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Aggression and Offence Motivation in Prisoners: Exploring the Components of Motivation in an Adult Male Sample

Ioan M. Ohlsson[1,2] and Jane L. Ireland[2,3]*

[1]Psychology Department, HMP Risley, Warrington, Cheshire, United Kingdom
[2]School of Psychology, University of Central Lancashire, Preston, Lancashire, United Kingdom
[3]Ashworth Research Centre, High Secure Forensic Psychiatry, Mersey Care NHS Trust, Liverpool, United Kingdom

This study examined aggression and offending motivation. Participants were 206 adult male prisoners. All completed the Aggression Motivation Questionnaire [Ireland, 2008], the Offending Motivation Questionnaire [Gudjonsson and Sigurdsson, 2004], the Multidimensional Anger Inventory [Siegel, 1986] and the Balanced Inventory of Desirable Responding [Paulhus, 1991]. It was predicted that aggression motivation would separate into two factors, one reflecting proactive aggression and the other reactive aggression. It was predicted that aggression motives would vary by offence type. It was also predicted that the offending motives identified in previous research (i.e. Excitement, Compliance, Provocation and Financial) would be reflected in this study. Levels of anger and social desirability were also examined for their relationship with aggression and offending motives. Results indicated that aggression motivation separated into four core motives; protection, social recognition, perceived positive outcome, and pleasure. Violent and nonviolent offenders were found to differ in their underlying motives for recent acts of aggression. Anger was related to all core aggression motives, whereas social desirability was related only to some. Offending motives were similar to previous research although some differences were found. Results are discussed with reference to their theoretical and clinical implications. Aggr. Behav. 37:278–288, 2011. © 2011 Wiley-Liss, Inc.

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INTRODUCTION

Over recent years, aggression has been the subject of extensive debate and theoretical exploration with various conceptual difficulties in existence [Baron and Richardson, 1994]. Researchers have, nonetheless, emphasized two different types of aggression; *Proactive* and *Reactive*, which are said to differ with regards to their underlying functions [Dodge and Coie, 1987]. Proactive aggression is described as instrumental, planned and organized [Berkowitz, 1989; Ireland, 2008]. In contrast, reactive is defined as an uncontrolled form of aggression which is largely impulsive and driven by emotion. It is thought likely to occur in response to a blocked goal [Ireland, 2008]. In recent years the "mixed-motive" aggressor has also been acknowledged based on the notion that individuals can present with both proactive and reactive motivations [Gendreau and Archer, 2005; Raine et al., 2006].

The proactive verses reactive distinction has value in operationalizing the concept of aggression by providing the potential for a greater understanding of the etiological pathways to aggression [Raine et al., 2006]. Explanations for aggression and its motivation have moved from individual understandings to multiple factor models [Anderson and Huesmann, 2003]. The applicability of these variables and models to extreme populations, such as forensic samples, are less well researched and understood. This is surprising since raised levels of aggression are evidenced in such populations [e.g. Watt and Howells, 1999], and points to the importance of studying such samples.

Understanding Motivation and Aggression

First, however, there is a need to define what is meant by a motive and why it is relevant to the study

*Correspondence to: Jane L. Ireland, School of Psychology, University of Central Lancashire, UK and Ashworth Research Centre, Forensic Psychiatry, Mersey Care NHS Trust, Liverpool, UK. E-mail: jLIreland1@uclan.ac.uk

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of human aggression. Motives are the underlying reasons held by individuals for engaging in and performing a given behavior [Ajzen, 1991; Ajzen and Fishbein, 1980; Reiss, 2004]. Motives are said to organize the individual's perception, attention, cognitions, emotions and behaviors, into coherent action [Reiss, 2004]. Reiss [2004] also argues that any collection of motives, even if diverse, have common elements. With regards to aggression, the notion of intent is considered paramount in its definition [Baron and Richardson, 1994; Berkowitz, 1993; Tedeschi and Felson, 1994]. Arguably therefore an individual's intrinsic motive underlying their behavior is significant in understanding the decision made to aggress. Indeed Ireland [2008] argues that motivation is an issue often neglected within both research and clinical practice, arguing that "….aggression should be described less by its *nature* and more by its *motivation*" (p 69). At the forensic clinical level, exclusive attention to the mere nature of undesirable behavior has negative implications. These include neglecting salient areas of recidivism risk and failing to meet individual treatment needs [Andrews and Bonta, 1998]. Research has nonetheless paid little attention to the concept of aggression motivation despite its theoretical and clinical significance.

Motivation Theory has been applied across various psychological disciplines [e.g. Houkes et al., 2001; Ryan and Deci, 2000]. Its application to forensic contexts, particularly to the study of aggression, is limited. Gudjonsson and Sigurdsson [2004, 2007] examined the importance of offence motivation more broadly than a sole focus on aggression, identifying five primary motivators for self-reported delinquency. These were compliance, provocation, financial, excitement and consequences. These motivators varied significantly across offence type, supporting the notion that motivation is pivotal in delinquent behavior [Ajzen, 1991; Cornish and Clark, 1986]. This study was limited by its sample, which was comprised of students and young offenders, and by the focus on delinquency as opposed to aggression per se.

Predicting Behaviors from Underlying Motives

Theories deserving of particular attention with regards to advancing our understanding of motivation and the decision to engage in aggression are *Social Interactionist Theory* [SIT: Tedeschi and Felson, 1994] and the *Theory of Planned Behavior* [TPB: Ajzen, 1991]. Both view aggression as instrumental and committed through rational consideration and choice selection. SIT argues that aggression results from a decision process made by the perpetrator to achieve relevant social goals, which include the control of others, the restoration of justice for perceived wrongs, and the protection of social or self-identity [Tedeschi and Felson, 1994]. The decision to aggress, referred to as coercive power, is mediated by an expectancy that the goal will be reached, by the value attached to the respective goal, and by the estimated costs of the behavior being minimized. SIT provides a useful explanation, therefore, for aggression motivated by social goals [Baumeister et al., 1996]. It further highlights how critical it is to understand the decision-making process and how this links to motivation. SIT is perhaps then complemented further, however, by the *TPB* [Ajzen, 1991; and its precursor the *Theory of Reasoned Action*, Ajzen and Fishbein, 1980], which incorporates attitudes, beliefs and intentions as part of motivation. TPB describes how the intention to engage in a behavior is the amalgamation of an individual's personal attitudes toward the behavior, the strength of support from significant others (i.e. subjective norm), and the level of perceived behavioral control/self-efficacy that may inhibit or facilitate the behavior [Ajzen, 1991]. In a recent meta-analysis Armitage and Conner [2001] reported that the TPB explained 39% of the total variance in behavioral motivation and 27% of the variance in actual behavior. The relationships between affective states (part of personal attitudes according to TPB) and the remaining elements of TPB have been further demonstrated by Armitage and Conner [2001] as valuable. They found that when negative mood states were experienced, participant's attitudes were more likely to be related to intrinsic (personal) motives than to social norms. The opposite was found for positive affective states. However, TPB's application to explaining aggression and delinquency more generally, is yet to be comprehensively examined.

Individual and Situational Motives for Aggression

Building further on the TPB, at an individual level pro-aggression attitudes, values, and beliefs have predicted levels of general aggression [Huesmann and Guerra, 1997], aggression against target groups [Malamuth et al., 1995], aggression as a means of achieving social status [Klein and Maxson, 1989] and aggression to manage social problems [Huesmann and Guerra, 1997]. The origins of this have been related to the concept of hedonism. This contends that pleasure is the only intrinsic good and that humans strive to maximize pleasure and minimize displeasure [Reiss, 2004]. There is also evidence to

support different social models influencing the likelihood of aggression, such as aggression modelled from family behavior [Farrington, 1991], peer groups [Cairns and Cairns, 1991] and the media [Bushman and Huesmann, 2006]. This fits more with situational models for understanding aggression motivation and can incorporate cultural-level factors [Ireland, 2008; Silberman, 1995].

Cultural factors seem particularly important for forensic samples. Anderson's [1994] *Code of the Streets Theory* and the *Prisoner Subculture Theory* [Irwin and Cressey, 1962] both emphasize informal cultural rules which govern interpersonal behavior, viewing this as underpinned by normative values (e.g. one should not betray another, one should be trustworthy and reliable). Other normative values including "not backing down" and "using violence to protect oneself" have also been reported in forensic populations [McGurk and McDougall, 1991]. Thus underlying values become valuable in trying to understand the possible motives that underlie the readiness to aggress in a forensic population, such as prison. The function of such aggression is hypothesized to be an attempt by prisoners to preserve social image, or to protect their person or possessions [Irwin and Cressey, 1962; Toch, 1985]. Research into this area, however, is somewhat dated with a need to incorporate it more broadly into multifactor theoretical explanations such as SIT and TBP.

THIS STUDY

The current research examines aggression motivation, broadening this to include offence motivation, within a sample of adult male prisoners. It aims to establish the components of motivation, exploring if the dichotomy of reactive and proactive motivation exists in extreme samples. The application of theoretical models, such as TPB in particular, will be further examined by considering the interaction between motives and affective states (i.e. anger). The following predictions were made: (1) Aggression motives would separate into two factors, reactive and proactive [Dodge and Coie, 1987; Ireland, 2008]; (2) Prisoners with different types of convictions (i.e. violent/nonviolent) will differ in their underlying motives for aggression [Ireland, 2008] and offending [Ajzen, 1991; Gudjonsson and Sigurdsson, 2004]; and finally (3) The offending motivation components of Gudjonsson and Sigurdsson [2004], namely compliance, provocation, financial, excitement and consequences will be replicated in the current sample.

METHOD

Participants

The sample of adult male prisoners were taken from a category C training prison. Category C (medium) refers to the security conditions under which the prisoner is held. A total of 433 questionnaires were distributed. Two hundred and six were returned suitable for analysis (response rate of 47.6%). Of the 206 participants, 75 were aged between 18 and 29 (36.4%), 66 between 30 and 41 (32%), 52 between 42 and 53 (25.2%), and 13 over 54 (6.3%). Fifty three percent had between zero and five previous convictions (108 participants), 24% had between six and ten previous convictions (50 participants), and 23% had over ten previous convictions (48 participants). Sixty-six participants were serving a sentence under 5 years (32%), 93 participants between five and ten years (45%), and 47 participants were serving a sentence over ten years (23%). Fifty-nine percent were convicted of a nonviolent offence (121). Forty-one percent were convicted of violent offences (85).

Measures

Each participant completed the following measures: *Aggression Motivation Questionnaire* [*AMQ-I*: Ireland, 2008]: This 46 item self-report questionnaire asks participants to rate a number of motivations for their recent aggressive behavior. Statements included "I enjoy seeing people suffer," "I have had to defend myself" and "I wanted revenge." These items were devised following a review of the aggression literature as part of an earlier unpublished study. Participants were asked to rate the personal relevance of each item on a Likert scale ranging from 1 (totally disagree) through to 5 (totally agree).

Offending Motivation Questionnaire [*OMQ*: Gudjonsson and Sigurdsson, 2004]: This 22-item measure assesses motives for general offending (thus not restricted to aggression). Participants are asked to rate on a Likert scale from 1 (not at all) through to 7 (very much) how relevant each item is to their own offending. Examples of items are, "needed money," "to take revenge on somebody" and "I was under the influence of alcohol or drugs and did not know what I was doing". Items cover five main groups of motives; compliance, provocation, financial, excitement and consequences.

Multidimensional Anger Inventory [Siegel, 1986]: This is a 38 item self-report measure. The MAI was developed to assess simultaneously the following dimensions of anger: frequency, duration, magnitude, mode of expression, hostile outlook, and a

range of anger-eliciting situations. Participants are asked to rate on a Likert scale from 1 (completely not descriptive) to 5 (completely descriptive) the degree to which each item describes them. Examples include, "it is easy to make me angry," "I am secretly quite critical of others" and "I often feel angrier than I think I should."

Balanced Inventory of Desirable Responding [Paulhus, 1991]: The BIDR is a measure of an individual's tendency to provide socially desirable responses. Participants were asked to rate the degree that they agreed with 40 items, on a Likert scale ranging from 1 (not true) to 7 (very true). Examples of items were "I always know why I like things," "I never regret my decisions" and "I sometimes tell lies if I have to." The measure was used to control for any impact of social desirable responding on the measures [Suris et al., 2004].

Procedure

Ethical approval was obtained from a university ethics committee and from the research coordinator at the prison. It was stressed to participants that the research was anonymous and that their individual responses would be reported only as part of group data. Prisoners completed their questionnaires in their cell over the lunch hour. These were distributed as they collected their meals, and collected either when prisoners were unlocked after lunch, or via prisoners' posting them under their door during the lunch hour for collection by the researcher. An envelope was provided for all completed questionnaires to be returned in. Literacy difficulties were managed by researchers reading questions to individuals after the lunchtime unlock. Sixteen participants in total asked for all questionnaires to be read to them. Participants then marked their responses discretely as required.

RESULTS

Data Screening

Two hundred and eleven measures were initially returned and screened to identify any outliers and unusual data patterns. Measures were treated as incomplete when 25% or more items were missing. This resulted in the removal of four cases. Missing values analysis revealed no systematic pattern in missing values; means, correlations and covariances were all missing at random (Little's χ^2 [1, $n = 206$] = 2.02, $P > .16$). Further analysis revealed nine cases (4.4%) with at least one missing value. This corresponded to only 0.1% of the total values collected. To generate values for these missing values, Multiple Imputation [Allison, 2001] was utilized. Multivariate outlier checks were also calculated using Mahalanobis distance and resulted in the removal of one further case. The data screening process resulted in a final total of 206 cases, which were then subjected to further analysis.

Factor Analysis of AMQ

In order to identify themes within aggression motives, a Principal Component Analysis (PCA) was conducted on the 46 items of the AMQ with orthogonal rotation (varimax). The Kaiser–Meyer–Olkin measure verified the sampling adequacy for the analysis as excellent [Hutcheson and Sofroniou, 1999: KMO = .91]. Bartlett's test of sphericity $\times 2$ indicated that correlations between items were sufficient for PCA ([1035] = 5408.974, $P < .001$). With regards to factor extraction, an initial analysis indicated nine components with eigenvalues over Kaiser's criterion of 1. In combination these components explained 63.3% of the variance. The scree plots were slightly ambiguous which led to a decision to utilize Parallel Analysis [Thompson and Daniel, 1996; Velicer, 1976] as a more accurate approach. Following Parallel Analysis four factors were extracted, kept to items loading above .40. Appendix A shows the factor loadings after rotation.

Factor one (eigenvalues = 15.71) accounted for 14% of the variance and comprised 13 items. In general items reflected a *Protective* motivation factor. These 13 items showed internal consistency using Cronbach's alpha ($\alpha = .90$). Factor two (eigenvalues = 3.31) accounted for 13% of the variance and comprised 12 items. Items tended to refer to a *Social recognition* of aggression motivation. These 12 items were internally consistent using ($\alpha = .88$). Factor three (eigenvalues = 1.95) accounted for 12% of the variance and comprised ten items, which pertained to a perception that the aggression had a *Positive outcome*, with the items internally consistent ($\alpha = .88$). Finally, factor 4 (eigenvalues = 1.75) accounted for 12% of the variance and comprised 11 items, which described a *Pleasure* motivation for aggression. This factor was also internally consistent ($\alpha = .86$).

Further Analyses With AMQ Subscales

All item loadings above .50 were used to calculate a factor score, in accordance to recommendations from Tabachnik and Fidell [2001]. Descriptive results for each subscale (i.e. protection, social

TABLE I. Mean Scores by Offence Type for the AMQ, OMQ, MAI and BIDR

	Overall sample ($n = 206$)		Violent offence ($n = 85$)		Nonviolent offence ($n = 121$)	
	M	SD	*M*	SD	*M*	SD
BIDR (social desirability)	12.98	6.20	12.81	5.77	13.10	6.51
MAI (anger)	98.80	26.67	99.54	21.35	98.27	30.00
AMQ						
Protection	26.67	10.74	27.68	10.89	25.97	10.60
Social recognition	12.97	6.10	13.30	5.75	12.90	6.30
Positive outcome	15.50	7.15	16.70**	7.29	14.70	6.96
Pleasure	15.34	6.40	16.70*	6.21	14.58	6.33
OMQ						
Compliance	12.08	7.74	13.15	7.83	11.33	6.62
Excitement	14.22	7.96	13.12	7.40	15.00	8.27
Provocation	17.47	8.78	19.75*	9.73	15.87	7.70
Financial	6.54	5.97	7.09	6.28	6.15	5.74

$P < .05$**; $P < .01$*.

recognition, positive outcome, and pleasure) are presented in Table I. A multivariate analysis of covariance was performed to investigate differences in aggression motives for different types of offenders (i.e. violent vs. nonviolent). Participant scores on measures of anger and socially desirable responding were used as covariates. Preliminary assumption testing revealed no serious violations of the assumptions of normality, linearity, homogeneity of variances, homogeneity of regression slopes, or reliability measurements of the covariants. After adjusting for anger and social desirability, multivariate analysis indicated a significant difference between violent and nonviolent offenders (*Wilks*' *Lambda* = 0.95, $F(4, 201) = 2.72$, $P < .05$).

As shown in Table I, analysis revealed significant differences between violent and nonviolent offences on the factor, positive outcome (Factor three: $F(1, 201) = 4.38$, $P < .05$, $r = .13$), with violent offenders reporting this motivation more. The factor, pleasure, was also significantly different (Factor four: $F(1, 201) = 7.01$, $P < .01$, $r = .11$), again in favour of violent offenders reporting this more.

As a covariate, anger was significantly positively related to the positive outcome motive ($F(1, 204) = 9.31$; $P < .01$, partial $\eta^2 = .04$). There was a significant effect of socially desirable responding on the positive outcome aggression motive (Factor three) after controlling for the effects of anger ($F(1, 204) = 14.14$, $P < .01$, partial $\eta^2 = .06$). In contrast, anger was again significantly positively related to the pleasure aggression motive (Factor 4: $F(1, 204) = 49.6$, $P < .01$, partial $\eta^2 = .19$), although socially desirable responding was not ($F(1, 204) = 3.40$ ns).

No significant differences were found between violent and nonviolent offenders on the motivation factor protection (Factor one: $F(1, 201) = 1.41$ ns) or social recognition (Factor two: $F(1, 201) = 0.21$ ns). There was a significant relationship between anger and protection ($F(1, 204) = 21.30$, $P < .01$, partial $\eta^2 = .09$) and social recognition ($F(1, 204) = 19.57$, $P < .01$, partial $\eta^2 = .088$). A relationship was also found between the social recognition aggression motive and socially desirable responding ($F(1, 204) = 5.32$, $P < .05$, partial $\eta^2 = .026$). However, no relationship was found between social desirability and the protection motive ($F(1, 204) = 3.68$, $P > .05$, partial $\eta^2 = .02$).

This suggests that underlying motives for recent acts of aggression among prisoners convicted of a violence offence was more likely to be motivated by perceived positive outcomes and pleasure, compared with offenders with nonviolent offences. These findings also indicate a strong relationship between anger and aggression motives. Social desirability, however, was only found to be related to aggression motivated by perceived positive outcomes and social recognition.

A further multivariate analysis of covariance was conducted to examine possible interactions between the sentence length (a marker of offence severity) and motives for aggression use. Preliminary assumption testing revealed no serious violations of assumptions. Descriptive results for each subscale (i.e. protection, social recognition, positive outcome, and pleasure) are presented in Table II. After adjusting for anger and social desirability, multivariate analysis indicated no significant differences between sentence length and aggression motives (*Wilks*' $\lambda = .94$, $F(4, 201) = 1.61$ ns). Univariate analysis, however, revealed significant differences between participants with longer prison sentences

TABLE II. Mean Scores by Years for Current Conviction for the AMQ

	Under five years ($n = 66$)		Five to ten years ($n = 93$)		Over ten years ($n = 47$)	
Sentenced to	*M*	SD	*M*	SD	*M*	SD
Protection	23.92	11.12	28.17	10.51	27.57	10.01
Social recognition	11.12	5.20	13.60	6.47	14.72*	6.51
Positive outcome	14.14	7.00	15.85	6.81	16.72	7.86
Pleasure	14.36	6.53	15.85	6.71	16.19	6.24

$P < .05$ *.

and the Social recognition aggression motive ($F(2, 206) = 4.86$, $P < .05$). The covariate, anger, was significantly related to social recognition ($F(1, 206) = 20.1$, $P < .05$, partial $\eta^2 = .09$). There was also a significant effect of social desirability on the social recognition aggression motive ($F(1, 206) = 4.34$, $P < .05$, partial $\eta^2 = .02$).

Factor Analysis of OMQ

The OMQ was subjected to factor analysis using a PCA. A KMO of.81 and Bartlett's Test of Sphericity of 2,251.985 ($P < .000$) were produced indicating factorability [Tabachnik and Fidell, 2001]. PCA yielded five components, with eigenvalues greater than one, that explained 64% of the variance. Parallel Analysis was again employed and supported the extraction of four factors. Factors were extracted with item loadings above .40. The results of the analysis are outlined in Appendix B. The factors produced were broadly consistent with those previously reported by Gudjonsson and Sigurdsson [2004] using a student sample, although the single-item ''consequences'' factor loaded onto the ''provocation'' factor in this study.

Factor one, compliance, comprised seven items that largely reflected offending motivated by wanting to please others, to comply with instructions, or a result of being led by others. This factor had good internal consistency ($\alpha = .85$). Factor two, excitement, comprised five items. In general items tended to reflect offending motivated by enjoyment, relief, or pleasure. This produced an $\alpha = .80$. Factor three, provocation, contained six items, ranging from wanting revenge to defending oneself. This factor had an α of .76. Factor four, financial, comprised three items that largely reflected an offending motive fuelled by financial gain and reward. This had an internal consistency of $\alpha = .90$.

Further Analyses With OMQ Subscales

All item loadings above .50 were used to calculate a factor score. Descriptive results for each subscale (i.e. compliance, excitement, provocation, and financial) are presented in Table I. Analysis of covariance was performed to investigate differences in offending motives for different types of offenders. Levels of anger and socially desirable responding were again used as covariates. There were violations of the assumptions multivariate analysis. Therefore, univariate analyses were conducted as the data satisfied the required assumptions.

After adjusting for anger and social desirability, no significant differences were found between violent and nonviolent offenders on the compliance offending motive (Factor one: $F(1, 203) = 2.64$ ns). However, there was a relationship between anger and compliance ($F(1, 202) = 13.2$, $P < .05$, partial $\eta^2 = .06$) and social desirability ($F(1, 202) = 4.99$, $P < .05$, partial $\eta^2 = .02$).

Similarly, there were no significant differences between violent and nonviolent offenders on the excitement motive (Factor two: $F(1, 202) = 3.52$ ns) or the financial motive (Factor four: $F(1, 202) = 1.10$ ns). There were again significant relationships between covariates and motives, with a relationship between anger and the excitement motive ($F(1, 202) = 2.66$, $P < .05$, partial $\eta^2 = .01$), and between social desirability and excitement ($F(1, 202) = 4.89$, $P < .05$, partial $\eta^2 = .02$). Social desirability was also related to the financial offending motive ($F(1, 202) = 8.33$, $P < .05$, partial $\eta^2 = .04$). As a covariate anger was not, however, related to the financial motive ($F(1, 202) = 1.71$ ns).

A significant difference was found between violent and nonviolent offenders on the provocation motive (Factor two: $F(1, 202) = 10.1$, $P < .01$), with violent offenders more likely to cite this as a motive than nonviolent offenders. Levels of anger were also significantly related to the provocation motive after controlling for the effect of social desirability ($F(1, 202) = 7.93$, $P < .01$). Finally, there was a significant relationship between provocation and social desirability after controlling for anger ($F(1, 202) = 5.92$, $P < .05$, partial $\eta^2 = .03$).

DISCUSSION

This study highlighted how motivation comprised a number of components. The presence of four salient aggression motives were indicated; protection, social recognition, positive outcome and pleasure. There was also consistency with the work of Gudjonsson and Sigurdsson [2004], using a student sample, with regards to general offence motivation. Four general offence motivations were noted; compliance, excitement, provocation and financial. Aggression and offence motivations differed between prisoners with violent convictions and those with nonviolent convictions. Anger was also found to be an important factor with regards to all core aggression motivations, which suggests a role for reactive aggression across components [Raine et al., 2006].

With regards to aggression motives, contrary to the prediction that there would be a dichotomy of proactive verses reactive, this was clearly not supported in the current sample. This is inconsistent with the literature proposing a distinction between these two different types of aggression [Ireland, 2008]. This study does provide some evidence of parallel between the findings and this reported distinction. For example, the protection motivation found in this study was similar in description to uncontrolled behaviors in response to external provocation, self-defence and uncontrolled emotions. This is consistent with the "reactive" dichotomy [Ireland, 2008]. Similarly, the positive outcome motivation was similar to the definition of proactive aggression [Berkowitz, 1989] where emphasis is given to deliberate, planned, or organized actions. It may be reasonable to deduce from the results that an exclusive reactive-proactive distinction was not found, and that instead aggression in forensic populations may be explained better by a concept of "mixed motives" [Gendreau and Archer, 2005; Raine et al., 2006]. Although the current results can only be described as preliminary, they nonetheless suggest a more comprehensive framework is required for forensic samples, one that moves away from a simple dichotomy. Focusing on underlying motivation is valuable as it provides the opportunity to examine individual, situational, and social level factors on behavioral decision making. As this study has demonstrated the use of self-report measures, such as the AMQ, may have utility in empirically and clinically examine motivation beyond dichotomy alone.

It is also worth noting the positive implications of the current research at a clinical level. It is apparent that efforts to understand aggression by merely considering overt behavior (i.e. the nature of aggression as opposed to its motivation) will always have limitation in achieving a comprehensive understanding of the decision-making processes that result in aggression [Ireland, 2008]. Moreover, it is common practice for many clinical treatment programmes for aggression to assess suitability for intervention, solely on the basis of the overt nature of aggression, or at the most by categorizing the behavior as reactive or proactive. The current research has demonstrated how valuable information can be lost if behavior motivation is not expanded beyond the rather crude reactive-proactive distinction.

Furthermore, use of the AMQ to explore additional research hypotheses revealed interesting findings. Those with violent and nonviolent convictions differed in terms of their underlying motives for aggression. This was consistent with the assertions that motives play a pivotal role in behavior [Ajzen, 1991; Cornish and Clark, 1986]. Those convicted of a current violent offence were more likely to cite motives of positive outcome and pleasure for their aggression compared With offenders with nonviolent convictions. There were no significant differences found on motives associated with protection or social recognition.

The finding that pleasure was a distinguishing aggression motive for violent offenders can be explained with reference to the concept of hedonism [Reiss, 2004]. Hedonism asserts that any human behavior, including aggression, is motivated by intrinsic and extrinsic pleasures and rewards [Reiss, 2004]. The findings from this study suggest that aggression for violent offenders is a behavior driven by the need for intrinsic pleasure and extrinsic positive outcomes. These findings are also synonymous with the TPB [Ajzen, 1991] in that behaviors, with greater perceived benefits to the individual, are performed despite any associated consequence to others. Therefore, these findings provide further support for the principles outlines in TPB and also evidence the utility of TPB to aid our understanding of aggression and its motives.

In terms of differences between violent and nonviolent offenders, anger was found to have a strong relationship with aggression motives. Overall anger explained a larger proportion of variance between violent and nonviolent offenders (21%) than socially desirable responding (6%), and was related to the positive outcome aggression motive, and pleasure aggression motive in particular. Anger is thought to have both constructive and destructive qualities [Novaco, 1978; Wood and Newton, 2003], and a possible explanation for the relationship between anger and pleasure, is that anger may be responsible for the maintenance and intensification of arousal preceding or following an act of

aggression [Sukhodolsky et al., 2001]. Furthermore, it could be speculated that anger is not confined to more classic reactive aggression motives [Crick and Dodge, 1996; Dodge and Coie, 1987; Hubbard et al., 2004] but can extend beyond this. What this study cannot determine, however, is whether anger acts as a precursor, bi-product or both with regards to aggression motivation.

This study also found a relationship between socially desirable responding and a positive aggression motivation but not a pleasure motivation. This suggests that prisoners are less likely to respond in a socially desirable manner at assessment when recent acts of aggression are motivated by pleasure, whereas aggression used in the pursuit of positive outcome may result more readily in such responding. The reasons for this finding are unclear although an explanation may be located within the principles of TPB. For example, social desirability may serve as a means to justify the negative consequences inflicted on others when making the decision to aggress, or it could create more positive social appearances following acts of past aggression in order to support future acts of aggression. This may prove particularly functional in a prison [Irwin and Cressey, 1962; Toch, 1985]. Alternatively, the negative relationship between pleasure motives for aggression and social desirability may be due to other factors, such as individual personality or mental health, none of which were assessed in this study.

There are further interesting findings when the social recognition motivation on the AMQ is considered. Those serving longer prison sentences were more likely to report aggressing due to this motive than those serving less time in custody. This suggests a social and environmental influence for prisoners with longer custodial sentences. This again would fit with TPB where emphasis is placed on the importance of subjective norms in shaping our intrinsic motives and ultimately behavioral decision making. Subjective norms should be expected to influence those with more time spent within the prison, linking to "code of the streets" and prisoner subculture theories [Anderson, 1994; Irwin and Cressey, 1962], where normative values and beliefs govern interpersonal behavior and often emphasize the social benefit of certain behaviors [Irwin and Cressey, 1962; Toch, 1985], particularly aggression [Ireland, 2008].

The findings with regards to the structure of general offending motives were also interesting. The four factors extracted, i.e. compliance, provocation, financial and excitement, were broadly consistent with the earlier student study of Gudjonsson and Sigurdsson [2004]. This was thus supportive of the prediction made. There were slight differences, but these were inconsequential and a likely product of inherent differences between student and forensic samples. Indeed there was surprisingly close symmetry between this study and that of Gudjonsson and Sigurdsson [2004] suggesting consistency in motivations for negative behavior across samples.

As predicted, variations in offending motives were found between violent and nonviolent offenders, although this focused on the provocation motivation. To a degree this supports the underlying assertions of the research by Gudjonsson and Sigurdsson [2004, 2007] that motives vary significantly according to the type of offences committed. However, no significant differences were found across the remaining motivations, although this may be explained by the method of offender classification utilized in this study (i.e. violent versus nonviolent). Interestingly, levels of anger and social desirability were found to be independently related to the provocation motivation. With regards to anger this is particularly synonymous with previous literature on the influence of emotions on an offender's thinking and behavior [Cota-McKinley et al., 2001; Gudjonsson and Sigurdsson, 2007; Novaco, 1997; Stuckless et al., 1995]. It is also consistent with the conclusions of Armitage and Conner [2001] who described mood as a moderator of intrinsic motivation and further supporting an application of TBP to the current results. The association with social desirability is a more challenging finding to explain owing to its novel nature. Nevertheless, it could be speculated that social norms are more forgiving of an act of aggression that is considered to be a product of being provoked. Thus, the positive relationship between wishing to present oneself in a positive light (i.e. social desirability) and reporting to have been provoked is perhaps not unexpected. It would be interesting to see if this applies beyond more extreme forensic samples.

Finally, previous research has highlighted a number of individual differences associated with aggression [Anderson and Bushman, 2002]. Results from the current research suggest that underlying motives are also capable of distinguishing between individuals. This supports Ireland [2008] who argued that exploring and examining underlying motives are more valuable in understanding individual aggression than merely describing how aggression is expressed. This study has certainly supported the importance of exploring this area in more detail.

This study is not without its limitations though, which need to be acknowledged. Prisoners were

sampled from a single prison establishment within a single geographical area. Therefore, generalization of the findings and conclusions to the wider forensic population should be made cautiously. Furthermore, reliance on self-report could be a further limitation of the current research [Rosenbaum and Lavrakas, 1995], but challenging to address when exploring research of this nature. Finally, the method of classifying prisoners into violent offence or nonviolent offence is not without its limitations. This method was vulnerable to a potential underreporting of offences and legal "plea bargaining." For instance, an offender convicted of a nonviolent offence, and therefore allocated into the nonviolent subgroup, may have indeed committed a violent offence that was never reported. However, it would also be reasonable to conclude that the majority of other empirical research with forensic sample adopting such a design would be vulnerable. What remains certain is the degree of difficulty in reducing or eliminating this effect in future research.

This study does nonetheless provide valuable findings, highlighting the importance of examining motivation in both aggression and general offending. It also highlighted the importance of looking beyond more simplistic dichotomy approaches to describing motivation (i.e. reactive-proactive) to more comprehensive component approaches. It has also introduced a measure of aggression motivation (AMQ) and an existing measure of offence motivation not before applied to an adult forensic or prison sample (OMQ). Both have demonstrated applicability and utility to extreme samples. Finally, anger has been indicated to represent a fundamental emotion associated with a range of motivations, not just those classically related to more traditional descriptions of reactive aggression.

Even accounting for the limitations, this study provides a positive foundation for future study. Further research confirming the structure of these aggressive and general offence motivations would be of value, with further examination of the validity and reliability of the AMQ and OMQ to differing forensic and nonforensic populations. Finally, it would be beneficial for motivation to be examined longitudinally to assess whether environmental factors exist which directly or indirectly influence a motivation to engage in negative behavior [Anderson, 1994; Irwin and Cressey, 1962].

APPENDIX A

Factor structure of the Aggression Motivation Questionnaire (AMQ).

	Factor loading
Factor 1: *Protection aggression motive*	
I have had to defend myself	.75
I have wanted to protect myself	.73
I was provoked by another	.69
I was trying to protect others	.65
I wanted to let others know I am not an easy target	.62
I was feeling fearful/afraid	.60
I have used it to release anger, frustration or tension	.60
I was reacting to another person making fun of me	.58
I wanted to assault someone before they assaulted me	.55
I wanted revenge	.54
I have used it to avoid doing something I did not want to	.45
I believe the world is a dangerous place and others will try to harm me	.44
I have believed that others are "out to get me"	.42
Factor 2: *Social recognition aggression motive*	
I wanted to gain a reputation	.71
I wanted to impress groups of peers and be accepted by them	.62
I wanted to release feelings of guilt or shame	.62
I wanted to "prove" myself to my peers	.59
I believe the victim was going to be an "easy target"	.56
I wanted to release feelings of jealousy	.56
I wanted to stop feeling alone	.51
I was trying to cope with my difficulties	.49
I want to stop others from gaining status	.48
I wanted to maintain the status I already have	.48
I have wanted to let others know that I am angry or frustrated	.40
I thought there would be few or no negative consequences	.40
Factor 3: *Positive outcome motive*	
I believed it would have a positive outcome for me	.72
I am just believing in a way that has worked for me in the past	.67
It has helped me to increase my status among my peers	.60
I have used it to make others do what I want	.59

I have used it to protect my self-esteem	.54
I wanted to win the argument or conflict	.53
It has been a way of obtaining items from others	.52
I wanted to dominate and control others	.49
It has been a way of making sure others avoid me	.47
The environment I am in stops me from being nonaggressive	.30
Factor 4: *Pleasure aggression motive*	
I have been fantasising about using aggression	.68
I have thoughts telling me to hurt others that won't go away	.67
I enjoy seeing other people suffer	.60
I have been responding to a mental illness	.59
My personality makes it more likely that I will be aggressive	.55
It is the only way I have of managing conflict with others	.51
I wanted to punish others who were "getting at me"	.51
I wanted to humiliate the victim	.49
I have just been behaving in a way that others have told me to	.49
I wanted to be disruptive	.46
I wanted some fun and enjoyment	.42

APPENDIX B

Factor structure of the Offending Motivation Questionnaire (OMQ).

	Factor loading
Factor 1: *Compliance*	
Wanted to "show off" to my friends	.79
To please my peer(s)	.76
Gave in to pressure from peer(s)	.70
To show how brave and daring I was	.68
I was asked by somebody to commit the offence	.61
I was tricked into it	.60
I did it because my friends were doing it	.52
Factor 2: *Excitement*	
Did it for excitement	.87
Did it for fun	.78
Gave in to temptation	.70
I thought I would get away with it	.66
To relieve pressure or stress	.58
Did it because I was annoyed and bitter at society	.35
Factor 3: *Provocation*	
I was under the influence of alcohol or drugs and did not know what I was doing	.74
I lost control over myself	.73
To take revenge on somebody	.68
Wanted to cause damage to person or property	.66
I was defending myself	.57
I did not think about the consequences of what I was doing	.45
Factor 4: *Financial*	
In hope of financial gain	.91
Needed money	.91
Did it to finance alcohol or drugs	.77

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