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Animal Abuse as an Outcome of Poor Emotion Regulation: A Preliminary Conceptualization

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Abstract

Animal abuse is an under-reported yet prevalent form of both passive and active forms of aggressive behavior. Its severe and upsetting consequences are not only experienced by the victims themselves, but also others in proximity (e.g., pet owners). Despite this, research and theory focusing on the motivations for such behavior appear to be sparse and limited in development when compared to other types of offending behavior, such as interpersonal violence. This article examines the motivations that underlie animal abuse and the maladaptive emotion regulation techniques that facilitate this type of behavior. We focus on two specific emotion regulation styles that have been implicated in existing literature; that is, the mis-regulation and under-regulation of emotions. Based on existing research and theories, we posit that the facilitative role emotion regulation plays in the perpetration of animal abuse is vital in our understanding of how and why this abuse occurs. In this article, we present a preliminary conceptualization of animal abuse behavior that depicts emotion regulation as a pivotal factor in key explanatory pathways.

Animal Abuse as an Outcome of Poor Emotion Regulation: A Preliminary Conceptualization

Animals are easy targets for interpersonal affection and aggression. In our society, this places them at the most vulnerable. When people harm animals, the abuse is underreported and convictions are rare (Ascione & Arkow, 1999; Daly, Taylor, & Signal, 2014; Levitt, Hoffer, Loper, 2016; e.g. RSPCA, 2009). Unlike most violent crimes committed against people, animal abuse is difficult to prosecute because its victims are voiceless. As such, it is challenging to gauge its prevalence and, in response, develop any effective prevention or intervention strategies (RSPCA, 2009). Understanding the factors and processes that can explain animal abuse behavior has significant implications for research and practice because, for example, animal abuse is significantly correlated with other types of offending behavior, including interpersonal violence (Baxendale, Lester, Johnston, & Cross, 2015; Coston & Protz, 1998; Flynn, 2011; Hensley, Tallichet, & Dutkiewicz, 2012; Vaughn et al., 2009; Walters, 2014). It has also been recognized as an indicator for more serious mental health problems and social skills deficits (Lockwood, 2002). On reviewing the animal abuse literature, there are some indications of regulatory processes at play given the emotional contexts that this abuse typically situates (e.g., Alleyne & Parfitt, 2017). For example, rejection sensitivity, emotional attachment, empathy deficits and emotional violence have all been associated with the perpetration of animal abuse in the literature (Flynn, 2000; Gullone, 2012, 2014; Gupta, 2008; Hardesty et al., 2013; Simmons & Lehmann, 2007; Strand & Faver, 2005). Nonetheless, animal abuse has yet to be fully conceptualized within an emotion regulation framework.

Drawing from the wider offending literature, emotion regulation has become one of the primary treatment targets in reducing reoffending (Bowen et al., 2014; Garofalo, Holden, Zeigler-Hill, & Velotti, 2016). There currently exists no single definition of emotion

regulation, however, it can broadly be described as "all of the conscious and nonconscious strategies we use to increase, maintain, or decrease one or more components of an emotional response" (Gross, 2001, pp. 215). For example, research has found that offenders with maladaptive emotion regulation styles are more likely to have an extensive history of aggression in comparison to those with adaptive regulation styles (Roberton, Daffern, & Bucks, 2014). Findings such as these are incorporated into rehabilitation programmes aimed at reducing violent offending, specifically by including emotion-related modules.

To offer one specific example, deficient emotion regulation has been identified as a causal factor in pathways to sexual offending (Polaschek & Ward, 2002), as well as recidivism (Hanson & Morton-Bourgon, 2005). These findings offered an evidence base to implement changes to existing treatment programmes. As a result, it is recommended to incorporate mindfulness exercises in sexual offender treatment programmes (Gillespie, Mitchell, Fisher, & Beech, 2012), and the preliminary results more broadly are promising for both male and female offenders (Samuelson, Carmody, Kabat-Zinn, & Bratt, 2007). Given that animal abusers share many social and psychological characteristics with other types of offenders (Ascione, 1999), we might hypothesize that they may also have similar issues with emotion regulation at some point during the offence process.

Based on this, we propose a conceptual framework to structure our understanding of why and how some people harm animals. So, in this article, we examine the available research on animal abuse in relation to the underlying emotional components that facilitate this offending behavior. Our primary argument is that animal abuse is an outcome of poor emotion regulation and this can be evidenced, at least in part, by the existing research on the underlying motivations for the offending. When a person encounters a perceived conflict, we argue that animal abuse is a behavioral manifestation of two types of emotion regulation, specifically *under*-regulation and *mis*-regulation. And in response to these regulatory

processes, maladaptive coping strategies are employed to counteract the cognitive dissonance. But before we embark on the conceptualization of animal abuse within an emotion regulation framework, we must operationalize what we mean by *animal abuse.*

Definitional Issues: Animal Cruelty versus Animal Abuse

We use the terms *animal abuse* and *animal cruelty* inter-changeably throughout the human-animal relations literature (Gullone, 2012; Tiplady, 2013). However, there are apparent differences between *cruelty* and *abuse* which need to be distinguished. For instance, *cruelty* denotes a specific motivation, such as enjoyment or sadism, but not all acts of animal abuse are motivated in such a way (Rowan, 1999). Whereas, *abuse* can be viewed as a broader term that encompasses cruelty, as well as all other types of motivation. Thus, for the sake of clarity, the term *animal abuse* will be used throughout this article to capture the broader range of motivations and types of harm.

There are current debates and discussions on what the components of an animal abuse definition should entail. For example, attitudes towards, and acceptance of animal abuse vary significantly depending on factors such as, the species of the animal, the severity of the abuse, the type of abuse (i.e., psychological versus physical, passive versus active) and the frequency of abuse (i.e., one-off versus repeat). Thus, the definition of animal abuse has evolved over time in an attempt to account for these various issues, as well as the differences found when considering particular cultural and societal norms (Akhtar, 2012). For the sake of simplicity, we refer to *animal abuse* as "all socially unacceptable behavior that intentionally causes unnecessary pain, suffering or distress and/or death to an animal" (Ascione, 1993, pp. 83).

Animal Abuse: Setting the Context

Child Perpetrated Abuse

To date, the literature has mostly focussed on the link between animal abuse and human-directed aggression. There is a myriad of empirical studies that have focussed predominantly on the predictive strength of animal abuse perpetrated during childhood on interpersonal violence during adulthood. This has been examined in a series of retrospective studies. For instance, research utilizing offender samples has found significantly higher levels of reported childhood animal abuse in aggressive or violent criminals (e.g., murder, sexual violence), when compared to non-aggressive offenders (e.g., theft, fraud; Kellert & Felthous, 1985; Merez-Perez & Heide, 2004; Merez-Perez, Heide, & Silverman, 2001). Hensley et al., (2009) acknowledged that repeated acts of childhood animal abuse were predictive of later recurrent acts of aggression towards humans. Moreover, methods of animal abuse utilized in childhood are often reflected in adult expressions of aggression towards humans (Henderson, Hensley, & Tallichet, 2011; Hensley & Tallichet, 2009; Wright & Hensley, 2003). For example, case studies of serial murderers examined within this study described sadistic behaviors, such as the mutilation and dissection of small animals during childhood. In the majority of the cases examined, this was later followed by mutilation and dissection of human bodies. This link becomes most apparent in the Diagnostic and Statistical Manual 5 (DSM-5) criteria for conduct disorder. According to the DSM-5, conduct disorder is a "repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated" (American Psychological Association, 2013). In order to be diagnosed, a child will have to demonstrate at least three of the associated symptoms over the past year, which are encompassed in the following categories: aggression to people and animals, destruction of property, deceitfulness of theft, and serious violation of rules. Continuation of this disorder into adulthood has been found to be indicative of antisocial personality disorder (Loeber, Farrington, & Petechuk., 2002;

Simonoff et al., 2004), which is characterized by irresponsible, exploitative behavior, recklessness, impulsivity and deceitfulness (Livesley, 2007).

Within the childhood animal abuse literature, a number of factors have also been identified which help to explain the development of this behavior in adults. For example, children who engage in animal abuse are more likely to continue this behavior into adulthood (Tallichet & Hensley, 2005). The authors found that the younger the perpetrator during their first experience of animal abuse, the more likely they were to continue this behavior into adulthood. Moreover, children who are exposed to animal abuse and/or domestic violence in their home, are also more likely to start abusing animals themselves (Currie, 2006; DeViney, Dickert, & Lockwood, 1983; Thompson & Gullone, 2006). In one such study, Flynn (1999) reported that adult perpetrators of animal abuse were more likely to report being exposed to harsh/punitive parenting styles during their childhood/adolescent years than non-animal abusers.

Recently, Hensley and colleagues (2017) examined the social and emotional context of childhood animal abuse in order to explain this developmental pathway to adult interpersonal violence. They looked at whether, for example, feeling upset for the harm participants' caused animals during childhood could explain whether they become violent during adulthood. There data could not speak directly to this relationship, but this study is one of the first to directly consider the role of emotions as facilitator of violence escalation.

Adult Perpetrated Abuse

There is an emerging literature examining the link between adult-perpetrated animal abuse and human-directed aggression specifically within the context of domestic violence (Ascione, 2005). For example, perpetrators of domestic violence may threaten or abuse animals to gain coercive control over their partner (Adams, 1994; Abrahams, 2007). A recent study by Hartmen et al. (2015) examined 291 victims of domestic violence and found that

11.7% of domestic abusers threatened to abuse the family pet, in comparison to 26% who acted on the threats of abuse. These figures are relatively low in relation to previous studies which have found threat rates to range between 12 – 21%, and actual acts of animal abuse to range from 46 – 57% in cases of domestic violence (Ascione et al., 2007; Carisle-Frank et al., 2004; Faver & Strand, 2003; Volant et al., 2008). Moreover, domestic abusers who have also engaged in animal abuse exhibit higher rates of sexual violence, marital rape, emotional violence and stalking behaviors (Simmons & Lehmann, 2007). In some instances, victims (i.e., women and children) of domestic violence can also be made to engage in animal abuse. For example, research has shown that victimized partners may be coerced into performing sexually abusive acts with an animal (Walker, 1979), or they may take out their anger on their pets (Walker, 1984), or in some extreme cases, they will kill their own pet to prevent it from coming to further harm at the hands of their abusive partner.

However, there are very few studies that have examined animal abuse in other specific contexts explicitly and/or context-less completely. In a study of 153 convicted animal abusers, and an equivalent number of matched controls, Arluke and colleagues (1999) found that animal abusers were more likely to have previous criminal records, specifically for violent offences, than non-animal abusers. With a similar design, Febres and colleagues (2014) found that animal abuse was related to perpetration of severe psychological aggression, as well as physical aggression. Following studies have shown a link between direct interpersonal aggression (as opposed to displaced aggression) and direct animal abuse (whereby the animal is the perceived provocateur; Alleyne, Tilston, Parfitt, & Butcher, 2015), suggesting a possibility of shared characteristics between both forms of aggression (Parfitt & Alleyne, 2016). Walters (2013) compared reports of prior animal cruelty in violent and non-violent prisoners and patients and found that animal abuse was predictive of antisocial

behavior broadly, not violence specifically. That is, animal abuse is just as much of an indicator of nonviolent antisocial behavior as it is for violent antisocial behavior.

Aside from the animal abuse and antisocial behavior link, research has also found animal abusers to be more likely to hold pro-animal abuse attitudes, have lower levels of human-directed empathy (Erlanger & Tsytsarev, 2012), self-report higher levels of criminal attitudes (specifically in relation to power orientation; Schwartz et al., 2012), and higher levels of the Dark Triad traits (i.e., psychopathy, narcissism and Machiavellianism; Kavanagh et al., 2013).

Empathy deficits have also been highlighted as a key factor contributing to the development of animal abuse behavior (Jolliffe & Farrington, 2004). Empathy is defined as "the reactions of one individual to the observed experiences of another" (Davis, 1983, p. 113). Thus, it is made up of a cognitive element (i.e., the ability to engage in perspective-taking) and an emotional element (i.e., the ability to share the feelings of others and react appropriately; Davis, 1980). In light of this, empathy is a key mechanism within the development of good decision making and positive social interactions. Therefore, deficits in empathy have been linked to an increased risk of violence to animals and humans alike (Stranger, Kavussanu, & Ring, 2012). For example, those who are less concerned by animal abuse also express lower levels of empathy towards other people (Ascione, 1997; Henry, 2006). Individuals who are more likely to engage in animal abuse are also more likely to score low on empathetic concern (i.e., the ability to experience other-oriented emotions; Parfitt & Alleyne, 2016).

Taken together, these findings highlight the negative implications of animal abuse, both psychologically and behaviorally. It is apparent from the literature that animal abusers are a deviant and problematic offending group, therefore the motivations, characteristics and cognitions need further investigation to assist in the development of effective interventions.

Whilst there is an accumulating body of research identifying the underlying characteristics and motivations of adult animal abusers, less research is focused on the offence process, or even the regulatory processes which may inhibit or facilitate animal abuse. However, it is important to first understand the motivations for animal abuse in order to extrapolate any further processes facilitating this behavior (Hensley & Tallichet, 2005).

Motivations for Animal Abuse

One of the areas that has received the most attention in the literature has been the underlying motivations for the perpetration of animal abuse. From qualitative interviews with offenders who reported committing acts of animal abuse, Kellert and Felthous (1985) developed a classification scheme consisting of nine motivations for committing animal abuse. Based on these statements, they found that animal abusers' motivations were as follows: (1) to control (e.g., striking a dog to stop it from barking); (2) retaliation (e.g., kicking a dog because it urinated on the carpet); (3) prejudice against a specific species/breed (e.g., the belief that cats are not worthy of moral consideration); (4) expression of aggression through an animal (e.g., running illegal animal fights); (5) enhancement of one's own aggression (e.g., owning 'fighting' dog breeds to impress others); (6) shocking people for amusement (e.g., social media fads such as swallowing a live goldfish); (7) retaliating against another person/revenge (e.g., harming a disliked persons' pet); (8) displacement of aggression from a person to an animal (e.g., lashing out at a pet due to frustration provoked by your boss at work); and finally, (9) sadism (tendency to derive pleasure from inflicting suffering, injury or death on an animal). Kellert and Felthous (1985) however, did not distinguish the age of animal abuse perpetration so although they were interviewed as adults, some could have been reporting on incidents which occurred during childhood.

More recently, Arluke (2002) conducted interviews with 25 college students, asking about their involvement in and motivation for animal abuse perpetration. The majority of

participants reported committing these acts because they were risky, with the main motivation being the thrill of 'getting away with it'. Later on, Hensley and Tallichet (2005) conducted a similar study on 112 inmates. When asked to indicate motivations for animal abuse, 48% reported committing the acts out of anger, 33% reported that they were motivated by fun, 22% reported that they were motivated by a prejudice or because they wanted to control the animal, 14% reported that they were motivated by revenge or sexual gratification, and the remainder were too unclear to categorize effectively. Once again, the authors did not distinguish the age of animal abuse perpetration, so their data can not speak to any explicit developmental processes. Following this, Hensley, Tallichet and Dutkiewicz (2011) conducted a study to examine the potential impact demographic and situational factors may have had on the motivations for animal abuse identified in the previous study. They found that acts committed out of anger were less likely to be covered up or cause upset to the perpetrator. However, these acts were more likely to re-occur. Acts committed to shock others were more likely to be carried out alone and in urban areas, and sexually driven acts were more likely to be covered up and re-occur.

More recent attempts have been made to understand the underlying motivations for incidents of animal abuse. Levitt, Hoffer and Loper (2016) examined criminal histories of 150 animal abusers and found 21% of incidents resulted from animals' misbehavior, 7% resulted from retaliation against the animal, 8% resulted from retaliation against another person, and 13% resulted from a domestic dispute. Similarly, Newberry (2018) examined the associations between motivations for animal abuse, methods and impulsivity in a sample of undergraduate students. Out of the 130 participants who took part in the study, 55% reported engaging in at least one act of animal abuse. The most commonly reported motivations were prejudice, amusement, control, and retaliation.

There exists one known article which presents a social psychological model of animal abuse (Agnew, 1998). There are two parts to this model. The first describes the individual-level factors which increase the likelihood of an individual engaging in animal abuse. These include: (1) being unaware of the consequences of their behavior on the animals; (2) not thinking that their behavior is wrong; and (3) believing that they benefit from the behavior. The second part of the model describes a further set of factors which have both direct and indirect effects on animal abuse. These include: (1) individual traits (e.g., empathy), (2) socialization (e.g., taught beliefs, behavioral reinforcement/punishment), (3) strain or stress level (e.g., strain/stress provoked by the animal), (4) level of social control (e.g., attachment to the animal, commitment to school/family), and (5) nature of animal (e.g., animals similarity to us). Focusing specifically on the individual traits described by the model, Agnew highlights impulsivity, sensation-seeking, irritability and low self-control as major influencers for animal abuse. He suggests that such traits largely originate from socialization, specifically poor socialization as a child. But what this model does not explicitly account for is the role of emotions (and the regulation of these emotions) in the facilitation of this offending behavior. For example, socialization experiences that are dysfunctional and/or abusive could, arguably, breed resentment and other types of negative emotions. How that child copes with those emotions, in addition to the normalization of animal abuse behavior, could be what explains whether the child (or in future, the adult) goes on to engage in animal abuse. Whilst this model does well to set out the social and developmental factors related to animal abuse, it certainly leaves room for developing our understanding of the process variables that facilitate this type of behavior.

Taking into account this research, a number of common themes emerge that we can build on to explain why adults harm animals. Specifically, much of the research has found that people may engage in animal abuse out of anger or in pursuit of excitement/fun (Agnew,

1998; Hensley & Tallichet, 2005; Kellert & Felthous, 1985). Both scenarios are indicative of poor emotion regulation, whereby the resulting behavior appears to be the outcome of impulsiveness (i.e., "rapid, spontaneous, unplanned, and maladaptive" behavior; Enticott, Ogloff, & Bradshaw, 2006; Newberry, 2018) or effortful control (Eisenberg, Smith, & Spinrad, 2011). For example, in some instances, it appears individuals engage in animal abuse because of a perceived threat (either from the animal itself or another individual) and have difficulty in regulating their emotions resulting in an aggressive outburst towards the animal. On the other hand, some individuals are able to plan their opportunity to engage in animal abuse (perhaps motivated by their desire to have fun) demonstrating an extraordinary level of emotion regulation. These contrasting examples have been supported by existing studies. Ramirez and Andreu (2006) found a link between impulsivity and aggressive behavior, including animal abuse. Similarly, Newberry (2018) looked explicitly at the different facets of impulsivity and found various associations between this construct and motivations and methods of animal abuse. In contrast, Parfitt and Alleyne (2017) found a link between animal abuse proclivity and effective anger regulation. These relationships present a conundrum because there is evidently a relationship between an individual's ability to regulate (whether effectively or ineffectively) their emotions and animal abuse behavior, but there is yet to be a conceptual framework to explain why and how this occurs.

Emotion Regulation and Animal Abuse Perpetration

To date, there is a developing body of literature which has linked difficulties with emotion regulation with a variety of maladaptive behaviors, including but not limited to, substance misuse (Bonn-Miller, Vujanovic, & Zvolensky, 2008; Kun & Demetrovics, 2010), self-harm (Buckholdt, Parra, & Jobe-Shields, 2009; Gratz & Tull, 2010), elevated aggression (Roberton, Daffern & Bucks, 2014), aggressive behavior (Gratz et al., 2009; Tager et al., 2010), sexual deviance (Tull, Weiss, Adams, & Gratz, 2012), and disordered eating behaviors

(Selby, Ward, & Joiner, 2010). So far, the role of regulatory processes has not been examined in relation to the perpetration of animal abuse, which is surprising given that animal abuse (perpetrated by children and adults) has been linked to a variety of deviant behaviors, suggesting possible shared characteristics with other types of offending groups (Ascione, 2005). Deficits in empathy are also evidenced in the animal abuse literature, which is broadly the understanding of emotions experienced by others (Gupta, 2008; Dadds et al., 2006; Merez-Perez & Heide, 2004; Ramirez & Andreu, 2009). Thus, it can be argued, theoretically, that difficulties in emotion regulation comprise a significant explanatory factor in the perpetration of animal abuse.

As mentioned previously, only one psychological theory of animal abuse has been proposed in the existing literature. Agnew's (1998) social-psychological theory draws on existing criminological theories including social learning theory, strain theory and control theory to help explain why individuals engage in animal abuse. Due to the evidenced overlap between animal abuse and other types of antisocial behavior (specifically interpersonal), other theoretical approaches from the criminological literatures may also lend support towards explaining animal abuse with consideration of the experiences of emotions, the processing of self and others' emotions, and the regulation of emotions. For example, *rational choice theory* (Becker, 1968) suggests that perpetrators willingly choose whether to commit an offence or not based on a rational consideration of the costs and benefits of the intended behavior. Based on this theory, an individual would engage in animal abuse on the basis that it will be rewarding, profitable, or satisfy a need more effectively than a noncriminal behavior could. However, this is based on the assumption that those who engage in antisocial behavior are no different to those who do not (Kubrin et al., 2009). Therefore, individual differences in personalities which may cause particular behaviors, such as animal abuse, are not fully considered. Specifically, the different emotion regulation strategies which

may take effect in a given situation which determine whether or not someone engages in animal abuse are overlooked in this approach.

Another well-cited theory, *social learning theory,* argues that individuals' behaviors are determined by what they learn from their environments. For example, some learn by observing prototypical models of behavior, or they learn by observing the punishment and reinforcement of certain behavior, but simply put, we learn the beliefs, attitudes, and behaviors we are most exposed to (Agnew, 1998). A substantial body of evidence also links poor child-rearing environments with abusive behavior towards animals as an adolescent/adult (Becker at al., 2004; Felthous, 1980; Hensley & Tallichet, 2005). According to Wright and Hensley (2003), individuals engage in animal abuse because they are frustrated, so to release this frustration they redirect their aggression towards an animal who is considered weaker and less likely to retaliate. Children raised in hostile home environments may also be more likely to model their care-givers abusive behavior, and through the process of modeling and reinforcement, they learn to become abusive towards humans and animals alike (Hensley et al., 2012). Overall, social learning theory does better accounting for childhood acts of animal abuse as opposed to adult acts. Additionally, it struggles to fully explain opportunistic offending which has not previously been observed. However, the presence of frustration as a predictive factor for animal abuse is supportive of existing evidence linking ineffective anger regulation with an increased likelihood of animal abuse (Parfitt & Alleyne, 2017). Whilst social learning theory can tell us that ineffective emotion regulation develops through social interactions as a childhood, little is known about the role of emotion regulation as an adult in influencing antisocial behaviors, such as animal abuse.

Strain theory has previously been applied to the perpetration of animal abuse (Agnew, 1998). Based on this theory, animals can be direct provocateurs or indirect provocateurs of abuse. For example, an animal may interfere with the perpetrators ability to achieve a desired

goal or it may engage in unwanted behaviors. Consequently, the perpetrator will justify the abuse as being deserved or necessary. Alternatively, some individuals may engage in animal abuse for revenge purposes or personal gain. For example, they would abuse an animal as an outlet for the aggression they have built up due to stress or strain. In this instance, there may be an inability to process the negative emotions efficiently or effectively, highlighting the importance of considering emotional processing in the perpetration of animal abuse. Whilst strain theory explores how emotions may facilitate or inhibit antisocial behavior such as animal abuse, the exact role of emotional processing needs further clarification (Dippong & Fitch, 2017).

The violence graduation hypothesis is another proposed theoretical underpinning of animal abuse. Despite receiving limited empirical support, this hypothesis suggests that children who engage in animal abuse will later graduate to more serious offending towards humans as an adult (Arluke, Luke, & Ascione, 1999; Wright & Hensley, 2003). Whilst some studies have found support for this developmental trajectory via retrospective self-reports (Felthous, 1980; Kellert & Felthous, 1985; Wright & Hensley, 2003), others have found little to no supporting evidence (Beirne, 2004; Green 2002; Walters, 2013) and argue that there are methodological limitations within these studies (Thompson & Gullone, 2003).

The deviance generalization hypothesis is a competing theory, which proposes that animal abuse is just one form of many forms of antisocial behavior that can precede or follow any other type of offending (Arluke et al., 1999). In other words, those who engage in animal abuse are likely to commit other types of offending. Engaging in childhood animal abuse allows the individual to learn and practice cruelty and violence, causing them to become desensitized to violence, which enables them to commit later acts of violence towards humans. There is greater support for this hypothesis, however, it has also been criticized for its inability to explain why some children who abuse animals do not go on to commit further

acts of violence, and why some serial murderers have no history of animal abuse (Walters, 2013; Wright & Hensley, 2003).

The deviance generalization hypothesis developed from a much larger criminological theory, namely self-control theory (Gottfredson & Hirschi, 1990). This theory encompasses a broader range of developmental, social and behavioral factors and posits that antisocial behavior is the result of low self-control. There are five important factors which determine criminality: (1) an impulsive personality, (2) a lack of self-control, (3) depleting social bonds, (4) an opportunity to engage in antisocial behavior, and (5) deviant behavior (Siegel & McCormick, 2006). An individual's level of self-control is determined throughout early childhood and remains stable throughout life. Therefore, child-rearing and school experience are key factors in developing self-control. If parents and teachers monitor children's behavior, recognize deviant behavior and address it accordingly, appropriate levels of self-control will develop. However, if this is not achieved, individuals will develop poor self-control and struggle to resist the short-term gains that antisocial behavior might otherwise provide (Gottfredson & Hirschi, 1990). According to the authors, such individuals are self-centered, have a low threshold for frustration, take risks, become aggressive quickly, lack empathy and lack diligence. Based on this, one can see how a provocation from an animal may result in an aggressive outburst towards the animal. However, self-control theory has further to go in addressing the exact process of self-, or emotion-regulation, in the causation or prevention of an aggressive behavioral outcome, such an animal abuse.

Similarly, the frustration-aggression hypothesis (Dollard & Miller, 1939) suggests that aggressive behavior is the direct result of frustration, which is defined as any event or stimulus that prevents an individual attaining some goal and its accompanying reinforcing quality. Whilst frustration is essential for aggression, there are contextual factors which can inhibit an aggressive response (Dollard et al., 1939), such as the risk of punishment. When

aggressive responding is suppressed, the individual may be unable to achieve the desired goal using non-aggressive strategies. As a result of this, the non-aggressive response becomes dominated by an aggressive response. For example, when applied to animal abuse it is clear to see how frustration caused by an animal may lead to an aggressive outcome towards that animal. Whilst this hypothesis does well to explain reactive aggression, it does not fully capture other types of abuse towards animals, such as sadistic abuse or abuse towards animals who are not directly responsible for the frustration.

Whilst the theories reviewed so far do lend support in explaining animal abuse behavior, they are single factor theories. As a result of this they are generally limited in scope. The next theory to be reviewed is a multi-factor theory which could be better at capturing the complexities of animal abuse motivations and facilitators.

The General Aggression Model (GAM; Anderson & Bushman, 2002) has been used to explain how situational, individual and biological factors interact to produce various cognitive, emotional, physiological and behavioral outcomes. Given that animal abuse is an aggressive behavioral outcome, and the GAM's focus is understanding aggression, its framework may be utilized for better understanding the process behind animal abuse. The GAM consists of three core structures: inputs, routes and outcomes (see Figure 1). The inputs are the key causal factors of aggression, and can be situational (e.g., provocation, such as an insult), or individual (e.g., personality and attitudes). The interaction of the inputs then primes the three main routes to aggression; namely cognitive (e.g., aggression related schema/scripts), affective (e.g., mood/emotion and motor responses) and physiological (e.g., increased heartrate or blood pressure). These three routes are interconnected and can therefore guide or influence one another with ease, which has an immediate effect on the person's appraisal of the situation. Immediate appraisal is an automatic response, i.e., occurring outside of the person's conscious awareness. Depending on the situation,

immediate appraisal will result in an automatic trait, or situational inference. For example, someone with aggressive thoughts will be more likely to perceive an accidental event (e.g., being bumped into by someone in a busy bar) as purposeful and will respond accordingly. However, someone with less-aggressive thoughts will be more likely to perceive an accidental event as a direct consequence of the situation (e.g., the bar is crowded). The elected response is determined by the persons' personality and current state of mind. Reappraisal occurs if the person has the required resources (e.g., time and cognitive capacity) and if the immediate appraisal outcome was not satisfactory. This method is more effortful and conscious than appraisal as the person must seek an alternative view of the situation, which may include what caused the event, important memories, and important features of the current situation which may influence the outcome. At the end of this framework is the behavioral outcome, whereby the response is either aggressive or non-aggressive.

Based on the GAM, it can be argued, for example, how a provocation from an animal may result in an aggressive outburst towards the animal. However, taken together with the research findings on emotion regulation and its associations with animal abuse, it would seem that the GAM has a little further to go in order to fully explain its role in this relationship. Whilst the GAM does consider aggression inhibition in the form of self-regulation based on moral standards, it does not consider the role of the individual emotion regulation styles identified in the current emotion regulation literature. Similarly, to the previous psychological and criminological theories, the precise role of emotion regulation is generally overlooked and requires further exploration and consideration given the accumulating evidence of its potential importance.

Given this argument for a conceptual framework that integrates multiple factors with emotion regulation as a central process, we would argue that a process model of emotion takes these into account. A process model of emotion proposed by Gross (1998) suggests that

emotion begins with an evaluation of external and internal emotion cues, which leads to a corresponding set of behavioral, experiential, and physiological emotional response tendencies; see Figure 2. Within this model, there are two ways in which emotion is regulated: antecedent-focused emotion regulation (AFER) and response-focused emotion regulation (RFER). According to Gross, that AFER pathway occurs early and interferes before emotion response tendencies have been fully stimulated. For instance, individuals will choose whether to avoid or approach a particular person or situation based on the potential emotional impact. They will reassess the situation, or their ability to manage the situation, so as to alter their emotions. Furthermore, they may also direct their attention towards or away from the events to regulate their emotion. In comparison, RFER occurs after an emotion is experienced. In this instance, individuals will suppress, increase, diminish, extend, or limit ongoing emotional experience, expression or physiological/behavioral responding.

There is research to support this distinction between emotion regulation pathways AFER and RFER (Gross, 1998; Gross & John, 2003). In doing so, research has focused on two specific types of emotion regulation, cognitive reappraisal and expressive suppression. Cognitive reappraisal is a method of RFER and involves the construction of a possibly emotion-eliciting situation to change its emotional impact (Lazarus & Alfert, 1964). In contrast, expressive suppression is an AFER pathway, which inhibits ongoing emotion-expressive behavior (Gross, 1998). Findings suggest that reappraisers experience and express more positive emotions than suppressors, by taking an optimistic approach, reinterpreting, and making efforts to deal with emotional distress. Reappraisers also have more adaptive consequences than suppressors, in the form of close relationships, self-esteem, emotion regulation and general life satisfaction (Gross & John, 2003).

When employed appropriately, emotion regulation allows individuals to handle situations effectively, and often in a prosocial way. However, maladaptive emotion regulation

can result in difficulties in functioning within an environment (Bridges, Benham, & Ganiban, 2004). Thus, determining whether a response is appropriate is dependent on the unique situational context combined with the personal goals of the individual involved. For instance, when considering aggression, suppressing its expression would be considered adaptive in a stressful work environment. In contrast, suppressing the expression of anger during an interpersonal conflict would be considered maladaptive. Based on this, the importance of considering a person's typical emotion regulation style is highlighted, whether that be characteristically adaptive or maladaptive. Therefore, emotion regulation is going to be broken down into under- and mis- regulation, as they are the two most prominent features of maladaptive emotion regulation within the current literature. In doing so, the opposing emotion regulation styles can be matched with unique outcome behaviors identified in the literature explored so far.

Before examining these unique regulation strategies, we must first consider the developmental aspect of emotion regulation. These are developmental factors which have been identified in animal abusers and play a role in the development of maladaptive emotion regulation strategies. Taken from the literature, it is proposed that childhood animal abuse, witnessing animal abuse, exposure to domestic violence, harsh/punitive parenting, and a poor home environment (Boat et al., 2011; Currie, 2006; DeGue & DiLillo, 2009; DeViney et al., 1983; Ewen, Moffitt, & Arseneault, 2014; Flynn, 1999; McPhedran, 2009; Tallichet & Hensley, 2005; Thompson & Gullone, 2006) are all developmental factors which feed into maladaptive emotion regulation strategies. Thus, it is our understanding that such factors predispose or at least play a role in these maladaptive processes.

Under-Regulation of Emotional Responses

In the case of under-regulation, individuals are unable to avoid or suppress their emotion responses and thus fail to inhibit impulsive reactions and maintain goal-directed

behavior. This is important as research has found that an inability to suppress emotion responses can impact an individual's ability to achieve their desired goals (Greenberg, Elliott, & Pos, 2007). This is mainly due to the resulting inability to regulate emotions effectively enough to control their own behavior. For example, individuals who under-regulate emotions, such as anger, are more likely to engage in aggressive behavior (Roberton, Daffern, & Bucks, 2012). In order to address the uncomfortable over-emotional state, individuals will behave aggressively to either (1) repair, (2) terminate, or (3) avoid their internal distresses (Gardner & Moore, 2008).

Mis-Regulation of Emotional Responses

In contrast, mis-regulators inhibit the development of emotional experiences altogether. This can also have negative implications as emotional responses are required for the accompanying physiological and psychological processes to operate effectively and as normal (Whelton, 2004). By suppressing emotional responses, individuals make themselves susceptible to a range of physical, psychological and social costs. For example, suppressing emotional responses does not reduce the experience of negative emotion, in some cases, it can have the opposite effect (Gross & John, 2003; John & Gross, 2004). Emotion suppression has also been associated with increased levels of anxiety (Hofmann, Heering, Sawyer, & Asnaani, 2009), lower levels of self-esteem (Gross & John, 2003), and increased levels of stress (Moore, Zoellner, & Mollenholt, 2008). In a recent review, Roberton et al. (2012, pp. 78) concluded that over-regulation of uncomfortable emotions through suppression can lead to "increased negative affect, reduced inhibitions towards aggression, compromised decision making processes, impoverished social networks and increased physical arousal".

Taken together, these findings suggest that both styles of emotion regulation are maladaptive and dramatically hinder adaptive emotion regulation. This in turn, prevents individuals from inhibiting impulsive behavior and pursuing goal-directed behaviors, whilst

focusing their attention on the emotion experience and allowing it to fully develop (Gratz & Tull, 2010; Whelton, 2004). However, there are appropriate strategies for emotion regulation (that can be taught) that work as protective factors. Three unique skills are alleged to be linked with adaptive emotion regulation, these include: emotional awareness, emotional acceptance, and access to emotion regulation strategies.

Emotion Regulation as Protective Factors: Adaptive Coping Strategies

In addition to identifying the factors which motivate animal abuse and the underlying processes, it is important to also consider what ultimately prevents these factors and processes from developing into the undesired behavior that is animal abuse. The existing criminological theories predominantly focused on identifying risk factors associated with aggression, meaning there is little emphasis on the protective factors with inhibit the development of aggression. By identifying adaptive coping strategies, it is possible to negate the maladaptive regulation strategies that accommodate animal abusive behavior. *Emotional awareness* can be defined as an individual's ability to recognize and acknowledge their own internal emotional states. This permits an individual to be aware of the values, goals and needs contained within the emotion experience (Barrett et al., 2007). Without efficient emotional awareness, individuals struggle to respond appropriately to an emotion experience. *Emotional acceptance* involves the active process of responding to emotions open-mindedly. By doing so, the physiological and psychological processes which accompany these emotions are able to progress naturally (Whelton, 2004). Without efficient emotional acceptance, individuals are likely to avoid or suppress the emotion/ emotion experience (Chambers, Gullone, & Allen, 2009). Finally, *access to strategies* is vital for regulating emotions in accordance with environmental demands and for maintaining the personal goals of the individual (Gross, 2002). With limited access to regulation strategies, an individual becomes

unable to suppress particular emotion experience, or have limited flexibility when employing a particular strategy on a particular emotion.

Adaptive coping strategies such as these have been adapted into intervention programs in an attempt to improve emotion regulation directly, or as a means of providing emotional stability before carrying out more intensive cognitive and behavioral interventions (Farrell & Shaw, 1994). One such program is Emotional Intelligence Training (EIT), which taps into the three facets of adaptive coping, by teaching emotional awareness and emotion regulation strategies, including a module on acceptance. So far the effectiveness of this method has been tested in the fields of organizational and clinical psychology, providing promising results. For example, in a clinical sample of borderline personality disorder patients, those provided with EIT saw significant improvements in emotional intelligence (which includes emotion regulation), as well as a decrease in depressive symptoms, in comparison to the control group (Jahangard et al., 2012). In another study, company managers were provided with EIT, which resulted in increased emotional intelligence and improved health and well-being, in comparison to a control group (Slaski & Cartwright, 2003). Findings such as these highlight the potential for these three adaptive coping strategies to be manipulated into interventions focused on improving emotion-regulation.

The Role of Emotion Regulation in Animal Abuse Perpetration

Whilst there is a fairly established body of research proposing that maladaptive emotion regulation is associated with problematic behaviors (Aldao et al., 2010; Gratz & Hull, 2010; Tull et al, 2012), such as aggression (Cohn, Jakupcak, Seibert, Hildebrandt, & Zeichner, 2010), there is no known research examining the relationship between adult animal abuse and maladaptive emotion regulation; which is surprising considering the well-evidenced links between animal abuse and aggressive behavior (Baxendale, Lester, Johnston, & Cross, 2015; Coston & Protz, 1998; Flynn, 2011; Hensley, Tallichet, & Dutkiewicz, 2012;

Vaughn et al., 2009; Walters, 2014). For instance, Cohn et al. (2010) conducted a study using male university students and found that maladaptive emotion regulation mediated the relationship between the tendency to restrict emotions and the use of physical aggression. Similarly, Tull and Roemer (2007) conducted a study on university students and staff, and found that avoidance of emotion experience and emotional inexpression were predictive of aggressive behavior. Taken together, these findings support the relationship between emotion regulation style and aggressive behavior. However, the way in which emotion regulation manifests amongst animal abusers, who are markedly more aggressive than the general population, is currently unknown (Arluke, Levin, Luke, & Ascione, 1999).

So far, one such study has looked directly at the link between anger regulation and animal abuse propensity. Parfitt and Alleyne (2017) conducted a study on undergraduate students and found *better* anger regulation to be predictive of animal abuse propensity (i.e., likelihood to engage in the abuse). When they examined animal abuse propensity by level of severity (i.e., neglect versus physical abuse), they found that low levels of neuroticism was uniquely predictive of scenarios depicting low severity animal abuse (e.g., neglect). That is, individuals who are likely to engage in less severe forms of animal abuse (or arguably, more passive forms) are also more emotionally stable and aware (Costa & McCrae, 1992). The authors suggest that this is indicative of a particular type of animal abuser, one that is well-organized, more controlled, and emotionally stable. There was also an interesting, however contradictory, finding in their study. People who scored high on impulsivity also scored high on overall animal abuse propensity. That is, individuals who have difficulty regulating their behavior were more likely to engage in animal abuse. But the authors argue that this further substantiates an issue with emotion regulation. That is, their findings are indicative of an explosive type of abuser, one who is less able to regulate their emotions effectively, so engage in animal abuse as an immediate outlet. These findings are further substantiated by

related research that has established a relationship between maladaptive emotion regulation and problematic behaviors (Aldao et al., 2010; Gratz & Hull, 2010; Tull et al., 2012), in particular, aggressive behavior (Cohn, 2010). So there is, at least, a theoretical link worth exploring further because we know that animal abusers often present with aggressive traits (Arluke et al., 1999), and have empathy deficits, in particular with emotional empathy (Parfitt & Alleyne, 2016).

Further consideration is needed regarding the dual typology of emotion regulation (i.e., under- versus mis-regulation) and how it relates to animal abuse (i.e., planned, well-organized perpetrators versus impulsive, explosive perpetrators; Parfitt & Alleyne, 2017). Taken with the existing literature on emotion regulation, there are a number of theoretical links which can be made. According to Gross' (1998) emotion regulation process model, mis-regulators who suppress their emotion reactions are characterized by reduced inhibitions towards violence and increased physical arousal (Roberton et al., 2012). Therefore, when individuals have insufficient mental resources to engage in reappraisal processing, they are more likely to engage in immediate appraisal and are less likely to control their aggressive impulses when provoked. Likewise, when individuals are used to practicing self-control (i.e., suppressing emotional reactions), they are immune from the negative effects of mental exhaustion and are more likely to engage in a less impulsive, and more strategic behavioral response. This reflects indirect animal abuse, where an individual uses an animal as an alternate outlet for aggression, despite being provoked by another person/situation (Alleyne et al., 2015). For example, an individual who is provoked by another person, or a particular situation, suppresses their emotions, as not to aggress towards that person. However, the utilization of suppression only increases their likelihood to aggress impulsively, resulting in them directing their aggression towards an animal. An alternative narrative would also argue that an individual who is provoked by another person, or situation, would suppresses their

initial desire to retaliate, and methodically plans how they will use an animal to manipulate the perceive provocateur. In this instance, the individual reappraises the situation, and avoids any natural behavioral or subjective emotional reactions. Thus, it is proposed, in this context, that this indirect animal abuse (or in other words, displaced aggression) is reflective of mis-regulation; see Figure 3.

Based on the same principle, Gross' (1998) model suggests that under-regulators are unable to inhibit impulsive reactions, or control their behavior, making them more likely to react impulsively and sometimes violently (Roberton, Daffern, & Bucks, 2012). In accordance with this, previous theories including the GAM (Anderson & Bushman, 2002) and strain-theory (Agnew, 1998) suggest that individuals who are mentally exhausted (i.e., unable to regulate their emotions) are less likely to control their aggressive impulses when provoked. This is indicative of direct animal abuse, whereby the perpetrator explicitly and directly aggresses towards the animal (Alleyne et al., 2015). For example, an individual who is provoked by an animal fails to regulate their emotions effectively, resulting in a direct and violent attack on the animal. Thus, it is proposed that under-regulators are more prone to engage in direct animal abuse as they do not have the sufficient mental resources to engage in reappraisal processing.

Conclusion

In this article, we have focused on research and theoretical approaches relating to the role of emotion regulation in animal abuse perpetration by adults. It is apparent from the existing literature that emotion regulation, despite being an important factor, has so far been overlooked in animal abuse research. As highlighted throughout this paper, it is important that we understand why an individual commits animal abuse. Thus, further research is warranted in order to shed more light onto these underlying motivational processes. It is also important to understand how each unique style of emotion regulation (i.e., mis-regulation or

under-regulation) contributes to the specific behavioral outcome. If future research substantiates these links, there will be clear targets for more effective intervention/prevention strategies.

Throughout this review, we have argued that the process of emotion regulation has an important role to play in facilitating individuals' engagement in animal abuse. Constructs closely linked with emotion regulation, such as poor impulse control and lack of other-oriented emotions, have previously been identified as important factors contributing to acts of antisocial behavior, including animal abuse. By applying what we know about emotion regulation and aggression to the existing criminological theories, the process through which animal abuse occurs can be better understood. Specifically, the existing criminological theories (e.g., GAM, self-control, strain-theory) consider how the individual and situation interact to influence the likelihood of aggression in a given scenario. In the context of animal abuse, our adapted model would argue that the perceived provocateur would be either an individual or an animal. The third stage of the model focuses on appraisal and decision processes, and on aggression or non-aggressive outcomes. In our adapted model, we apply elements of emotion regulation processes and propose that the appraisal and decision process leads to under regulation (i.e., impulsive action), or mis-regulation (i.e., thoughtful action) of emotions. These outcomes mimic the two styles of animal abuse taken from the animal abuse literature; direct (i.e., the target of aggression is the perceived provocateur) and indirect (i.e., displaced aggression towards an animal).

The maladaptive emotion regulation techniques identified in this review correspond with existing emotion regulation models, such as that proposed by Gross (1998) and aggression models, such as that proposed by Anderson and Bushman (2002). When an individual adopts maladaptive coping strategies, they have difficulty inhibiting impulsive tendencies and maintaining goal-directed behavior. Furthermore, maladaptive coping

obstructs the physiological and psychological processes required to behave effectively and respond to situations 'normally'. More importantly, we argue that emotion regulation provides a stronger theoretical explanation of the self-regulatory process that underlies animal abuse perpetration. The two proposed pathways of emotion regulation could explain the various circumstances under which animal abuse is carried out.

As discussed in this article, there has been very little attempt to consider the role of emotion regulation in explaining animal abuse perpetration. However, by utilizing the existing literature we present a preliminary conceptualization of how the two maladaptive styles of emotion regulation may operate in the perpetration of animal abuse by adults. We hope that the proposed conceptualization will serve as a useful framework for researchers in the animal abuse field specifically, and aggressive/offending behavior more generally. But most importantly, this preliminary conceptualization presents testable hypotheses that will lead to further developments in theory and practice.

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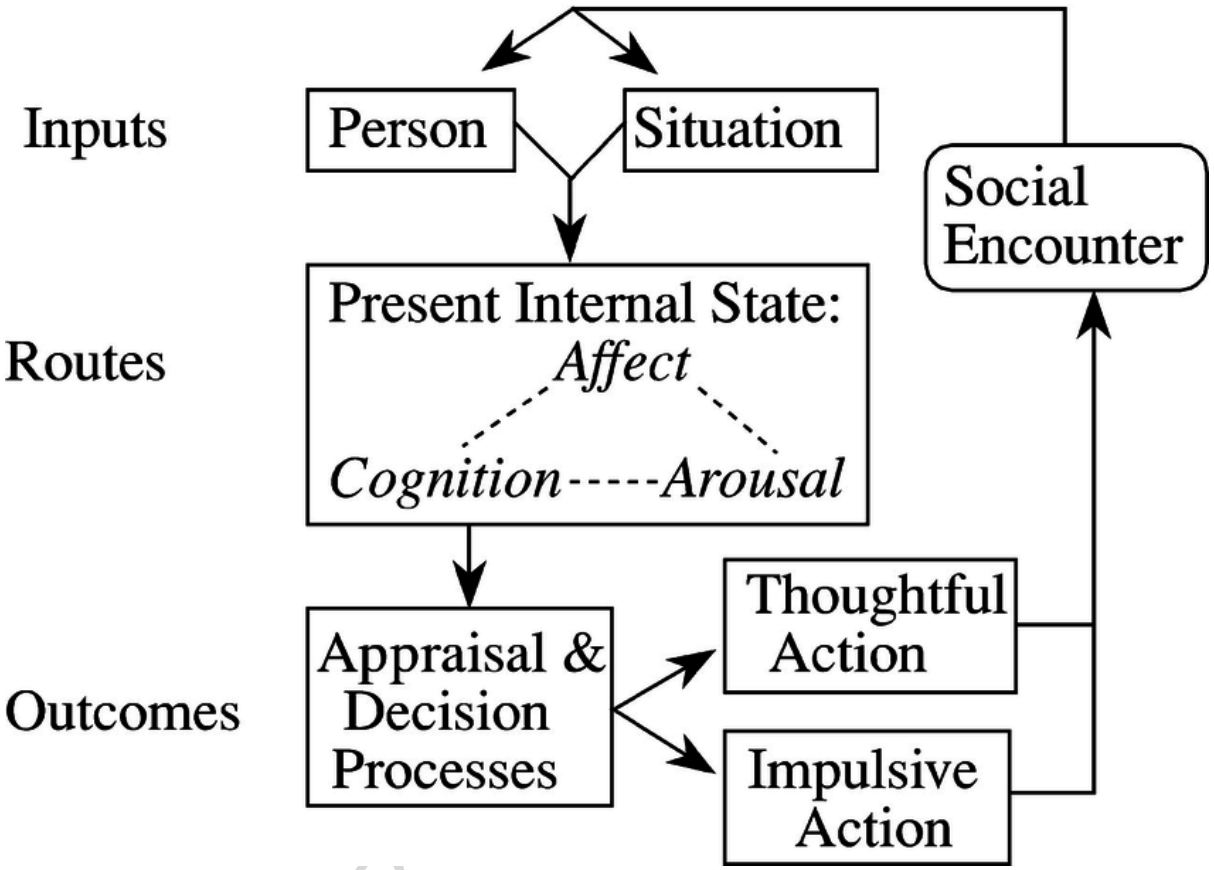

Figure 1. General Aggression Model (Anderson & Bushman, 2002)

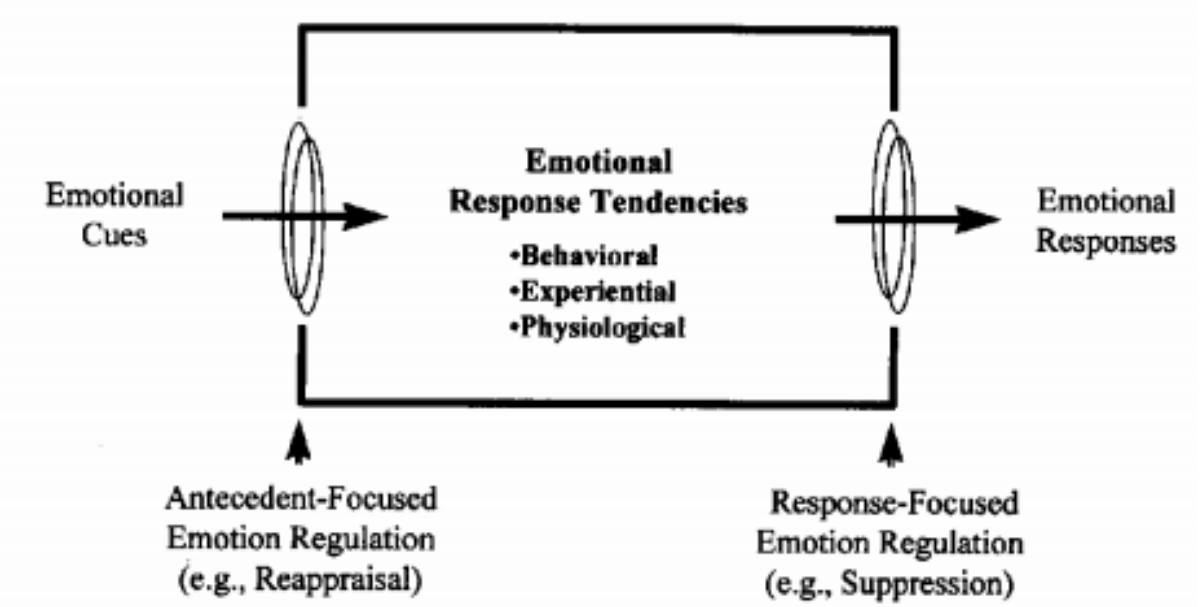

Figure 2. A process model of emotion that highlights two major classes of emotion regulation as proposed by Gross (1998).

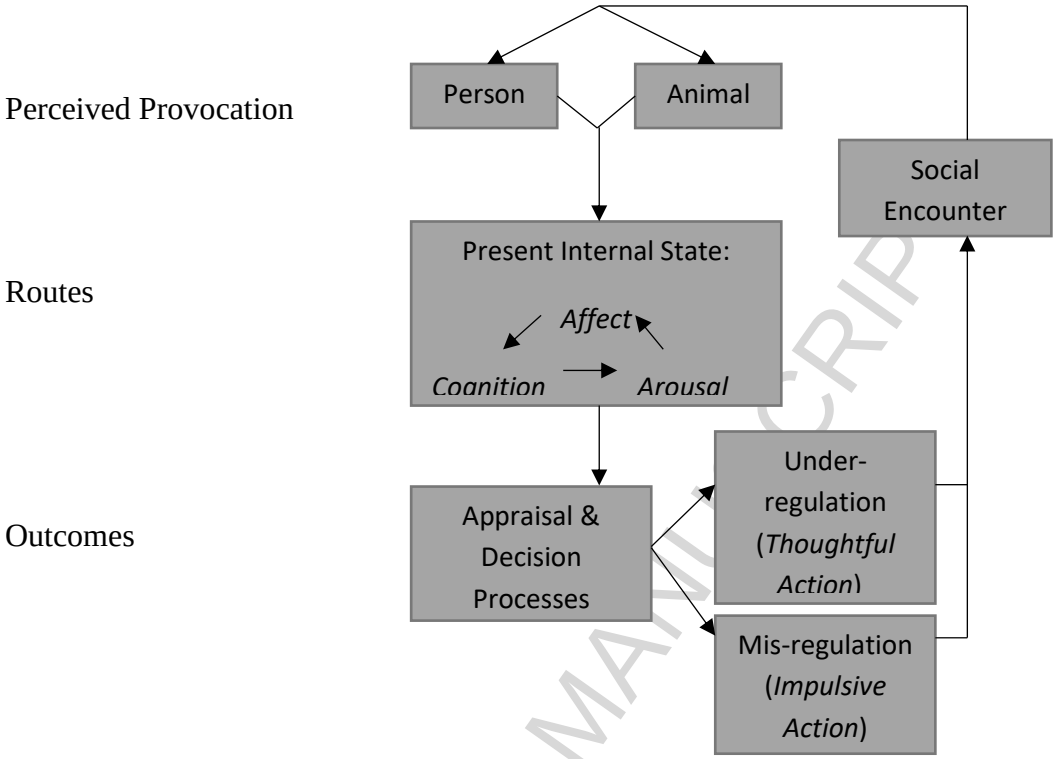

Figure 3. An adaptation of the General Aggression Model (Anderson & Bushman, 2002).

Highlights

- Research and theory on motivations for animal abuse are limited in scope
- The role of emotion regulation in explaining animal abuse has been overlooked
- Two specific emotion-regulation styles implicated in existing literature
- Preliminary conceptualization of how emotion regulation may operate in animal abuse