

Review Article

# Refining the Construct of 'Anger' in Relation to Personality Disorders

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Abstract

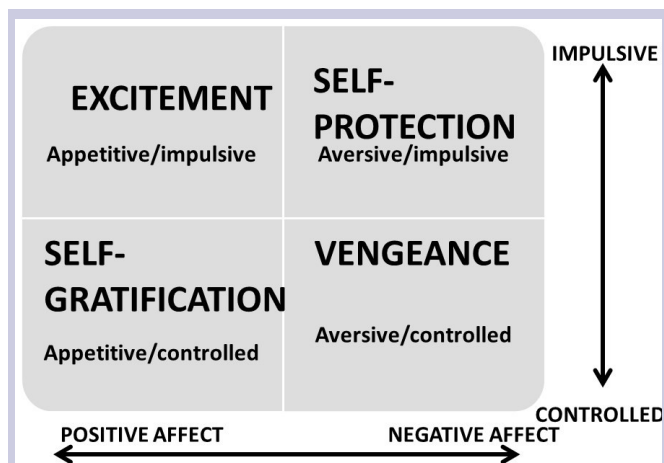
This paper highlights the importance of anger problems in psychopathology generally, and in personality disorders in particular. It argues, firstly, that problematic anger transcends traditional diagnostic boundaries and can best be viewed through the prism of the recently proposed hierarchical taxonomy of psychopathology; secondly, that anger is a heterogeneous construct that can be experienced as hedonically positive (experienced as pleasant: 'appetitive anger') as well as negative (experienced as unpleasant: 'aversive anger'). Four distinct types of anger are proposed in the context of the author's quadripartite violence typology: thrill seeking and coercive (both subtypes of appetitive anger) and explosive/reactive and vengeful/ruminative (both subtypes of aversive anger). Evidence is reviewed that supports this anger typology in studies of delinquent youth. Finally, the triggers of anger are considered in relation to the 4 types of anger. It is suggested that personality disorders differ not only with regard to the type of anger with which they are associated, but also with regard to the triggers that elicit anger.

## INTRODUCTION

Anger is a normal experience and a common one for the majority of people [1]. Indeed, anger is regarded among theorists of emotion as one of the 'core' or primary emotions [2,3]. Anger only becomes a problem for individuals when they are impaired in their ability to self-regulate and control their angry experiences, thoughts and impulses. When thus impaired, individuals are at increased risk of engaging in criminal behavior, and in aggression and violence in particular, notwithstanding that aggression and violence can occur without anger being an antecedent [4]. According to this view, anger, at least when experienced as an unpleasant affect, is neither a necessary nor a sufficient condition for aggression or violence to occur. However, in contrast with the view that anger is always experienced as unpleasant (i.e. hedonically negative), it has been argued, in the context of the author's proposed quadripartite violence typology [5,6], that anger associated with violence in people with personality disorders (PDs) can be experienced as either unpleasant (hedonically negative) or as pleasant (hedonically positive). A central purpose of this article is to explore in greater depth the idea that anger in the context of different types of violence perpetrated by personality disordered individuals can be experienced either as pleasant or as unpleasant, depending on the motive for their violence: thrill-seeking and self-gratification on the one hand, or self-protection and revenge on the other hand: see Figure 1. Pleasant anger will be referred to here as

'appetitive anger', while unpleasant anger will be referred to here as 'aversive anger' (see section 3 below).

As well as describing four different types of violence, Figure 1 describes a two dimensional affective/motivational space defined by the interaction of dimensions of affective valence (positive vs. negative) and impulsiveness (impulsive vs. controlled). This yields four distinct types of emotional state: excitement/exhilaration (associated with the upper left quadrant in Figure 1); fear/distress (associated with the upper right quadrant in Figure 1); vengefulness (associated with the lower right quadrant in Figure 1); and pleasurable feelings of anticipation (associated with the lower left quadrant in Figure 1)<sup>1</sup>. In an earlier description of the model [6] it was emphasized that movement is possible across quadrants within this affective/motivational space, which is *dynamic* rather than static. For example, sudden shifts in emotional state may occur in the course of a single violent episode: "One can easily see how, in rare cases where someone runs amok and carries out a series of killings, the episode might originate in a desire to wreak revenge for some perceived wrong... but once the violence has started, the perpetrator, viewing the whole episode through a protective frame and feeling excited and empowered by it, might have switched into a motivational state where he seeks ever higher degrees of arousal, culminating even in his own self-destruction, the ultimate act of excitement seeking" [6, p. 8)].



**Figure 1.** The quadripartite (2×2) violence typology. The intersection of impulsiveness (vs. control/premeditation) and affect (positive vs. negative) yields 4 distinct types of violence characterised by motives of excitement seeking and self-gratification (both associated with positive affect) and revenge and self-protection (both associated with negative affect)

## 1. Anger in Personality Disorder

Linking anger problems to psychopathology in general, and to PD in particular, is problematic; firstly because the anger construct itself is heterogeneous (this is discussed further in section 3 below), and secondly because anger problems transcend specific psychiatric diagnoses. Excessive anger, both in regard to its experience as an affective state and its outward expression, is central to the diagnosis of several disorders listed in the American Psychiatric Association's (APA) 5th edition of the Diagnostic and Statistical Manual (DSM-5) [7]: Intermittent Explosive Disorder, Borderline Personality Disorder (BPD), Bipolar Disorder, Disruptive Mood Dysregulation, and Oppositional Defiant Disorder (reviewed in [9]). While excessive anger is explicitly linked in DSM-IV/5 only to borderline personality disorder (e.g. 'inappropriate intense anger or difficulty controlling anger, e.g. frequent displays of temper, constant anger, recurring physical fights'), it is implicitly or indirectly linked to three additional PDs: antisocial, narcissistic and paranoid [4]. The co-occurrence of two or more PDs ('co-morbidity') is the rule rather than the exception among personality disordered patients [10]. This is particularly the case in forensic contexts where the frequent co-occurrence of antisocial and borderline PDs represents a toxic concatenation of maladaptive personality traits that is associated with high levels of experienced and expressed anger, both among PD patients residing in the community [11,12] and among PD patients detained in high-secure forensic hospital, in whom

### Footnotes:

<sup>1</sup> These emotional states bear some resemblance to several of the seven primary emotions proposed by Panksepp (discussed further below), e.g. his SEEKING/desire system is associated with excitement/exhilaration and, when overactive, "can promote excessive and impulsive behaviors" [8, p.538]. Unlike the conceptualization of anger proposed here, in Panksepp's analysis the experience of anger is associated explicitly and exclusively with the RAGE system. According to Panksepp, anger is affectively negative and triggered when SEEKING/desire is frustrated: "When SEEKING is thwarted, RAGE is aroused" [8, p.538].

<sup>2</sup> The relative stability of PD features is emphasised here, since not only do PD symptoms show considerable within-individual variability from day to day [14], they also show significant decline across years of follow-up [15].

high levels of anger were significantly associated with a greater incidence of institutional aggression [13].

PDs are typified by *relatively*<sup>2</sup> enduring, inflexible, and pervasive disturbances in how individuals experience and interpret themselves, others, and the world around them. These are reflected in maladaptive patterns of cognition, emotion, and behaviour that result in significant problems in psychosocial functioning, particularly in interpersonal relationships. As a consequence, people suffering from PD are at high risk of coming into contact with the criminal justice system and, particularly when the PD is severe, of being incarcerated in prisons and high-security psychiatric hospitals (see [16] for a review of PD and offending). Maladaptive traits associated with PD, in particular traits related to externalizing, thought disorder and psychopathy, are thought to link PD to violence and violent offending [17, 18].

## 2. Anger Within An Hierarchical Taxonomy Of Psychopathology

In reviewing anger and PD, Howells [4] pointed out that anger has been neglected as a topic in relation to PDs. He stated (p. 204): "Anger appears to be too important a problem in people with PDs for it to remain unaddressed...Anger has many environmental, cognitive, affective, psychophysiological and self-regulatory components and the patterns of such components for particular PDs need to be established." Notwithstanding this plea for an examination of anger components in relation to particular PDs, one reason for the neglect of anger in relation to PD, particularly in the clinical literature, is an excessive focus on distinct categories of PD and an acceptance of these categories as existing 'in nature'. Dissatisfaction with the traditional DSM-IV/5 PD categories themselves, on account of their high overlap (the comorbidity problem), their heterogeneous nature and their poorly defined boundaries, has given rise to an analysis of psychopathology in terms of levels within an overall hierarchical organization. For example, the recently proposed HiTOP model of psychopathology [19] posits that psychopathology is hierarchically structured, i.e., symptoms/signs (level 1) are nested within maladaptive traits (level 2) which in turn are nested within syndromes/disorders (level 3). At a higher level of the hierarchy (level 5) are situated broad spectra, namely internalizing pathology, externalizing pathology (comprising disinhibited and antagonistic), thought disorder (i.e., psychosis spectrum disorders), and detachment (i.e., pathological introversion). At the highest level of the hierarchy are super-spectra such as general psychopathology (p). By this means, superordinate domains can account for the interdependence of lower-order structures such as correlated personality traits and psychopathological syndromes. In particular, PD comorbidity can be seen as due to associations between broad liability factors (spectra) rather than to disorder-specific associations [20]. Given that problematic anger occurs across such a broad spectrum of psychopathology, we must ask whether anger problems perhaps reflect a predisposition that occurs transdiagnostically, at the level of spectra. One might expect several spectra in the HiTOP model to be highly relevant to anger problems, in particular the thought disorder, antagonistic externalizing and disinhibited externalizing spectra.

One such transdiagnostic predisposition is what has been referred to as emotional impulsiveness or "Urgency", reflecting the tendency to act rashly and precipitately under pressure of positive or negative emotions (positive and negative Urgency, respectively). Negative Urgency is a core feature of severe personality disorder in mentally disordered offenders [21], and anger is likely to be a key driver of emotionally impulsive behavior in those whose PD is severe, e.g. those with antisocial/borderline PD comorbidity. A recent meta-analytic review [22] showed that emotional impulsiveness - particularly negative Urgency - extends across a broad spectrum of psychopathology, including both externalizing and internalizing disorders. This suggests that a predisposition to emotional impulsiveness may contribute importantly to a general psychopathology (p) factor or 'super spectrum' associated with more life impairment, general familiarity, worse developmental histories, and more compromised early-life brain function [23].

However, anger can also be represented at lower levels within this hierarchy. For example, maladaptive traits associated with anger and aggression can be represented at the level of 'symptom components and maladaptive traits' in HiTOP. Recent evidence [24] indicates that two specific DSM-5 (section 3) trait facets, hostility (subsumed under the internalizing spectrum in HiTOP) and risk taking (subsumed under the disinhibited externalizing spectrum in HiTOP), are significantly associated with aggression in offenders, and by implication with anger. At a still lower level in the HiTOP hierarchy ('signs and symptoms'), anger can be represented by anger-related behaviours such as shouting, threatening, attacking, etc. In summary, therefore, problematic anger is arguably embedded in all levels within this hierarchical structure, from (at the lowest level) signs and symptoms to (at the highest level) higher-order dimensions or 'super spectra'.

The dimensions represented at the highest level of the HiTOP hierarchy, that is, at the level of spectra and super spectra, constitute heritable dispositions or 'temperaments' that give rise, at successively later periods of development, to lower-order manifestations such as syndromes/disorders and maladaptive traits. Personality disorders, for example, generally manifest in late adolescence or early adulthood, although they may often manifest in childhood [25]. Recent evidence [26] suggests that early (at age 10-11) dysregulation reflects a temperamental vulnerability that gives rise to personality pathology when children grow older. Results of several recent studies [27,28,29] reveal an important role for problematic anger in childhood and adolescence as a precursor of adult antisocial behaviour, suggesting that emotional impulsiveness may be an important strand that runs continuously through the developmental fabric of severe personality disorder, from early through late childhood into adolescence and adulthood.

Relationships between emotions such as anger and PD at the level of spectra or components have not to date been investigated, reflecting perhaps the damaging separation of theories of PD from mainstream psychological analyses of emotion [4]. Early theorists of emotion such as Plutchik [2] emphasised that emotions were closely related to psychiatric diagnoses. He argued that psychiatric diagnoses represent extremes or exaggerations

of personality traits, which in turn represent mixtures of basic emotions. Recent evidence, considered below, is consistent with this, suggesting that emotions are embedded within all PD diagnoses. Likewise, Panksepp's evolutionary theory posits seven primary emotions: seeking, fear, care, anger, sadness/panic, lust and play [30]. These primary emotions are expressed in individuals as personality traits that reflect both the intensity of the various primary emotions and the ways in which individuals have learned to cope with them. Primary emotions are said to have a distinct brain localization that reflects their evolutionary origins, being located in the brain stem and lower limbic area.

An important study [31] explored relationships between PDs and the primary emotions using the Affective Neuroscience Personality Scales developed by Davis and Panksepp [32]. Anger was defined in this study as feeling hot-headed, being easily irritated and frustrated, experiencing anger verbally or physically and remaining angry for long periods. After accounting for variance shared between the different emotions, anger was found to be significantly associated with a majority of PDs, in particular with paranoid, borderline, antisocial, narcissistic and obsessive-compulsive PDs.

Among most theorists of emotion, including Plutchik [2], anger has been conceptualised as a unitary process of reacting to a stimulus (e.g. a threat) in order to deal with it (e.g. to remove the threat). In contrast, it is argued in the following section that, in the context of PD and violence, the anger construct can be refined and extended to include positive, as well as negative, hedonic states. It will be further argued, in section 4, that individuals with PD are hypersensitive to particular triggers of anger - their thresholds for eliciting anger are reduced vis-à-vis these triggers.

### 3. Refining The Anger Construct: Appetitive vs. Aversive Anger

A problem with linking anger to psychopathology in general, and PD in particular, is the heterogeneous nature of the anger construct. Anger has been found to be multidimensional, at least in regard to anger-related behaviours, even in non-clinical, community samples. For example, in a native American sample 4 anger types were identified, including 'externalising' and 'internalising' types [33]. The 'externalizing' type acted out their anger by yelling and fighting, while the 'internalizing' type engaged in crying and thoughts of self-harm when angry. An earlier study [34] identified a similar 'internalizing' anger type characterised by keeping feelings inside, feeling emotionally bothered and ruminating about the anger-provoking event. While anger has traditionally been viewed as hedonically negative - indeed it is probably most commonly experienced as unpleasant - it is increasingly recognized that anger can also be experienced as hedonically positive ('pleasant anger'). Evidence from neuroscience suggests that the increased risk of violence conferred on individuals by virtue of their having low brain dopamine activity is mediated by high sensation seeking [35]. This implies that violence can be motivated by a desire for excitement and enhanced positive affect, an idea that is prominently represented in the quadripartite violence typology (QVT) [5,6]. In this typology (see Figure 1), there are four types of anger, each

linked to a particular type of violence. Two of these anger types - thrill-seeking and coercive - are associated with positive affect and can be referred to as 'appetitive anger'. The remaining two anger types - explosive/reactive and vengeful/ruminative - are associated with negative affect and can be referred to as 'aversive anger'. Consistent with anger traditionally being regarded as affectively negative (experienced as unpleasant), the explosive/reactive and vengeful/ruminative anger types have received most attention in the literature. For example Agnew [36] proposed that anger creates a disposition for violence, fostering the belief that violence is justified (to "right a wrong") and creating a desire for revenge. Revenge has been reported as a common motive for violence among young female violent offenders [37]. In this study, revenge-motivated violence was classed as 'instrumental', in contrast to QVT where it is classed as controlled/aversive rather than as controlled/appetitive. Thrill-seeking violence, motivated by a quest for excitement [6], is a common phenomenon [38]; it is accompanied by high arousal that is experienced as a pleasant feeling of malicious glee [39], exemplified in the behaviour of the mass murderer Anders Breivik, diagnosed with narcissistic PD with features of antisocial PD [40]. While engaged in a shooting spree on the island of Utøya, Norway, on 22 July 2011, Breivik was reported to have whooped with glee while going about his bloody business. Having once embarked on his shooting spree Breivik likely flipped into an emotional state of high excitement, albeit his murderous impulses were fuelled by an extreme right-wing ideology and a deep-seated sense of grievance at what he perceived as the Islamisation of his country. Coercive anger, also hedonically positive, is said to accompany violence that is instrumental and driven by a desire for self-gratification (material or sexual) at the expense of others. A desire to dominate or coerce others is a feature of this violence type. The final type of anger, called explosive/reactive, accompanies violence that is motivated by the desire to remove an immediately present interpersonal threat, physical or psychological. Here the affect is negative, accompanied by fear and distress.

A self-report questionnaire, the Angry Aggression Scales (AAS) was developed to tap these 4 anger types and has been applied in two studies of delinquent youth with severe conduct problems and a control sample of prosocial youth [41,42]. In the first study [41], the factor structure of the AAS was examined using promax rotation with Kaiser normalization. Based on the eigenvalue greater than one criterion, four factors were extracted. The first factor, corresponding to thrill-seeking anger items (e.g. When I make someone suffer I get "turned on" and lose control), accounted for 52.4% of the variance; the second factor, corresponding to the five coercive anger items (e.g. I sometimes pretend I'm angry to make others afraid of me), accounted for 6.8% of the variance; the third factor, corresponding to the vengeful/ruminative anger items (e.g. If I get really angry at someone I can spend a long time plotting revenge), accounted for 6.1% of the variance; the fourth factor, accounting for 5.5% of the variance, comprised explosive/reactive anger items (e.g. When I get angry I easily lose my self-control). Cronbach's alpha values were 0.93 for thrill-seeking, 0.87 for coercive, 0.86 for vengeful/ruminative, and 0.84 for explosive/reactive. Teacher-rated proactive aggression was positively and significantly associated with both AAS thrill-seeking and coercive scales, while teacher-

rated reactive aggression was most strongly associated with the AAS explosive/reactive scale, but also to some degree with the AAS vengeful/ruminative scale.

Results of the second study [43] provided further validation of the proposed anger typology by finding unique associations between anger type and different measures of disruptive conduct. Vengeful/ruminative anger uniquely predicted participants' cognitive problems and their failure to cooperate as rated by their teachers. Thrill-seeking anger uniquely predicted all forms of self-reported delinquency. Explosive/reactive anger uniquely predicted self-reported expulsion from school and teacher ratings of poor self-control and externalizing behaviour problems. Affective disturbance in youths, as rated by their teachers, was negatively associated with thrillseeking anger and positively associated with explosive/reactive and vengeful/ruminative forms of anger. A further study [43] examined the relationship of the violence types posited by QVT and functions of violence, using a typology developed to assess functions of violence [44]. The function 'express anger', previously identified as the most common function for aggressive acts in personality disordered offenders [45], correlated significantly and positively with both aversively motivated violence types:  $r = .57$  with aversive/impulsive and  $r = .28$  with aversive/controlled. "Express anger" correlated negatively with both appetitively motivated types of violence:  $r = -.39$  with appetitive/impulsive and  $r = -.45$  with appetitive/controlled. It should be noted that the 'express anger' function identifies anger expressed in the context of negative affect - that is, it does not capture appetitive anger.

#### 4. Triggers Of Anger

Implicit in the typology of anger outlined here is the idea that each type of anger is associated with a particular class of elicitor or trigger. Thus explosive/reactive anger is elicited when the individual is confronted by what is perceived as a direct interpersonal threat to his or her safety; this could take the form of a verbal or physical provocation, or even a provocative look. Appetitive anger is elicited by stimuli that evoke either greed or lust (in the case of coercive anger) or that provide an opportunity for maximizing positive affect (in the case of thrill-seeking anger). Finally, in the case of vengeful/ruminative anger, the evoking stimulus is a verbal slight, an injury or a perceived wrong that evokes feelings of vengeance. This type of anger is typically associated with both narcissistic and borderline PDs [4]. In the former case the eliciting stimulus is typically personal criticism (e.g. a disparaging remark) or threats to the individual's ego; the individual with narcissistic PD is "likely to respond to criticism with rage" [46,p. 114]. In the case of borderline PD the triggers are thought to be rejection or threatened abandonment, real or imagined [9]. A recent study [47] demonstrated that among women with prominent borderline personality disorder symptoms, anger arousal in the context of perceived rejection - but not in response to criticism - was key to the enhanced risk for aggressive urges and behaviors shown by these women in their daily life. Importantly, co-occurring antisocial PD symptoms attenuated the link between perceived rejection and aggression, suggesting that the pathway from rejection to aggression may be unique to borderline PD. The enhanced risk for aggressive urges



consequent upon perceived rejection in borderline PD patients likely accounts for their increased contact with the criminal justice system (e.g. [48]). In this study an inability to control emotional impulses was found to mediate the relationship between severity of borderline symptoms and criminal justice contact. While, as shown above, the critical triggers for eliciting anger in borderline and narcissistic patients appear to be, respectively, rejection and an ego-threatening slight, the critical trigger in antisocial PD patients is less clear-cut but might be characterized by general frustration or threats to dominance [4]. However, given that antisocial PD is linked to excitement seeking, we might expect the triggers for anger in antisocial PD patients to include stimuli that provide an opportunity for maximizing positive affect in the form thrill seeking. In the final section below, a possible model is presented showing how rejection in borderline patients might trigger an 'emotional cascade' resulting in a progressively worsening aversive emotional and cognitive experience that the individual finds difficult to terminate.

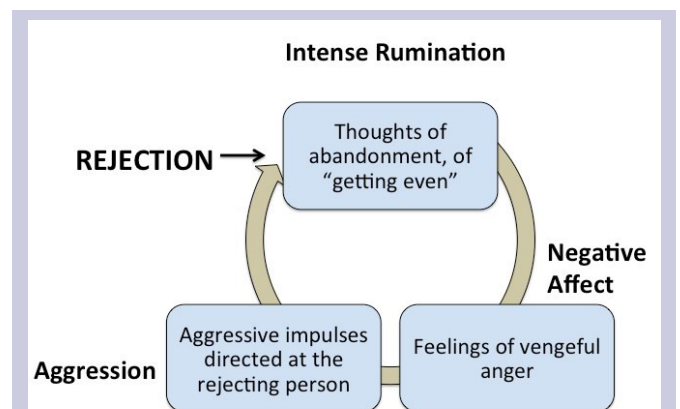
## 5. Hostile Rumination And Emotional Cascades

Hostile rumination has been found to be uniquely associated with borderline PD features and to mediate the link between a negative early environment and borderline features in adulthood [49]. Since hostile rumination is associated with a desire to seek revenge in response to situations that have been perceived as threatening [50], it is likely associated with violence motivated by a desire for vengeance (the "appetitive/controlled" subtype shown in Figure 1). The "emotion cascade" model developed by Selby and colleagues [51], illustrated in Figure 2, provides a possible mechanism through which hostile rumination in individuals with borderline PD, triggered by a self-threatening provocation such as a slight or a rejection, might make them more susceptible to a cycle of increasing rumination and negative affect, leading them to commit a retributive act of violence. Empirical support has been provided for the emotional cascade model, with the suggestion that impulsive behaviours might provide physical distraction that short-circuits the emotion cascade by reducing rumination [52]. These authors provided evidence that individuals with borderline PD may be especially susceptible to emotional cascades; they suggest that: "BPD may be a disorder characterized as the extreme end of a continuum of emotional cascades and impulsivity" [52, p. 13]. Confirmation that individuals with borderline PD are indeed particularly susceptible to emotional cascades involving hostile rumination, and that disinhibited behaviours including violence can act to shortcircuit the emotional cascade, would offer an important insight into the underlying motivational dynamics of violence in borderline PD.

## 6. Implications And Conclusion

Anger is an important but heterogeneous construct; problematic anger transcends particular psychiatric diagnoses and is particularly relevant to PD. Assessment of anger problems should be considered as part of the routine assessment of PD, particularly within the revised framework for assessing PD being undertaken for the new (eleventh) edition of the International Classification of Diseases (ICD-11). Anger problems have their

roots in early childhood. Early dysregulation at age 10 reflects a temperamental vulnerability that predicts later externalizing related traits, namely hostility, risk taking, deceitfulness and callousness [26]. It is important that children showing this pattern of dysregulation are identified early so that interventions can be undertaken to prevent it translating into adolescent and adult anger problems. The anger construct arguably needs to be refined in relation to its links with personality disorders. In particular, anger's association with positive affective states needs to be considered along with its association with negative affective states. Within each anger type, there is a need to consider the specific triggers of anger that might differentiate one personality disorder from another. Some might argue that the experience of anger is inherently unpleasant and that anger is therefore, by definition, an affect that is hedonically negative. However, a little introspection should suffice to convince the reader that anger can be experienced as pleasant. Indeed, for some individuals with a PD, the experience of excitement and exhilaration, a positive affective state, is a key motive for their violence, while others are motivated by the experience of self-gratification and social dominance at the expense of others. It remains debatable whether the "anger" experienced by such individuals is truly anger as commonly conceived. Perhaps the inverted commas should be retained to indicate its special properties in the context of this usage; for example when anger is used instrumentally to coerce another individual, as in the example of coercive anger given on p. 4.



**Figure 2.** An emotional cascade, initiated by rejection, leads to rumination which, through a positive feedback loop, serves to increase the intensity of the negative emotion (feelings of vengeance). A progressively worsening aversive emotional and cognitive experience is generated that the individual finds difficult to terminate.

In conclusion, it has been argued that the heterogeneous construct of anger can be de-constructed into four distinct types: thrill seeking, coercive, explosive/reactive, and vengeful/ruminative. Each of these anger types is linked to particular types of antisocial behavior, and - in individuals with PD - to particular types of violence: violence that is motivated by a desire for excitement, for self-gratification, for self-protection, and for vengeance respectively. This theoretical framework might prove useful in future studies of antisocial behavior in individuals with personality disorders.

## DISCLOSURE

The author declares no conflicts of interest.

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