacking during difficult times, so receiving social support from others may be discordant with their own self views, resulting in negative or simply non-positive reactions to typically soothing contexts. However, self-compassionate individuals tend to be kind to themselves after negative events, and thus receiving greater support and care from others in times of need may be more in line with their self-views. Yet, self-verification theory also leaves certain questions unanswered. For example, the theory might suggest that self-critics should be less reactive to negative interpersonal feedback as it fits with their own self-views (e.g., Rehman, Ebel-Lam, Mortimer, & Mark, 2009); however, self-critics actually show heightened sensitivity to negative interpersonal events (Dunkley et al., 2014; Mandel et al., 2018). Therefore, further research is needed to explore whether self-verification theory may help to explain how self-critical and self-compassionate individuals respond to negative interpersonal events, or whether some other theoretical perspective(s) might be more applicable.

**Study Objectives**

The goal of the current study was to examine whether cues of common humanity would interact with personality to predict responses following a negative self-relevant event. An experimental methodology was chosen, as other research with interpersonal contexts has typically been correlational, limiting conclusions about the casual effects of contextual variables. Following a negative interpersonal event, we examined whether trait self-criticism and trait self-compassion would predict different responses after participants had learned that either a peer had undergone a similar negative event (Common Humanity condition) or that a peer had not (Alone condition). Of particular interest was participants' state self-compassion in the moments after the

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event; however, we also measured other related responses to the event including state measures of shame, positive affect, and negative affect.

First, it was expected that the study would replicate previous findings that demonstrate that self-critical individuals have heightened negative reactions to distressing events (e.g., Dunkley et al., 2014) whereas self-compassionate individuals tend to have reduced negative reactions (e.g., Kreemers et al., 2018). As such we predicted main effects of trait self-compassion and trait self-criticism whereby following the negative event, 1A) trait self-compassion would predict greater state self-compassion and positive affect, and lower state shame and negative affect and 1B) trait self-criticism would predict lower state self-compassion and positive affect, and greater state shame and negative affect.

Second, based on literature that supports the experimental induction of self-compassion in part via cues of common humanity (e.g., Leary et al., 2007), we hypothesized a main effect of condition whereby 2) individuals in the Common Humanity condition compared to the Alone Condition would respond with more state self-compassion and positive affect, and less state shame and negative affect, following the negative event.

Third, based on self-verification theory and previous empirical research, we predicted that 3a) condition would moderate the effect of trait self-compassion such that trait self-compassion would be a stronger predictor of increased state self-compassion and positive affect, and of decreased state shame and negative affect, in the Common Humanity condition rather than in the Alone Condition. Finally, a hypothesis was less clear with respect to how condition and trait self-criticism might interact. Past research has shown that self-critics tend not to be soothed by interpersonal contexts that are usually comforting to others (e.g., Mongrain, 1998; Rockliff et al., 2008), but other research has found that interventions designed to increase self-

compassion are especially beneficial to self-critics (e.g., Kelly et al., 2010). Given these mixed

findings, we examined the nature of the interaction between self-criticism and condition on an

exploratory basis.

## Method

### Overview of Procedure

Undergraduate students were recruited for a study ostensibly investigating how meeting someone on a computer affects first impressions. The study contained two parts. First, participants completed a series of self-report measures online, in order to collect information on trait personality variables that were to be examined as independent variables. At least three days after completing the online portion of the study, participants completed the second part of the study in the lab. All participants underwent an experimentally induced negative self-relevant event and were then randomly assigned to either believe that they experienced the event and their peer did as well (Common Humanity condition) or that they experienced the event but their peer did not (Alone condition). Subsequently, participants completed the State Self-Compassion Scale, the State Shame Scale, and a measure of state affect. All participants were then thoroughly debriefed and completed a re-consent process.

### Participants

Participants were undergraduate students from a large Canadian university. They were recruited from an online participant pool to participate in a study ostensibly investigating how meeting someone on a computer (instead of in-person) affects first impressions. As remuneration, they received 1.5 participation credits for completing both parts of the study.

One hundred and thirty-nine participants completed both parts of the study. Of these, eight participants were excluded from analyses for either failing to follow the study's procedure ($n = 6$), or for failing to answer the majority of the questions in the self-report measures ($n = 2$). Finally, 29 participants were excluded for failing to be deceived by the experimentally-induced failure (see Procedure section for explanation of deception rating system). The final sample thus

consisted of 102 participants. Exact age data was missing for 22 participants due to a glitch in the online system but all participants identified as being 17 or older. Of the remaining participants, 3 chose not to report their age; across the other 77 participants, the age range was 17-31 years old ($M = 19.88$, $SD = 2.16$). Participants identified themselves as 87.3% female, and 12.7% males. The ethnic composition of the sample was as follows: 34.3% White/Caucasian, 21.6% South Asian, 15.7% East Asian, 5.9% Southeast Asian, 4.9% Black/African, 2.9% Middle Eastern, 2.9% Hispanic, 2.9% as Other, 2.0% West Indian/Caribbean, and 6.9% declined to identify their ethnic background.

**Measures**

**Independent variables.** During part one of the study, participants completed a battery of trait personality measures online using the US-based survey tool Qualtrics[TM].

*Self-compassion.* The Self-Compassion Scale (SCS; Neff, 2003b) is a 26-item self-report measure of trait self-compassion. It is made up six subscales, three positive item subscales and three negative item subscales. The subscales are: Self-Kindness (e.g., "I try to be loving towards myself when I'm feeling emotional pain), Common Humanity (e.g., When things are going badly for me, I see the difficulties as part of life that everyone goes through), Mindfulness (e.g., When something upsets me I try to keep my emotions in balance), Self-Judgment (e.g., I'm disapproving and judgmental about my own flaws and inadequacies), Isolation (e.g., When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world), and Over-identified (e.g., When I'm feeling down I tend to obsess and fixate on everything that's wrong). All items are rated on a 5-point Likert scale ranging from 1 (*Almost Never)* to 5 (*Almost Always).* A global or "total" score of trait self-compassion was used within the current study. The total score is calculated by reverse scoring the negative item subscales and

then calculating a grand mean of all six subscale means (Neff et al., in press). The SCS has good convergent validity, concurrent validity, discriminate validity, and test-retest reliability (Neff, 2003b). Cronbach's alpha in our sample was .91 demonstrating excellent internal consistency.

*Self-criticism.* The McGill Self-Criticism Scale (MSC; Santor, Zuroff, Fielding, 1997) is a 30-item self-report measure of trait self-criticism (e.g., If I fail to live up to expectations, I feel unworthy). In the current study, 3 items were left out of the scale in error. However, data from a previous study (Kelly et al., 2009) revealed a near-perfect correlation of $r = .98$ between the 27 items used in this study and the full 30-item scale. Items are rated on a 7-point Likert scale from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*) and a unit-weighted composite scale score is calculated[1]. The MSC was developed from the Depressive Experiences Questionnaire (Blatt et al., 1976), a measure used to assess the personality traits of self-criticism and dependency, which are known vulnerability factors for depression. The MSC preserves the psychometric properties of the original scale (Santor, Zuroff, Mongrain, & Fielding, 1997). Cronbach's alpha in our sample was .72 demonstrating acceptable internal consistency.

**Dependent Variables.** During part two of the study, participants completed a battery of state personality and affect measures in the lab.

*State Self-Compassion.* The State Self-Compassion Scale (SSCS; Breines & Chen, 2013) is a 16-item self-report measure of state-level feelings of self-compassion (e.g., "Right now… I'm trying to be understanding towards myself"). Items are rated on a 7-point Likert scale ranging from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*) and a total score is calculated by reverse scoring the negative items and then summing items to create a composite score. The

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[1] After consultation with one of the scales' developers, we were advised to scale each item by 27/30 when calculating the total score to accommodate for the missing three items. Therefore, means and standard deviations for total scores in our sample are not in the same range as other samples.

SSCS was adapted from Neff's (2003b) SCS, and the SSCS has a moderate positive correlation with the original scale (Breines & Chen, 2013). Cronbach's alpha in our sample was .90 demonstrating excellent internal consistency.

*State Shame.* The State Shame and Guilt Scale (SSGS; Marschall, Saftner, & Tangney, 1994) is a 15-item measure of state-level feelings of shame, guilt, and pride experience. Only the 5-item shame subscale was used in the current study (e.g., "I want to sink into the floor and disappear"). Items are rated on a 5-point Likert scale ranging from 1 (*Not feeling this way at all*) to 5 (*Feeling this way very strongly*) and are summed to create a composite scale score. The SSGS has good internal consistency, high levels of test-retest reliability, and good predictive and convergent validity (Tangney & Dearing, 2002). Cronbach's alpha in our sample was .86 demonstrating good internal consistency.

*Positive and Negative Affect.* State affect levels were measured using seven visual analogue scales (adapted from Nightingale & Kelly, under review), which ranged from 0 (*Not at All*) to 100 (*Extremely*). Visual analogue scales have psychometric properties that are comparable to Likert scales (Cook, Heath, & Thompson, 2001) and have demonstrated adequate reliability and validity as a measure of state affect (e.g., Abend, Dan, Maox, Raz & Bar-Haim, 2014). A principle components analysis with Varimax rotation revealed two single factors (Eigenvalue = 3.58, Eigenvalue = 1.80) that accounted for 44.78% and 22.51% of the variance respectively. Scores were thus summed to create measures of state positive affect (reassured, calm, content, happy, proud) and state negative affect (upset, angry, distressed).

**Procedure**

After completing part one of the study online, participants completed the second part in-lab with a research assistant (RA). Upon entering the lab, participants completed an online consent form and a visual analogue scale to assess their affect (i.e., pre-video affect).

**First Impressions Video.** An RA then entered the room, and reminded the participant that the study was investigating how first impressions are formed when meeting someone via a computer. The RA asked the participant to record a three-minute video of themselves in which he/she should introduce themselves to someone for the first time and talk about his/her hobbies and interests (adapted from Leary et al., 2007). The RA also explained to participants that after he/she recorded his/his video, an objective observer would watch the video and complete a feedback form about their first impression of the participant. The RA then set up a web-cam for the participant, and provided him/her with list of possible topics to discuss (e.g., what courses are you taking at university). The participant was asked to keep talking to the webcam until the RA returned to the room. After three minutes, the RA entered the room, and transferred the participant's video to a USB drive. The RA told the participant that she would take their video to be watched and rated by the objective observer. She instructed the participant to complete the visual analogue scale of affect for a second time (i.e., pre-feedback affect) while they waited. The RA then left the room for approximately five minutes.

**Common Humanity Manipulation.** The participant received three separate feedback rating forms in the following order: Average Participant Ratings, Personal Ratings, and Matched Participant Ratings. All the feedback forms contained ratings on six characteristics (socially skilled, friendly, likable, warm, intelligent, and mature) and each of the characteristics was rated on a 9-point scale from 1 (*Not at all*) to 9 (*Extremely*). At the top of each feedback form, a total

score was listed, reflecting the mean of all six characteristic ratings for either the average participant in the sample, the participant himself/herself, or the matched participant described below (see Appendix X for sample feedback rating forms).

*Average Participant Ratings.* When the RA first returned to the room, she told the participant that she had his/her feedback from the objective observer but that she first wanted to tell him/her about the average feedback ratings for the 29 participants who had already completed the study to provide background information. The RA handed the participant the average participant rating form, and orally reviewed each characteristic rating with the participants, "On average so far participants who completed the study have received a 7/9 for how socially skilled they appeared…" The rating forms contained a combination of *6*, *7*, and *8* ratings for each characteristic. The RA then highlighted the total score for the participant, "On average, participants in the study so far have been rated a total score of *7/9* for all six of these characteristics."

*Personal Ratings.* The RA then presented the participant with his/her own feedback rating form in a sealed envelope with the student ID written on the front. She asked the participant to review his/her ratings privately and then call her back into the room when he/she finished reviewing. To induce a sense of having failed, the participant received neutral feedback ratings, which were noticeably lower than the ratings received by the average participant. Neutral rather than negative ratings were chosen for ethical reasons, as previous research has demonstrated that neutral ratings still result in significantly more negative reactions than positive ratings (Leary et al., 2007). The participant received a combination of *4, 5*, and *6* ratings on each characteristic. The total score for the participant was thus a *5/9* for all six characteristics.

***Matched Participant Ratings.*** After the participant finished reviewing his/her feedback and called the RA back to the room, the RA told the participant that a student in the study had been matched to him/her based on the information provided during part one of the study so that the participant could compare his/her ratings to someone similar to themselves. The participant was handed a final feedback form, and told that the form contained the anonymized ratings of a participant who was in the same program and of the same sex. The RA orally reviewed each characteristic rating and the total rating with the participant. In the Alone Condition, the matched participant ratings on the six characteristics were a combination of *6, 7*, and *8* ratings (total score of *7/9*), and thus were noticeably higher than the ratings the participant received. In the Common Humanity (CH) Condition, the matched ratings were a combination of *4, 5*, and *6* ratings (total score of *5/9*) and thus very similar to the participant's own feedback. The RA told the participant that they would leave the room to let them compare their own ratings with the matched participant ratings in private.

**Dependent Measures.** After receiving all their feedback, the participant completed the visual analogue scale assessing affect for a final time (i.e., post-feedback affect), as well as the State Self-Compassion Scale, and the State Shame and Guilt Scale. The participant was only asked to complete these dependent measures after all three feedback forms were received as more frequent assessments (e.g., before and after the matched participant ratings) may have increased the likelihood that the participant would realize that the matched participant ratings were being used to manipulate affect. In addition, state measures of shame and self-compassion were only administered after the feedback manipulations as these experiences are only relevant in the context of a negative or distressing event. Finally, the participant completed a series of questions regarding compliance and their reactions to the feedback.

**Deception Ratings.** After completing the study, the RA asked the participant if he/she had "any guesses about what the study was really about" and questioned him/her about whether anything about the study "seemed strange or odd." RAs recorded all responses, which were then rated by the principal researcher on a 3-point scale to indicate participants' level of disbelief in the study's cover story. The participant was rated either: "1" designating that no deception was suspected by the participant, "2" designating that the participant did not fully believe or fully disbelieve the deception, or "3" designating that the participant did not believe an important part of the study's cover story (e.g., suspected that the feedback he/she received was fabricated). Participants who were rated a "3" were excluded from all analyses. Finally, the participant completed an oral debriefing and re-consent process.

**Analytic Strategy**

Hypotheses were tested in IBM SPSS Statistics 24 using hierarchical multiple regression. The main dependent variables were state self-compassion, state shame, post-feedback positive affect (PA), and post-feedback negative affect (NA). For each dependent variable, two three-stage hierarchical multiple regressions were conducted, one with trait self-criticism as the independent variable and another with trait self-compassion as the independent variable. The personality variable was standardized to facilitate interpretation of results (i.e., trait self-criticism or trait self-compassion) and entered at stage one of the regression, the condition variable (Alone or CH) at stage two, and the interaction between the two terms at stage three (i.e., trait self-compassion-by-condition or trait self-criticism-by-condition). Simple slope analyses were conducted to probe any significant interactions.

**Preliminary Analyses**

        **Deception variable.** Fifty-eight (44.3%) participants were rated "1" indicating they had

no suspicions about deception, 44 (33.6%) were rated a "2" indicating they did not fully believe

or fully disbelieve the deception and 29 (22.1%) were rated a "3" indicating they did not believe

an important aspect of the study's cover story. One-way ANOVAs were conducted to see if

deception groups differed on independent or demographic variables before excluding the "3s"

from all analyses. The ANOVAs demonstrated that there were no differences between the three

groups in trait self-compassion $F(2, 117) = 0.81$, $p = .448$, trait self-criticism $F(2, 122) = 0.75$, $p$

$= .476$, or age $F(2, 86) = 0.46$, $p = .631$. In terms of the sex, the "1" deception group was 91.4%

female compared to 81.8% in the "2" deception group and 65.5% in the "3" deception, which

was a statistically significant difference in proportions, $p = .011$. Post-hoc analysis with pairwise

comparisons using the $z$-test of two proportions demonstrated that the proportion of females in

the "1" deception group was significantly greater than the proportion of females in the "3"

deception group, $p < .05$. However, as all groups were predominately female (at least 82%

female), gender was not included as a control variable.  No other group differences were

significant, $p's > .05$.

        **Manipulation check.** A repeated measures ANOVA was conducted to examine changes

in NA across the three time points: pre-video, pre-feedback, and post-feedback. State NA

significantly differed across the three time points, $F(1.74, 175.98) = 11.42$, $p < .001$, $\eta^2_p = .102$.[2]

Tukey's post-hoc comparisons indicated that there was no change in NA from pre-video to pre-

feedback (-1.42, 95% $CI$ [-3.60, .76], $p = .199$), suggesting that merely recording the video did

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[2] The assumption of sphercity was not met, as assessed by Mauchley's test of sphericity, $\chi^2(2) = 16.00$, $p$
$< .001$; thus, a Greenhouse-Geisser correction was applied.

not affect participants' NA. However, mean NA increased from pre-feedback to post-feedback (6.38, 95% *CI* [3.33, 9.42], *p* < .001), suggesting that across conditions, participants felt worse after receiving feedback, consistent with the intention of the manipulation. The results suggest that regardless of condition, affect worsened after the feedback forms were received.

**Equivalence of groups.** Conditions did not differ on independent, control, or demographic variables except pre-feedback PA, with the Alone Condition having greater pre-feedback PA than the CH Condition (see Table 1). When central analyses were rerun to control for pre-feedback PA the pattern of results did not change.

**Correlations.** Pearson zero-order and partial correlations were calculated between independent (trait self-compassion and trait self-criticism), pre-video (PA and NA), and dependent variables (post-feedback NA controlling for pre-feedback NA, post-feedback PA controlling for pre-feedback PA, state shame, and state self-compassion; see Table 2). Trait self-compassion was negatively related to state shame and post-feedback NA, and positively related to state self-compassion and post-feedback PA. Trait self-criticism was positively related to state shame, and negatively related to state self-compassion. It was not significantly correlated with post-feedback NA or PA. Pre-video PA was positively related to state self-compassion and post-feedback PA but not related to state shame or post-feedback NA. Pre-video NA was positively related to post-feedback NA and state shame, and negatively related to state self-compassion. It was unrelated to post-feedback PA.

**Data Integrity.** For all hierarchical multiple regressions run, statistical assumptions were met. Linearity was assessed by visual inspection of a scatterplot and there was no evidence of multicollinearity as no tolerance values were less than .40. Homoscedasticity was assessed by visual inspection of studentized residuals plotted against the predicted values for participants in

the Alone and CH conditions. Normality was assessed by visually inspecting Q-Q Plots of studentized residuals. Any cases with studentized deleted residuals greater than $\pm$ 3 $SD$s, leverage values greater than 0.2, and/or values above 1 for Cook's distance were identified as outliers and their effect on the results was examined (see Table 3 for more details).

  **Missing Values Analysis.** More than 5% of data were missing for trait self-compassion, trait self-criticism, and state self-compassion variables (7.8%, 5.9%, 5.9% respectively). The data were determined to be Missing at Random (MAR; Tabachnick & Fidell, 2007). For MAR data, when the missing data of the predictors does not depend on the dependent variables (as was the case in this sample), regression analyses with listwise deletion will produce approximately unbiased estimates of the regression coefficients and accurate estimates of true standard errors (Allison, 2001). Therefore, any regression analyses were run with listwise deletion.

**Predicting State Self-Compassion**

  **Trait self-compassion.** As seen in Table 4, a hierarchical multiple regression demonstrated that trait self-compassion positively predicted state self-compassion (Step 1), but there was no main effect of condition (Step 2). The addition of the Self-compassion x Condition interaction term led to a statistically significant increase in $R^2$ (Step 3). The interaction term was significant, revealing that the relationship between trait self-compassion and state self-compassion differed based on condition. Simple slope analyses were used to probe the interaction and revealed a statistically significant positive relationship between trait self-compassion and state self-compassion in the CH Condition ($b = 0.69$, $SE = 0.13$, $p < .001$), and, to a lesser degree, in the Alone Condition ($b = 0.32$, $SE = 0.11$, $p = .004$; see Figure 1).

  **Trait self-criticism.** Trait self-criticism negatively predicted state self-compassion (see Table 5, Step 1), but there was no main effect of condition (Step 2). The addition of the

interaction term led to a trending increase in $R^2$ (Step 3).[3,4] The interaction term was trending

towards significance ($p = .051$), indicating that the relationship between trait self-criticism and

state self-compassion differed between the two conditions. Simple slope analyses demonstrated a

statistically significant negative relationship between trait self-criticism and state self-

compassion in the CH Condition ($b = -0.40$, $SE = 0.13$, $p = .002$), but not in the Alone Condition

($b = -0.04$, $SE = 0.13$, $p = .735$; see Figure 2).

**Summary.** Consistent with hypotheses, condition moderated the effect of both trait self-

compassion and trait self-criticism on state self-compassion. Higher trait self-compassion was

related to greater state self-compassion in the CH condition as compared to the Alone condition.

However, the reverse was true for trait self-criticism, and higher levels of the trait were related to

lower levels of state self-compassion in the CH condition than in the Alone condition.

**Predicting State Shame**

**Trait self-compassion.** As seen in Table 4, hierarchical multiple regression revealed that

trait self-compassion negatively predicting state shame (Step 1), but condition was unrelated to

state shame (Step 2). The addition of the interaction term explained an additional 7.0% of the

variance in state shame, which was significant (Step 3). The interaction term was also

significant, indicating that condition moderated the relationship between trait self-compassion

and state shame. Simple slope analyses showed a statistically significant negative relationship

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[3] The removal of two extreme values (see Table 2) lead to a significant increase in $R^2$ of .05, $F(1,84) = 4.42$, $p = .039$. Simple slope analyses demonstrated a statistically significant negative relationship between trait self-criticism and state self-compassion in the CH Condition ($b = -0.38$, $SE = 0.12$, $p = .001$), but not in the Alone Condition ($b = -0.04$, $SE = 0.11$, $p = .702$).
[4] The removal of a risky leverage value (see Table 2) lead to a significant increase in $R^2$ of .06, $F(1,85) = 5.49$, $p = .022$. Simple slope analyses demonstrated a statistically significant negative relationship between trait self-criticism and state self-compassion in the CH Condition ($b = -0.40$, $SE = 0.13$, $p = .002$), but not in the Alone Condition ($b = 0.05$, $SE = 0.15$, $p = .730$).

between trait self-compassion and state self-shame in the CH Condition ($b = -.59$, $SE = .12$, $p < .001$), but not in the Alone Condition ($b = -0.14$, $SE = 0.10$, $p = .162$; see Figure 3).

**Trait self-criticism.** As seen in Table 5, a hierarchical multiple regression revealed that trait self-criticism positively predicted state shame (Step 1). Condition was unrelated to state shame (Step 2), and the addition of the interaction term did not lead to a statistically significant increase in $R^2$ (Step 3).[5]

**Summary.** Consistent with hypotheses, condition moderated the relationship between trait self-compassion and state shame, with participants higher in self-compassion experiencing less shame in the CH condition. However, contrary to hypotheses, condition did not moderate the relationship between trait self-criticism and state shame.

**Predicting Post-Feedback PA**

**Trait self-compassion.** A four-stage hierarchical multiple regression revealed that after controlling for pre-feedback PA (see Table 4, Step 1), trait self-compassion positively predicted post-feedback PA (Step 2). There was no main effect of condition (Step 3), but the addition of the interaction term led to a statistically significant increase in $R^2$ (Step 4). The coefficient of the interaction term was statistically significant, demonstrating that the CH condition slope statistically differed from the Alone condition slope. Simple slope analyses revealed a statistically significant positive relationship between trait self-compassion and post-feedback PA in the CH Condition ($b = 9.70$, $SE = 2.73$, $p = .001$) but not in the Alone Condition ($b = -1.03$, $SE = 2.33$, $p = .659$; see Figure 4).

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[5] The removal of a risky leverage value (see Table 2) lead to a statistically significant increase in $R^2$ of .04, $F(1,89) = 3.95$, $p = .050$. Simple slope analyses demonstrated a statistically significant positive relationship between trait self-criticism and state shame in the CH Condition ($b = 0.30$, $SE = 0.11$, $p = .009$), but not in the Alone Condition ($b = -0.03$, $SE = 0.12$, $p = .798$).

**Trait self-criticism.** After controlling for pre-feedback PA (see Table 5, Step 1), there was no main effect of trait self-criticism or of condition on post-feedback PA (Step 2 and 3). However, the addition of the interaction term was statically significant and explained an additional 3.0% of the variance in post-feedback PA (see Table 5, Step 4). The coefficient of the interaction term was statistically significant, signaling that condition the CH condition slope statistically different from the Alone condition slope. Simple slope analyses revealed no statistically significant relationship between trait self-criticism and post-feedback PA in the CH Condition ($b = -3.76$, $SE = 2.43$, $p = .126$) but a trending positive relationship in the Alone Condition ($b = 4.50$, $SE = 2.41$, $p = .065$; see Figure 5).

**Summary.** Consistent with our hypotheses, condition moderated the effect of both trait self-compassion and trait self-criticism on post-feedback PA. Trait self-compassion was related to greater post-feedback PA in the CH condition but unrelated to PA in the Alone condition. The reverse was true for self-criticism, which was unrelated to post-feedback PA in the CH condition but, at a trend level, positively related to PA in the Alone condition.

### Predicting Post-Feedback NA

**Trait self-compassion.** After controlling for pre-feedback NA (Step 1), a hierarchical multiple regression revealed a negative effect of trait self-compassion on post-feedback NA (see Table 4, Step 2). There was also a main effect of condition (Step 3), with participants in the CH condition having significantly less NA after the feedback task than those in the Alone condition ($b = -6.90$, $SE = 2.91$, $p = .020$). The addition of the interaction term did not lead to a statistically significant increase in $R^2$ (see Table 4, Step 4).[6]

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[6] The removal of an extreme outlier value (see Table 2) lead to a statistically significant increase in $R^2$ of .03, $F(1,88) = 4.23$, $p = .042$. Simple slope analyses demonstrated a statistically significant negative relationship between trait self-compassion and post-feedback NA in the CH Condition ($b = -6.57$, $SE = 2.13$, $p = .003$), but not in the Alone Condition ($b = -0.75$, $SE = 1.85$, $p = .687$).

**State self-criticism.** A hierarchical multiple regression showed that after controlling for pre-feedback NA (Step 1), there was no main effect of trait self-criticism on post-feedback NA (see Table 5, Step 2). There was a trending main effect of condition (Step 3), with participants in the CH condition having less NA after the feedback task than those in the Alone condition ($b = -5.27$, $SE = 2.94$, $p = .076$).[7,8] The addition of the interaction term did not lead to a statistically significant increase in $R^2$ (see Table 5, Post-feedback NA, Step 4).

**Summary.** Contrary to hypotheses, condition did not moderate the effect of trait self-compassion or trait self-criticism on post-feedback NA. However, in both models, there was evidence for a main effect of condition on NA, with the CH condition leading to less post-feedback NA.

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[7] The removal of extreme outlier values (see Table 2) lead to a non-significant main effect of condition, $\Delta R^2$ of .02, $F(1,89) = 2.64$, $p = .108$

[8] The removal of extreme leverage values (see Table 2) lead to a non-significant main effect of condition, $\Delta R^2$ of .02, $F(1,90) = 1.83$, $p = .179$

**Discussion**

Building on the growing emphasis on interactionism in personality science, the current study set out to expand the self-compassion and self-criticism literature by examining how stable personality traits interact with situational factors to predict momentary levels of self-compassion and affect following a negative self-relevant event. Specifically, we examined whether cues of common humanity moderated the relationship between these traits and individuals' responses to a simulated failure in the lab. Generally, individuals high in trait self-compassion displayed more self-compassionate and, generally adaptive, responses towards their negative experiences, and these responses were enhanced among those who were led to believe that a peer had experienced a similar negative event. On the other hand, highly self-critical individuals tended to show less self-compassionate and more maladaptive responses to the negative event, and these responses were exacerbated among those who believed someone else had undergone a similar negative experience.

We found support for the first set of hypotheses as trait self-compassion and trait self-criticism predicted participants' responses to the negative event. Regardless of condition (Common Humanity vs. Alone), higher trait self-compassion predicted greater state self-compassion and positive affect after the feedback manipulation as well as less state shame and negative affect. In addition, trait self-criticism predicted greater state shame and less state self-compassion, but counter to our hypothesis, trait self-criticism was not related to post-feedback PA or post-feedback NA. However, trait self-criticism was positively related to pre-feedback NA, perhaps suggesting that self-critics' general tendency to experience more negative affect (Zuroff, Moskowitz, & Côté, 1999) may be the driving force behind their negative affective responses to distressing events.

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Hypothesis two was not supported as condition, on its own, did not generally impact participants' responses to the negative event. The only main effect of condition was present when predicting post-feedback NA, which was also the only dependent variable that was not predicted by the interaction of condition with trait variables. For post-feedback NA, support was found for the second hypothesis, as participants in the Common Humanity condition had less negative affect following the negative event than those in the Alone condition. However, among the other dependent variables there was no main effect of condition. It is possible that the salience of the Common Humanity condition was diminished due to the experimental design (see below), which may have reduced the likelihood of finding mean differences between the two conditions for state PA, state shame and state self-compassion. In addition, in many cases we found evidence for disordinal, or cross-over, interactions. As condition appeared to have an opposite effect on participants' responses to the event, depending on the value of trait self-criticism or trait self-compassion, it is understandable that there was no main effect of condition.

Finally, in line with our third and primary set of hypotheses, condition interacted with trait self-compassion and trait self-criticism to predict responses to the negative event. Condition moderated the relationship between trait self-compassion and state self-compassion such that trait self-compassion predicted greater state self-compassion in the Common Humanity condition than in the Alone Condition. Specifically, higher trait self-compassion was related to greater state self-compassion in both conditions but was most strongly related to state self-compassion when participants believed that a peer had experienced a similar negative event. These results suggest that cues of common humanity may have strengthened self-compassionate individuals' natural tendency to be kind to themselves after negative events.

In addition trait self-compassion was positively related to post-feedback PA, and negatively related to state shame, in the Common Humanity condition, but was unrelated to both outcomes in the Alone condition. Thus, although the current literature suggests that self-compassionate individuals always tend to show more adaptive responses during times of suffering, in the current study, trait self-compassion was often only related to these adaptive response styles when participants ostensibly shared the negative experience with another peer but not when they experienced the event alone. These preliminary results indicate that highly self-compassionate individuals may not show the same magnitude of resiliency to negative events across all contexts. However, this pattern of results did not emerge with all outcome variables, as condition did not moderate the relationship between trait self-compassion and post-feedback NA.

There was also some evidence to suggest that condition moderated the relationship between trait self-criticism and outcomes. Trait self-criticism tended to predict lower state self-compassion in the Common Humanity condition ($p = .051$) but was unrelated to state self-compassion in the Alone condition. In addition, trait self-criticism was unrelated to post-feedback PA when participants were in the Common Humanity condition, but was related to greater post-feedback PA in the Alone condition at a trend level ($p = .065$). Similar to the moderation effects observed with trait self-compassion, self-critics' typical, and maladaptive, responses to negative events were not always observed across both interpersonal contexts. However, whereas self-compassionate individuals responded more favourably when they believed a peer had experienced a similar below average rating and less favourably when the peer outperformed them, self-critical individuals responded either more negatively when experiencing a shared negative event or more positively when they experienced the negative event alone.

Though replication is needed, findings from this study are in line with self-verification theory and the broader literature on self-criticism and interpersonal contexts. Specifically, results provide evidence to suggest that self-critics' difficulty showing self-compassion after negative events may actually be more likely to occur within interpersonal contexts that are typically comforting for more self-compassionate individuals (e.g., Rockliff et al., 2008). Contrary to experimental findings that suggest that even brief self-compassion inductions may be helpful for individuals who have difficulty being self-compassionate (e.g., Leary et al., 2007), interpersonal cues of common humanity did not promote more adaptive responses for self-critical individuals in the current study. In fact, this study provides evidence to suggest that cues of common humanity may actually further undermine high self-critics' ability to respond to negative events with self-compassion.

It is important to note, however, that condition did not moderate the relationship between trait self-criticism and state shame or post-feedback NA, both of which were higher among self-critical individuals across conditions. [9] Negative affect and shame are pervasive responses to negative events for self-critics (e.g., Gilbert, 2005). Research has demonstrated that across repeated interactions of a similar nature individuals can come to develop an "interpersonal script," which provides them with a stable and almost automatic way to respond to similar interactions in the future, even if the response may not be entirely warranted or appropriate in the specific situation (Balwin, 1992). As such, receiving below-average feedback from the objective observer may have activated self-critics' typical response to negative self-relevant events, resulting in feelings of shame and negative affect regardless of the other contextual cues present.

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[9] However, when a risky leverage value was removed, condition moderated trait self-criticism to predict state shame.

However, it is also possible that some of the limitations of the present study (see below), such as a smaller sample size and not recruiting individuals who were clinically self-critical, may have limited our ability to observe these moderation effects.

Possible explanations for the observed moderation effects with trait self-compassion and trait self-criticism can be found within self-verification and social cognitive theories. Self-verification theory states that when people receive social feedback that does not objectively fit with their self-views, they may process, and thus perceive the feedback, in a way that still maintains their self-views. For example, Swann and Read (1981) found that participants showed selective recall when asked to remember statements from feedback they have been given. Participants had better recall of, and thus appeared to have paid more attention to, feedback statements that confirmed their self-views than statements that were inconsistent with their self-views (Swann & Read, 1981). In the case of the current study, all participants in the Common Humanity condition received feedback that a matched peer had received similar below average ratings from an objective observer, yet more self-critical participants may have fixated on different parts of the feedback than the more self-compassionate participants. For example, self-compassionate individuals may have focused on how their overall rating was the same as the matched peer, whereas self-critical participants may have paid more attention to the few characteristic ratings where they were rated lower than the matched participant (even if the peer's average rating was the same), thereby exacerbating their self-criticism and thwarting their self-compassion.

Similarly, the way self-critical versus self-compassionate participants interpreted the cue of common humanity may have differed. Mischel and Shoda's (1995) Cognitive Affective System Theory of Personality highlights how different expectancies, values, affect, and goals

impact how individuals respond to the same situation. Highly self-critical individuals tend to have unrealistically high personal standards (Flett, Hewitt, Blankstein, & Gray, 1998) and may therefore have expectations of performing better than their peers. Thus, receiving similar feedback to their peers may not have been comforting. Conversely, self-compassion has been shown to weaken the maladaptive effects of perfectionism (Ferrari, Yap, Scott, Einstein, & Ciarrochi, 2018), and thus for self-compassionate individuals, perhaps knowing that other people had also received negative feedback was more in line with their pre-existing expectation that failure is a part of life.

Overall, while stable personality traits indeed predicted responses to a negative event, these responses were typically moderated by the interpersonal context. Results highlight the importance of assessing both personality and contextual factors and testing them as predictors within one model, as the effect of interpersonal cues on self-compassionate responding may not be the same for every person. If these results can be replicated, an important next step will be to explore why interpersonal cues of common humanity appeared to promote greater state self-compassion for self-compassionate individuals while also leading to less state self-compassion for self-critics.

**Limitations, Future Directions, and Implications**

There are several limitations to the current study. First and foremost, although we expected that contextual cues might interact with self-criticism to predict responses to the negative event, we examined the nature of the interaction on an exploratory basis. The fact that the specific findings were not hypothesized underscores the importance of replicating the results in a larger sample. As well, to lend further confidence in the results, research questions should be tested with an altered procedure. For convenience and simplicity, the cues of common humanity

in the current study were not directly experienced (i.e., another person was not present to share their failure) and the matched participant was an unidentified stranger rather than a known peer. It is possible that by increasing the saliency of the shared failure in the Common Humanity condition, such as by having a known peer speak directly to participants about a similar failure, different results may emerge. In addition, while participants in both conditions received personal ratings that were objectively lower than the average participant ratings, those in the Alone condition also received lower ratings than a matched peer to accentuate the absence of common humanity. Future research should examine whether a more neutral comparison condition in which the participant is not made to feel isolated, leads to the same pattern of results.

As well, although an experimental approach was preferred for the current study, as much of the past research with interpersonal contexts has been correlational, using a lab setting also had its limitations. Not all participants believed the experimental deception, and among the 88% of participants who did believe the deception, reactions to the feedback were still relatively temperate (mean NA post-feedback was 15.82/100). As such, future work could investigate the effect of interpersonal contexts on self-compassionate responding using more naturalistic settings.

Another potential next step for research would be to manipulate common humanity in terms of the feelings associated with the negative event. In the present study, we provided participants with information that a peer had undergone a similar negative event, but did not provide any information about how the peer felt about the negative event. Research with low self-esteem individuals, who also tend to be self-critical, suggests that validating the negative feelings people experience during distressing events may be important (Marigold et al., 2014). As such perhaps by omitting information about the matched peer's feelings about the common

negative event, it is possible that we lessened the potential sense of common humanity, especially for more self-critical individuals.

Finally, the study relied on a convenience sample of predominately female undergraduates, limiting its representativeness. In addition, highly self-critical or self-compassionate individuals were not actively recruited for the current study. Future work with a more heterogeneous community sample, and perhaps a clinical sample, would make it possible to determine whether the present results apply to more highly self-critical individuals.

Despite these limitations, this study has important implications for both applied work and research on self-compassion. First and foremost, the current study supported the importance of applying an interactionist perspective to the study of self-compassion and self-criticism. Investigating how personality traits interact with social environments provides a deeper understanding about the stability *and* the flexibility in responses that both vulnerable and resilient individuals show during distressing events. Indeed, results imply that the way both self-critical and self-compassionate individuals respond to negative events may depend on the interpersonal context they are in and/or the way they appraise their social environments. Along the same lines, these results support past intervention research (e.g., Kelly & Carter, 2015), which suggests that attempts to promote self-compassion using a one-size fits all approach may not be effective for all types of people. The present findings may also help to inform more targeted social programming, such as choosing the specific strategies and skills taught to enhance self-compassionate responding based on whether an individual tends to be more self-critical or more self-compassionate. Overall, by investigating how interpersonal contexts impact self-compassionate responding, work building on the current study could help make self-compassion and its associated benefits more accessible to a diverse range of people.

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Table 1

*Equivalence of Groups on Key Demographic, Independent, and Control Variables*

|  | CH Condition | Alone Condition | t-test or $\chi^2$ |
|---|---|---|---|
| Demographics |  |  |  |
| Mean Age (SD) | 19.98 (2.47) | 19.78 (1.81) | -0.39, $p = .701$ |
| % Female | 89.1% | 85.1% | 0.36, $p = .548$ |
| Independent and Control Variables |  |  |  |
| Mean Trait S. Comp (SD) | 2.84 (0.52) | 2.98 (0.66) | 1.08, $p = .281$ |
| Mean Trait S. Crit (SD) | 150.98 (24.26) | 143.98 (25.62) | -1.37, $p = .173$ |
| Mean Pre-Feedback PA (SD) | 45.52 (22.96) | 54.79 (19.75) | 2.17, $p = .033$ |
| Mean Pre-Feedback NA (SD) | 9.79 (15.98) | 9.04 (10.89) | -0.27, $p = .786$ |

S. Comp = self-compassion. S. Crit = self-criticism. PA = positive affect. NA = negative affect.

Table 2

*Zero-Order and Partial Correlations between Independent, Pre-Video, and Dependent Variables*

| | Trait S. Comp | Trait S. Crit | Pre-Video PA | Pre-Video NA | Post-Feed. PA | Post-Feed. NA | State S. Comp | State Shame |
|---|---|---|---|---|---|---|---|---|
| Trait S. Comp | -- | | | | | | | |
| Trait S. Crit | -.452** | -- | | | | | | |
| Pre-Video PA | .343** | -.175$^t$ | -- | | | | | |
| Pre-Video NA | -.292** | .243* | -.312** | -- | | | | |
| Post-Feed. PA | .190$^t$ | .019 | .379*** | -.011 | -- | | | |
| Post-Feed. NA | -.233* | .001 | -.004 | .249* | -.299** | -- | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| State S.<br>Comp | .528** | -.250* | .421** | -.282** | .422*** | -.410*** | -- |
| | | | | . | | | |
| State<br>Shame | -.398** | .237* | -.143 | 203* | -.492*** | .446*** | -.746** | -- |

Trait S. Comp = self-compassion (assessed in part 1). Trait S. Crit = self-criticism (assessed in part 1).

Pre-Video PA= positive affect (assessed in part 2 before video recording and feedback manipulation).

Pre-Video NA = negative affect (assessed in part 2 before video recording and feedback manipulation).

Post-Feed. PA = Post-feedback positive affect after controlling for pre-feedback positive affect (assessed in part 2 after video recording and feedback manipulation). Post-Feed. NA = Post-feedback negative affect after controlling for pre-feedback negative affect (assessed in part 2 after video recording and feedback manipulation). State S. Comp = self-compassion (assessed in part 2 after video recording and feedback manipulation). State Shame (assessed in part 2 after video recording and feedback manipulation).

Table 3

*Statistical Assumption Testing for Primary Analyses*

| Independent Variable | Dependent Variable | Linearity | Lowest Tolerance Value | Homoscedasticity | Largest Studentized deleted residual | Largest Leverage Value | Largest Cook's Distance Value | Normality |
|---|---|---|---|---|---|---|---|---|
| Trait S. Comp | State S. Comp | Met | .43 | Met | -2.87 | .17 | 0.10 | Met |
| | State Shame | Met | .43 | Met | -2.31 | .17 | 0.13 | Met |
| | Post-Feed. NA | Met | .42 | Met | 3.09[*] | .35[†] | 0.59 | Met[‡] |
| | Post-Feed. PA | Met | .40 | Met | 4.30[§] | .18 | 0.26 | Met |
| Trait S. Crit. | State S. Comp | Met | .49 | Met | -3.18, -3.46[**] | .24[††] | 0.16 | Met |
| | State Shame | Met | .48 | Met | 2.65 | .22[‡‡] | 0.33 | Met |
| | Post-Feed. NA | Met | .43 | Met | -3.12, 3.18, 3.02[§§] | .33, .23[***] | 0.93 | Met[†††] |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|
| Post-Feed. PA | Met | .48 | Met | 5.02$^{‡‡‡}$ | .22$^{§§§}$ | 0.21 | Met |

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$^{*}$ Extreme value was in the plausible range but excluding the case did substantially change results. See results section.

$^{†}$ Value was in the risky range, but excluding the case did not substantially change results, thus case was retained

$^{‡}$ Moderate positive skew was detected, as such both the control variable and the dependent variable were base-10 log transformed. Using the transformed variable did not substantially change results, thus the untransformed variable was used in the main analyses.

$^{§}$ Extreme value was in the plausible range and excluding the case did not substantially change results, thus case was retained.

$^{**}$ Extreme values were in the plausible range and excluding the cases did not substantially change results, thus cases were retained. See Results section.

$^{††}$ Value was in the risky range, but excluding the case did not substantially change results, thus case was retained. See Results section.

$^{‡‡}$ Value was in the risky range, and excluding the case substantially changed results. See Results section.

$^{§§}$ Extreme values were in the plausible range, but excluding the cases did substantially change results. See Results section.

$^{***}$ Values were in the risky range, but excluding the cases did substantially change results. See Results section.

$^{†††}$ Moderate positive skew was detected, as such both the control variable and the dependent variable were base-10 log transformed. Using the transformed variable did not substantially change results, as such the untransformed variable was used in the main analyses.

$^{‡‡‡}$ Extreme value was in the plausible range, and excluding the case did not substantially change results, thus case was retained

$^{§§§}$ Value was in the risky range, and excluding the case did not substantially change results, thus case was retained.

Table 4

*Hierarchical Multiple Regression Predicting State Self-Compassion, State Shame, Post-Feedback PA, and Post-Feedback NA from Trait Self-Compassion, Condition, and Trait Self-CompassionXCondition.*

| | $R^2$ | $\Delta R^2$ | $\Delta F^2$ | $p$ | B(SE) | $p$ |
|---|---|---|---|---|---|---|
| **State self-compassion, $F(3, 85) = 13.20$, p < .001, effect size $r = .56$** | | | | | | |
| Step 1 | .278 | .278 | 33.574 | <.001 | | |
| Trait self-compassion | | | | | 0.479 (.083) | <.001 |
| Step 2 | .279 | .000 | 0.010 | .919 | | |
| Trait self-compassion | | | | | 0.480 (.084) | <.001 |
| Condition | | | | | -0.017 (.168) | .919 |
| Step 3 | .318 | .039 | 4.902 | .030 | | |
| Trait self-compassion | | | | | 0.688 (.125) | <.001 |
| Condition | | | | | -0.030 (.165) | .856 |
| Trait self-compassionXcondition | | | | | -0.364 (.165) | .030 |
| **State shame, $F(3, 88) = 8.959$, p < .001, effect size $r = .48$** | | | | | | |
| Step 1 | .158 | .158 | 16.896 | <.001 | | |
| Trait self-compassion | | | | | -0.327 (.080) | <.001 |
| Step 2 | .164 | .006 | 0.634 | .428 | | |
| Trait self-compassion | | | | | -0.334 (.080) | <.001 |
| Condition | | | | | 0.129 (.162) | .428 |
| Step 3 | .234 | .070 | 8.035 | .006 | | |
| Trait self-compassion | | | | | -0.586 (.118) | <.001 |
| Condition | | | | | 0.131 (.156) | .402 |
| Trait self-compassionXcondition | | | | | 0.440 (.155) | .006 |
| **Post-feedback PA, $F(4\ 89) = 22.661$, p < .001, effect size $r = .71$** | | | | | | |
| Step 1 | .432 | .432 | 69.840 | <.001 | | |
| Pre-feedback PA | | | | | 15.108 (1.808) | <.001 |
| Step 2 | .452 | .021 | 3.422 | .068 | | |
| Pre-feedback PA | | | | | 14.071 (1.871) | <.001 |
| Trait self-compassion | | | | | 3.477 (1.871) | .068 |
| Step 3 | .453 | .001 | 0.097 | .756 | | |
| Pre-feedback PA | | | | | 13.946 (1.922) | <.001 |
| Trait self-compassion | | | | | 3.450 (1.891) | .071 |
| Condition | | | | | 1.156 (3.707) | .756 |
| Step 4 | .505 | .052 | 9.314 | .003 | | |
| Pre-feedback PA | | | | | 13.515 (1.844) | <.001 |
| Trait self-compassion | | | | | 9.703 (2.734) | .001 |
| Condition | | | | | 1.297 (3.547) | .715 |
| Trait self-compassionXcondition | | | | | -10.697 (3.505) | .003 |

**Post-feedback NA, $F_{(4, 89)} = 10.471$, p < .001, effect size $r$ = .57**

| | $R^2$ | $\Delta R^2$ | $F$ | $p$ | $B$ (SE) | $p$ |
|---|---|---|---|---|---|---|
| Step 1 | .213 | .213 | 24.946 | <.001 | | |
| Pre-feedback NA | | | | | 7.660 (1.534) | <.001 |
| Step 2 | .256 | .043 | 5.206 | .025 | | |
| Pre-feedback NA | | | | | 7.438 (1.503) | <.001 |
| Trait self-compassion | | | | | -3.395 (1.488) | .025 |
| Step 3 | .299 | .044 | 5.603 | .020 | | |
| Pre-feedback NA | | | | | 7.401 (1.466) | <.001 |
| Trait self-compassion | | | | | -3.785 (1.461) | .011 |
| Condition | | | | | 6.900 (2.915) | .020 |
| Step 4 | .320 | .021 | 2.686 | .105 | | |
| Pre-feedback NA | | | | | 7.137 (1.462) | <.001 |
| Trait self-compassion | | | | | -6.553 (2.224) | .004 |
| Condition | | | | | 6.919 (2.888) | .019 |
| Trait self-compassionXcondition | | | | | 4.797 (2.927) | .105 |

*Note*: Condition was dummy coded, where: CH Condition = 0, and Alone Condition = 1.

*F*-values and effect size *r*s were derived from the final model in Step 3 of each hierarchical regression.

Table 5

*Hierarchical Multiple Regression Predicting State Self-Compassion, State Shame, Post-Feedback PA, and Post-Feedback NA from Trait Self-Criticism, Condition, and Trait Self-CriticismXCondition.*

| | $R^2$ | $\Delta R^2$ | $\Delta F^2$ | $p$ | $B(SE)$ | $p$ |
|---|---|---|---|---|---|---|
| **State self-compassion, $F(3, 86) = 3.320$, p = .024, effect size $r$ = .32** | | | | | | |
| Step 1 | .063 | .063 | 5.884 | .017 | | |
| Trait self-criticism | | | | | -0.220 (.091) | .017 |
| Step 2 | .063 | .000 | 0.014 | .905 | | |
| Trait self-criticism | | | | | -0.221 (.092) | .018 |
| Condition | | | | | -0.022 (.188) | .905 |
| Step 3 | .104 | .041 | 3.930 | .051 | | |
| Trait self-criticism | | | | | -0.402 (.128) | .002 |
| Condition | | | | | -0.033 (.185) | .875 |
| Trait self-criticismXcondition | | | | | 0.359 (.181) | .051 |
| | | | | | | |
| **State shame, $F(3, 90) = 2.550$, p = .061, effect size $r$ = .28** | | | | | | |
| Step 1 | .056 | .056 | 5.487 | .021 | | |
| Trait self-criticism | | | | | 0.187 (.080) | .021 |
| Step 2 | .061 | .005 | 0.443 | .507 | | |
| Trait self-criticism | | | | | 0.193 (.081) | .019 |
| Condition | | | | | 0.109 (.164) | .507 |
| Step 3 | .078 | .018 | 1.709 | .194 | | |
| Trait self-criticism | | | | | 0.302 (.116) | .011 |
| Condition | | | | | 0.115 (.164) | .483 |
| Trait self-criticismXcondition | | | | | -0.210 (.161) | .194 |
| | | | | | | |
| **Post-feedback PA, $F(4, 91) = 20.942$, p < .001, effect size $r$ = .69** | | | | | | |
| Step 1 | .445 | .445 | 75.242 | <.001 | | |
| Pre-feedback PA | | | | | 15.570 (1.795) | < .001 |
| Step 2 | .445 | .000 | .032 | .858 | | |
| Pre-feedback PA | | | | | 15.584 (1.806) | < .001 |
| Trait self-criticism | | | | | 0.310 (1.732) | .858 |
| Step 3 | .446 | .001 | .214 | .645 | | |
| Pre-feedback PA | | | | | 15.434 (1.842) | < .001 |
| Trait self-criticism | | | | | 0.420 (1.756) | .811 |
| Condition | | | | | 1.689 (3.651) | .645 |
| Step 4 | .479 | .033 | 5.810 | .018 | | |
| Pre-feedback PA | | | | | 15.223 (1.798) | <.001 |
| Trait self-criticism | | | | | -3.762 (2.437) | .126 |
| Condition | | | | | 1.467 (3.560) | .681 |
| Trait self-criticismXcondition | | | | | 8.260 (3.427) | .018 |

**Post-feedback NA, $F_{(4, 91)} = 6.984$, p < .001, effect size *r* = .49**

| | $R^2$ | $\Delta R^2$ | F | p | B (SE) | p |
|---|---|---|---|---|---|---|
| Step 1 | .202 | .202 | 23.734 | <.001 | | |
| Pre-feedback PA | | | | | 7.487 (1.537) | <.001 |
| Step 2 | .202 | .000 | 0.000 | .992 | | |
| Pre-feedback PA | | | | | 7.483 (1.602) | <.001 |
| Trait self-criticism | | | | | 0.015 (1.489) | .992 |
| Step 3 | .229 | .027 | 3.216 | .076 | | |
| Pre-feedback PA | | | | | 7.354 (1.584) | <.001 |
| Trait self-criticism | | | | | 0.408 (1.487) | .784 |
| Condition | | | | | 5.270 (2.939) | .076 |
| Step 4 | .235 | .006 | 0.750 | .389 | | |
| Pre-feedback PA | | | | | 7.053 (1.624) | <.001 |
| Trait self-criticism | | | | | 1.772 (2.167) | .416 |
| Condition | | | | | 5.387 (2.946) | .071 |
| Trait self-criticismXcondition | | | | | -2.546 (2.940) | .389 |

*Note*: Condition was dummy coded, where: CH Condition = 0, and Alone Condition = 1.

*F*-values and effect size *r*s were derived from the final model in Step 3 of each hierarchical regression.
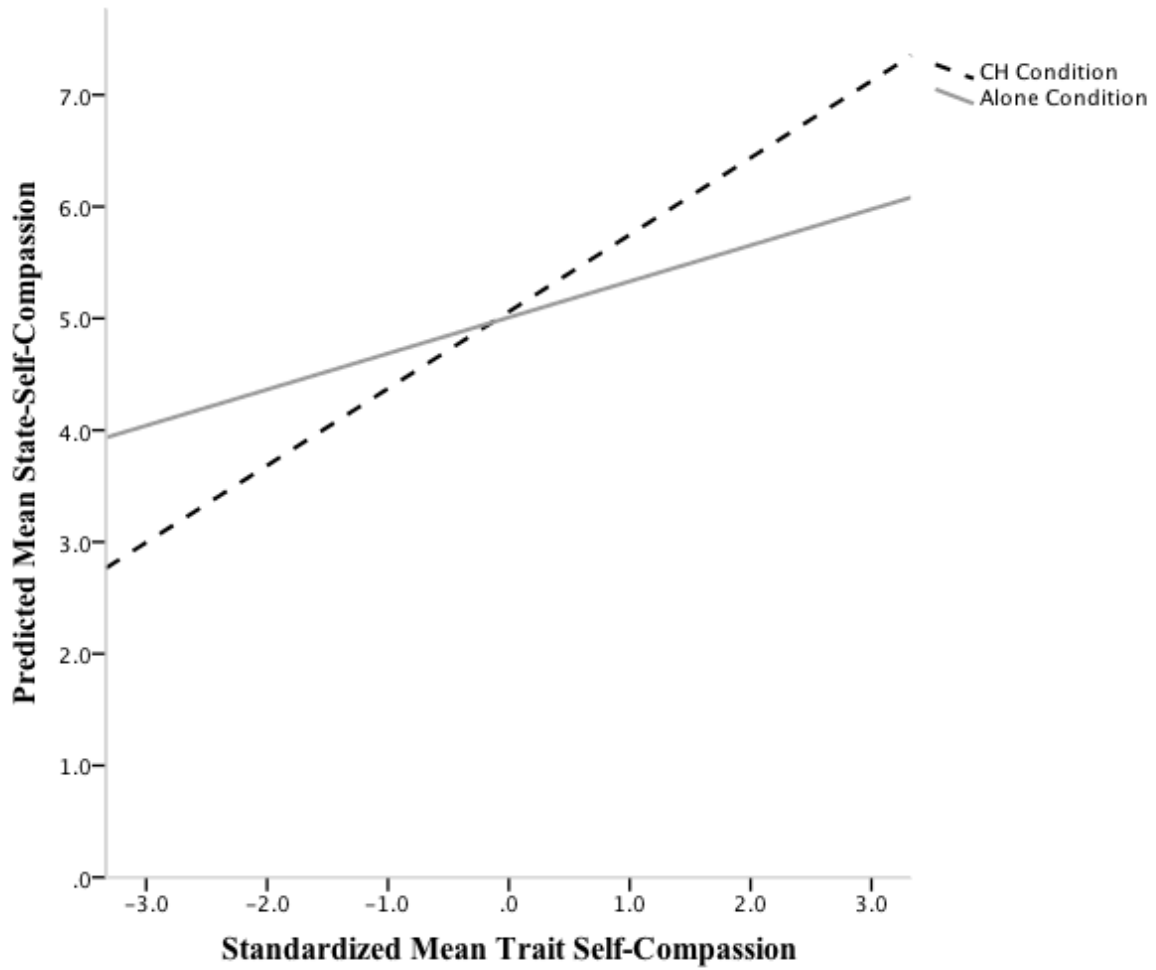
*Figure 1*. Within-condition simple slopes of trait self-compassion predicting mean state self-compassion
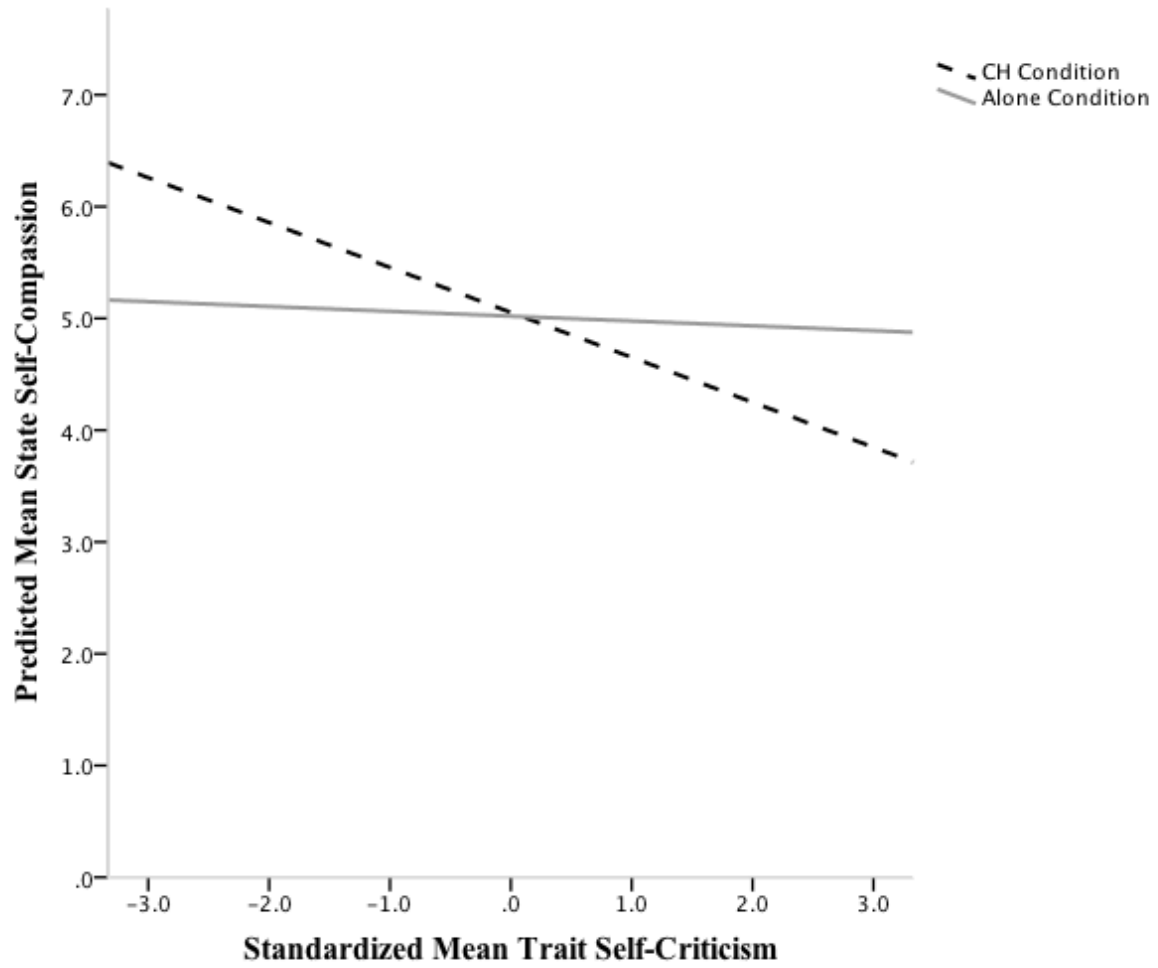
*Figure 2*. Within-condition simple slopes of trait self-criticism predicting mean state self-compassion
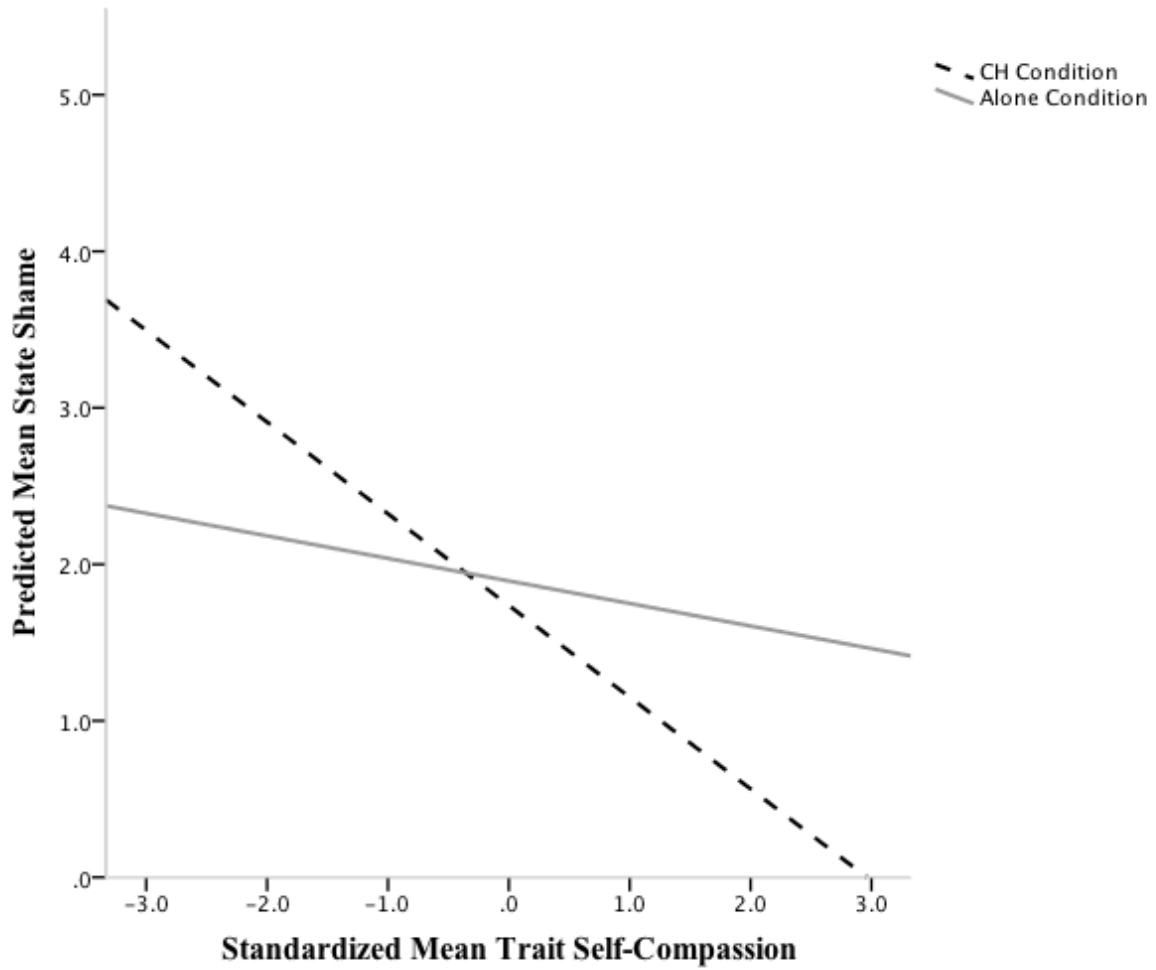
*Figure 3*. Within-condition simple slopes of trait self-compassion predicting mean state shame
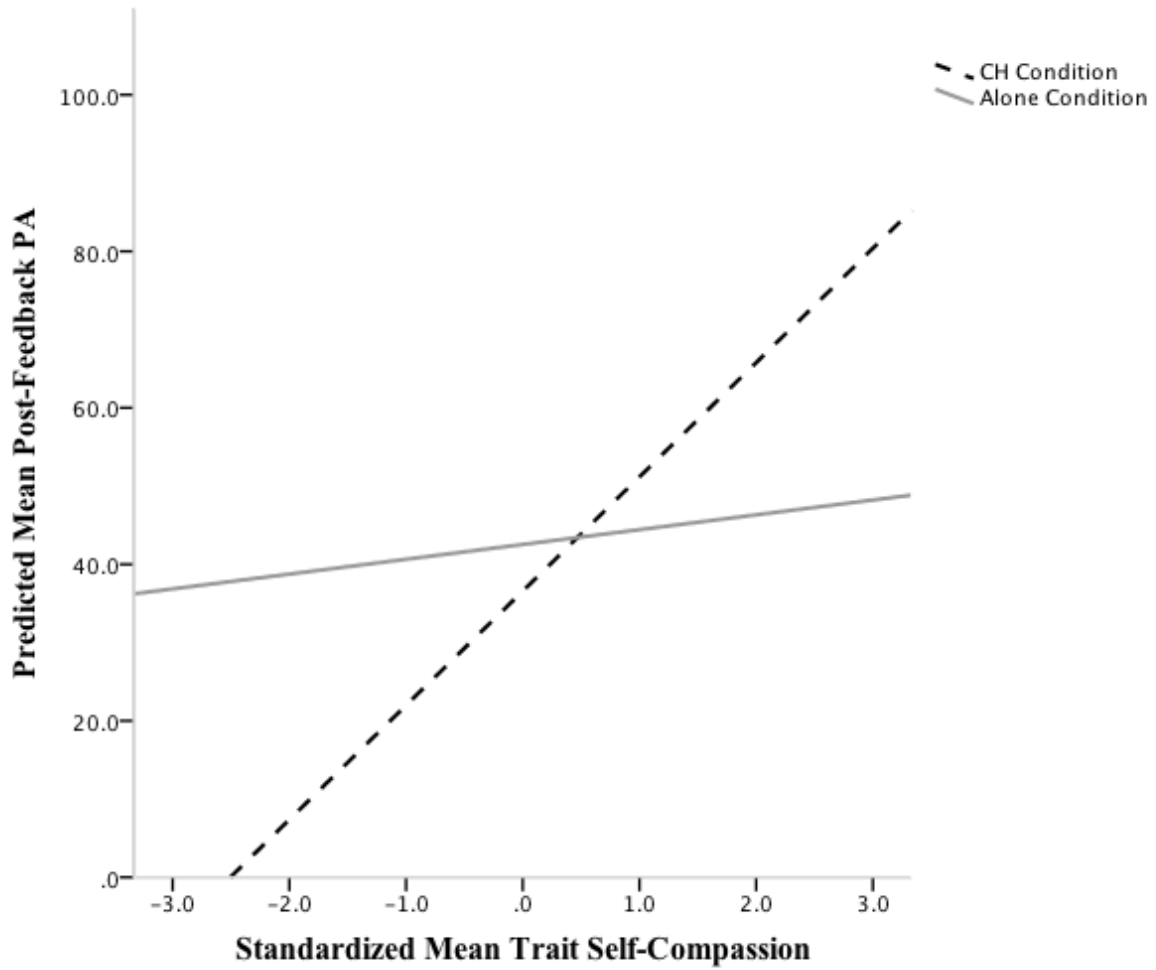
*Figure 4*. Within-condition simple slopes of trait self-compassion predicting mean post-feedback PA, controlling for pre-feedback PA
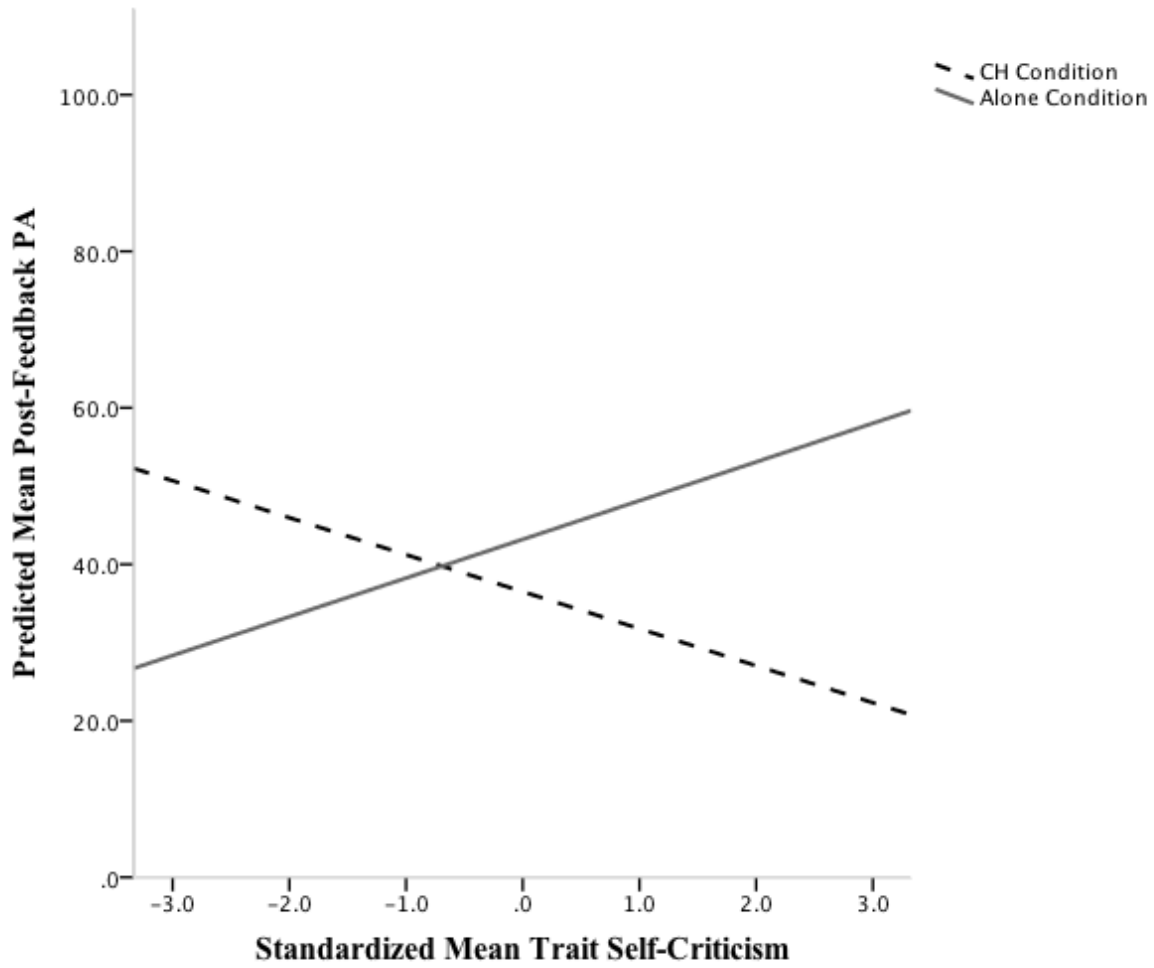
*Figure 5*. Within-condition simple slopes of trait self-criticism predicting mean post-feedback PA, controlling for pre-feedback PA

**Average Participant Ratings:**

Average Participant Feedback for 29 Participants
Average = 7/9

| | 1- Not at all | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 - Extremely |
|---|---|---|---|---|---|---|---|---|---|
| Socially Skilled | ○ | ○ | ○ | ○ | ○ | ○ | ● | ○ | ○ |
| Friendly | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● | ○ |
| Likable | ○ | ○ | ○ | ○ | ○ | ○ | ● | ○ | ○ |
| Warm | ○ | ○ | ○ | ○ | ○ | ● | ○ | ○ | ○ |
| Intelligent | ○ | ○ | ○ | ○ | ○ | ○ | ● | ○ | ○ |
| Mature | ○ | ○ | ○ | ○ | ○ | ○ | ● | ○ | ○ |

**Personal Ratings:**

Your Feedback
Average = 5/9

| | 1- Not at all | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 - Extremely |
|---|---|---|---|---|---|---|---|---|---|
| Socially Skilled | ○ | ○ | ○ | ○ | ◉ | ○ | ○ | ○ | ○ |
| Friendly | ○ | ○ | ○ | ◉ | ○ | ○ | ○ | ○ | ○ |
| Likable | ○ | ○ | ○ | ◉ | ○ | ○ | ○ | ○ | ○ |
| Warm | ○ | ○ | ○ | ○ | ◉ | ○ | ○ | ○ | ○ |
| Intelligent | ○ | ○ | ○ | ○ | ○ | ◉ | ○ | ○ | ○ |
| Mature | ○ | ○ | ○ | ○ | ◉ | ○ | ○ | ○ | ○ |

**Matched Participant Feedback – Alone Condition:**

Matched Participant Feedback
Average = 7/9

| | 1- Not at all | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 - Extremely |
|---|---|---|---|---|---|---|---|---|---|
| Socially Skilled | ○ | ○ | ○ | ○ | ○ | ○ | ◉ | ○ | ○ |
| Friendly | ○ | ○ | ○ | ○ | ○ | ○ | ◉ | ○ | ○ |
| Likable | ○ | ○ | ○ | ○ | ○ | ○ | ◉ | ○ | ○ |
| Warm | ○ | ○ | ○ | ○ | ○ | ○ | ◉ | ○ | ○ |
| Intelligent | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ◉ | ○ |
| Mature | ○ | ○ | ○ | ○ | ○ | ◉ | ○ | ○ | ○ |

**Matched Participant Feedback – CH Condition:**

Matched Participant Feedback
Average = 5/9

| | 1- Not at all | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 - Extremely |
|---|---|---|---|---|---|---|---|---|---|
| Socially Skilled | ○ | ○ | ○ | ○ | ◉ | ○ | ○ | ○ | ○ |
| Friendly | ○ | ○ | ○ | ○ | ◉ | ○ | ○ | ○ | ○ |
| Likable | ○ | ○ | ○ | ○ | ◉ | ○ | ○ | ○ | ○ |
| Warm | ○ | ○ | ○ | ◉ | ○ | ○ | ○ | ○ | ○ |
| Intelligent | ○ | ○ | ○ | ○ | ◉ | ○ | ○ | ○ | ○ |
| Mature | ○ | ○ | ○ | ○ | ○ | ◉ | ○ | ○ | ○ |