

The Pleasure of Aggressiveness Among Inmates in Preventive and Long-Term Detention

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Abstract: To a large degree, humans use pleasure (hedonicity) maximization to guide decision making, thereby optimizing their behaviour, as shown by research on either sensory or purely mental pleasure (e.g., pleasure from video-game playing or mathematical problem-solving). Our group has now found that pleasure determines decision making in situations of interpersonal aggression, i.e., people tend to behave aggressively in proportion to the resulting pleasure. In the present study, two groups of inmates in a Spanish prison were compared: those serving long sentences and those being held in preventive detention. All participants answered self-administered questionnaires that had been devised to examine how hedonicity influences decision making in the case of aggressive behaviour. The questionnaires described social conflict situations and offered four options ranging from a passive response to a highly aggressive response. Previous research showed similar results between inmates serving long terms and a non-delinquent population, even though the degree of hedonicity was higher in the inmates: increasingly aggressive behavior is increasingly pleasurable to the aggressor, but only up to a certain level. In contrast, this paper shows that inmates in preventive detention did not rate any of the aggressive responses as pleasant. Such a difference was present in males only and may have been caused by a desire for social acceptance.

Keywords: Aggressiveness, hedonicity, emotion, prison inmates, decision making, social desirability.

INTRODUCTION

Our research group has studied aggression and violence in the general population of different cultures with a view to developing effective strategies of prevention for people who are at higher than average risk of being either perpetrators or victims. If these individuals have already demonstrated violent or seriously delinquent behaviour, the goal should be to lower the risk of recidivism. To this end, we should study more specific populations, such as psychiatric patients or prison inmates. Prevention of violence lies more with the criminal courts and the police than with the penal and corrective system, which traditionally becomes involved only after someone has already become violent (Devine, Gilligan, Miczek, Shaikh, & Pfaff, 2004; Gilligan & B. Lee, 2004). Even further upstream is research on prevention of violence.

The present study further explores the association between pleasure and aggression in delinquents, within the frame of a decision-making background. More specifically it was analyzed the paramount role of hedonicity (pleasure or displeasure) when delinquents make violence-related decisions, these people being more prone to violence than is the general population. Our model conceptualizes decision-making as mental prioritizing, requiring a common currency to rank motivations and assessing trade-offs, as postulated by McFarland and Sibly (McFarland & Sibly, 1975) and by McNamara and Houston (McNamara & Houston, 1986). Various motivations competing for access to this final

common path must be able to 'talk to one another' in order for the brain to rank their priority. A series of interdisciplinary studies allowed us to conclude that this common currency is the hedonic dimension of consciousness. In fact, our suggestion on the role of pleasure in decision-making indeed started within physiology (Cabanac, 1979). Then it was extended to other pleasures, such as money (Cabanac, 1986, 1995). Then to all motivations and decisions (Cabanac, 1992) as, eventually, maximization of pleasure was found in other realms of purely mental functioning optimization activity, such as enjoying poetry or video games, ethics, and mental calculus (Cabanac, *et al.* 19997, 2002) (Bonniot-Cabanac & Cabanac, (submitted)). The present piece of work explores the role of pleasure in decision making, adding a new dimension, the social one, to the general concept that maximizing pleasure is the way decisions are made. Within this context, aggression would give pleasure too, and vice versa, the goal of hedonic maximization may be a cause of aggression (Ramírez, Bonniot-Cabanac, & Cabanac, 2005). A quite recent research in mice has shown that the brain responds to aggression in the same way as to sensory pleasures: for mice aggression is rewarding and dopamine's involved in that rewarding affect in the same areas of the brain that's rewarding for drugs, reproductive behavior, and anything that seems to be pleasant (Kennedy & Couppis, 2008).

Previous research of our group documented for the first time that pleasure is a major factor in social situations related to interpersonal aggression in 'normal' population (Ramírez, Bonniot-Cabanac, & Cabanac, 2003; Ramírez *et al.* 2005). Participants were asked to rate the pleasure or displeasure experienced in several minor conflicting social situations, and to decide how they would solve these situations. Several

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behavioral alternatives were given, from passive non-aggressive behavior to aggressive responses of rising intensities. People tended to make aggressive behavioral decisions as a function of the resulting pleasure: passive behavior and most aggressive behaviors were rated as unpleasant, but mild and moderate aggressive responses provided some pleasure to the aggressor in decisions. The moderate level of aggressiveness was the selected preference when participants were invited to make decisions. This relationship of pleasure with aggressiveness (Ramírez *et al.* 2003, 2005) has been recently confirmed by other researchers, showing that aggressive behavior (Haller & Kruk, 2006; Helfritz & Stanford, 2006; Meier, Robinson, & Wilkowski, 2006; Slovic, 2007), and even cruelty (Nell, 2008), can be pleasurable. That research offers relevant evidence for the operation of hedonic considerations in decision-making about violence.

Hedonicity is still relatively unstudied with respect to prison inmates. In previous studies on a 'normal' population (Ramírez *et al.* 2003, 2005) and on inmates serving long-term for severe crimes (Ramírez, Millana, Toldos-Romero, Bonniot-Cabanac, & Cabanac, 2007), both groups rated mildly aggressive behaviours as pleasant and selected them as their preferred responses to mild social conflicts. These similar results were congruent with our previous analysis on justification of aggression in different cultures suggesting a certain universal moral code, common to all humans (Ramírez, 1991, 1993, 2007b; Ramírez, Lagerspetz *et al.* 2001).

In the present study, two categories of prison inmates were compared for somewhat opportunistic reasons. Alongside the usual long-term inmates there was a small group in preventive detention who had not been sentenced yet. Our hypotheses was that inmates who had not been judged yet would most likely answer in a more socially desirable fashion than those inmates already judged; i.e., they would show less degree of hedonicity related to aggression.

METHODS

Participants

Two groups of participants were recruited in a prison near Madrid. The first group contained 65 long-term inmates (53 men 37.7±1.1 yr; 12 women 36.5±2.6 yr) who had already been sentenced and were serving for serious crimes. The second group contained 28 inmates in preventive detention (15 men, 35.0±1.1 yr and 13 women 36.0±2.4 yr). We excluded people who were illiterate in Spanish or psychiatrically disturbed, according to police records. The study was strictly anonymous and their participation was voluntary, receiving no compensation for it. Given the opportunistic nature of the study the sample sizes are relatively small and uneven.

Questionnaires

Participants were asked to answer three questionnaires that explored the pleasure/displeasure of aggressive behaviour, and their spontaneous level of aggressiveness.

Psychophysics

Questionnaire 1 (see sample in Appendix 1) presented fifteen minor social conflicts and explored the hedonistic valence they aroused. The items on Questionnaire 1 placed the participants in different conflict situations, describing an

incident that could be seen as insulting, upsetting, or offensive. Each situation was presented four times, each time ending with a different behavioural response to the social conflict. Thus, there were sixty entries in total. The four possible behavioural responses were non-aggressive (passive, i.e., avoiding confrontation with the perpetrator), slightly aggressive (expressing displeasure or disapproval), mildly aggressive (complaining or reprimanding), or clearly aggressive. The order of presentation was randomized to remove this possible influence on the results. Half the participants received Questionnaire 1 with the items ordered from 1 to 60, and the other half from 60 to 1. The response sheet had 60 parallel lines, as many as there were items on the questionnaire. Each line was 130 mm long, with zero hedonicity indicated in the middle and with pleasure and displeasure indicated on either side. Participants were instructed to rate the intensity of their pleasure or displeasure while reading each item: a situation followed by a response. They read the item, and then marked the line at their experienced magnitude of pleasure (to the right of the middle) or displeasure (to the left of the middle). We thus obtained an analog estimate of the participant's imagined hedonic (positive or negative) experience. The magnitude of aggressiveness was, of course, non-parametric as the four possible responses reflected personal judgment. A similar method has been repeatedly used in previous research (e.g., (Bonniot-Cabanac & Cabanac, (submitted))(Ramírez *et al.* 2003, 2007)).

Decision

Questionnaire 2. To evaluate preference for a given aggressive response to a situation, we presented the same fifteen Questionnaire 1 situations, with each being followed by four possible behavioural responses (i.e., 15 entries). The test was thus a multiple-choice one where participants marked the responses they preferred. The order of the responses, and hence the magnitude of aggressiveness, was randomized for each of the 15 situations.

Aggressiveness

Questionnaire 3, known as the CAMA test, was originally designed by Lagerspetz and Westman (K. Lagerspetz & Westman, 1980) and subsequently revised by Ramirez (Ramírez, 1985, 1991) (Ramírez & Fujihara, 1997). The CAMA test estimates the participants' level of spontaneous aggressiveness by measuring how much they justify different types of aggressive acts in various situations. Although relatively novel, it has already been used in many countries: Finland (Lagerspetz & Westman, 1980; Lagerspetz, Björkqvist, Björkqvist, & Lundman, 1988), Great Britain (Benton, Kumari, & Brain, 1982), Poland (Fraçzek, 1985; Fraçzek, Ramirez, & Torchalska, 1985), Spain (Ramírez, 1985, 1991, 1993), Japan and the USA (Ramírez, Fujihara, VanGoozen, & Santisteban, 2001)(Ramírez, Santisteban, Fujihara, & VanGoozen, 2002), Iran (Musazadeh, 1999), India (Sunni, see (Ramírez, 2007a), and South Africa (Ramírez, Lagerspetz *et al.* 2001). We included it in this study (see Appendix 2), having previously described some of its psychometric properties and validated features.

RESULTS

Questionnaire 1 (Hedonicity)

Passive responses and the most aggressive responses were rated unpleasant by both groups. There was, however, a

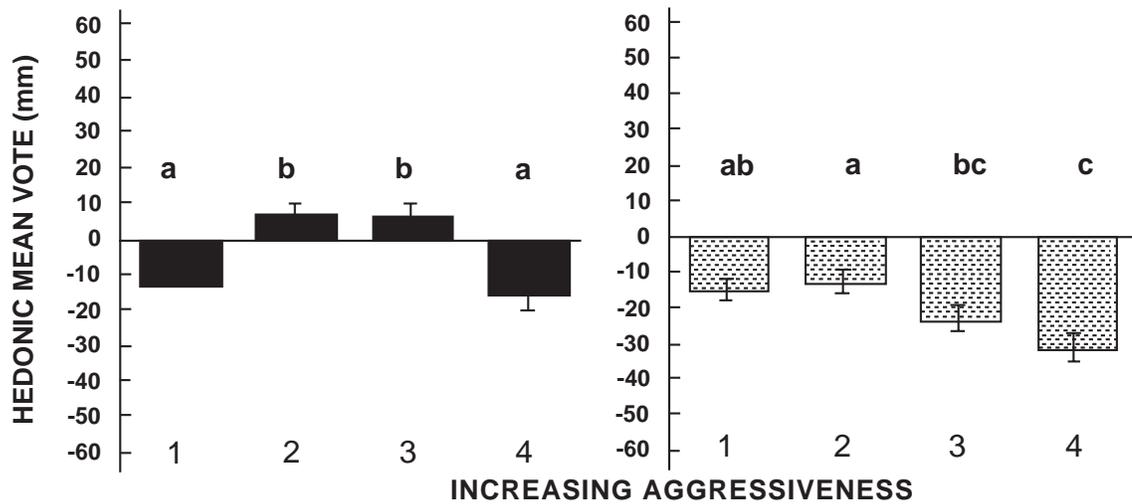


Fig. (1). Mean results from Questionnaire 1: mean hedonicity ratings of the various items. On the x-axis, columns 1, 2, 3, and 4 represent increasingly aggressive responses. Left: long-term inmates; same letter, a or b, indicates a non-significant difference (ANOVA, F-Value 9.62, $p < 0.0001$). Right: inmates in preventive detention, i.e., held in prison pending trial and awaiting minor sentences; same letter, a, b, or c indicates a non-significant difference (ANOVA, F-Value 5.26, $p = 0.002$).

difference in their ratings of slightly and mildly aggressive responses (Fig. 1): whereas long-term inmates described both responses as pleasant, inmates in preventive detention described them as unpleasant. Ratings also differed by sex: whereas men rated all responses as unpleasant, women followed a bell curve of hedonicity vs. aggressiveness, similar to the one shown by long-term inmates and by a ‘normal’ population in previous studies) (Fig. 2 presents the Questionnaire 1 results separately for men and women).

Questionnaire 2 (Decision making)

Both groups selected responses with an aggressiveness magnitude ca. 2 (see Table 1). Their choices were the ones that yielded the most pleasure among long-term inmates and the least displeasure among inmates in preventive detention

(as can be seen on Fig. 1). Thus, although long-term inmates considered responses with aggressiveness intensity 3 to be pleasant, they did not select them on Questionnaire 2. All inmates selected responses they had rated highest for pleasure, but they chose responses with an aggressiveness magnitude of 2, although they had rated magnitude 3 responses almost equally pleasant.

Sex differences in decision making were exhibited only by inmates in preventive detention: the men chose slightly more aggressive responses than did the women (2.1 vs. 1.7) (ANOVA sex*group yielded $F = 3.7$, $p = 0.026$). No significant sex differences were exhibited by long-term inmates.

Individual hedonic ratings were compared with individual behavioural preference to see if the two correlated. There was a significant correlation for long-term inmates ($n = 65$, Z value = -2.199 , $p = 0.027$) but not for inmates in preventive detention ($n = 28$, Z value = -1.071 , $p = 0.28$).

Questionnaire 3 (Justification of aggression)

With long-term inmates, justification of aggression, as measured by CAMA, correlated positively with the mean selected response on Questionnaire 2 (F-value 5.686, $p = 0.021$). Such a correlation suggests that the more aggressive participants tended to select more aggressive responses on Questionnaire 2 (Fig. 3). Such a correlation was not found with inmates in preventive detention, though.

There were no sex differences in the CAMA test results among either long-term inmates or inmates in preventive detention.

DISCUSSION

When hedonicity is plotted as a function of rising aggressiveness it follows a bell curve in long-term criminal population: pleasure is related to slight and moderate aggressive responses while passive or highly aggressive responses are rated as unpleasurable. This bell curve is similar to the one previously obtained from university populations in Quebec City (Ramírez, 2003) and Madrid (Paradis, Ramirez, & Ca-

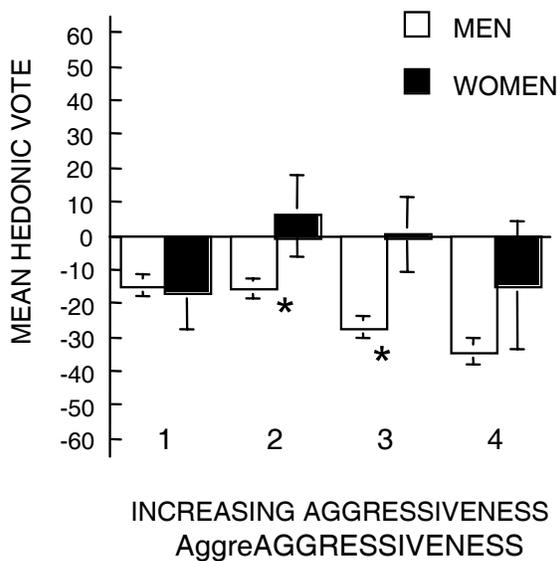


Fig. (2). Mean results by sex for inmates in preventive detention from Questionnaire 1 (presented Fig. 1). The results from long-term inmates are not shown because none of the sex differences reached statistical significance. Student's t tests: * $p < 0.02$.

Table 1. Mean responses ± se selected on Questionnaire 3. Aggressive responses may range from 1 (passive behaviour) to 4 (clearly aggressive behaviour). The mean pleasure or displeasure of the responses is computed from the Questionnaire 1 ratings

	MEAN AGGRESSIVENESS RATING OF PLEASURE	
LONG-TERM DETENTION	2.0 ± 0.1	28.0 ± 3.6
PREVENTIVE DETENTION	1.9 ± 0.1	-11.4 ± 3.1

banac, 2007). This is also the case for female inmates in preventive detention. On the contrary, for male preventive inmates all their ratings were negative: they felt the four aggressiveness intensities as unpleasurable.

Long-term inmates rated positively responses with aggressiveness intensity 3 on Questionnaire 1, even when they did not select them on Questionnaire 2. This suggests that their decisions might be influenced by different factors, such as their own agreeableness (Meier *et al.* 2006), heredity (Marler, Trainor, & Davis, 2005), previous learning of the consequences of aggression (Carnagey & Anderson, 2006), or impulsiveness (Ramírez *et al.* 2005). There was a significant correlation between aggressiveness (CAMA test) and selected response among long-term inmates (F-value 7.249, $p < 0.01$), as in our previous studies (Millana, Cabanac, Toldos-Romero, Bonniot-Cabanac, & Ramírez, 2006; Ramírez, 1993), but no such correlation was observed among inmates in preventive detention. All ratings were lower among inmates in preventive detention than among long-term inmates, as well as among the university participants in our previous studies (Ramírez *et al.* 2003, 2005). Their response was consistent on all three questionnaires: they described all responses as unpleasant on Questionnaire 1; their CAMA did not correlate with their choices, an indication of low aggressiveness; and their choices on Questionnaire 2 were similar to those of participants from the other group.

The results from inmates in preventive detention may reflect social desirability or self-presentational biases. Be-

cause they had not been judged yet, they would most likely answer in a socially desirable fashion despite the anonymity of the study, as part of a strategy to get out earlier. Chances of early release may be reduced if one admits to engaging in and deriving pleasure from aggressive activities. If such social desirability and self-presentational biases did influence the responses, self-report would have to be treated more cautiously in this kind of study to ensure accuracy. Although assured of anonymity, the participants may still have been reluctant to disclose feelings about pleasurable experiences or justification of aggression for fear of reprisals from prison authorities. This reluctance could have biased their decision-making, making them less approving of aggression in comparison to a 'normal' population.. The social desirability hypothesis is supported by the non-significant correlations between the responses and the ratings of responses among inmates in preventive detention. Their selected responses probably were inconsistent with what they really felt, reflecting instead a desire to please the researchers.

In summary, violence is a multi-faceted phenomenon resulting from complex interactions among a variety of biological, psychological, and social variables (Ramírez & Andreu, 2003; Slovic, 2007). If aggressiveness seems to depend largely on the social environment before adulthood, as has been shown by many researchers (Boivin & Vitaro, 1995; Kerr, 1994; Lansford *et al.* 2002; Poulin & Boivin, 2000), one could also expect that aggressiveness would become more pleasurable in a prison environment among inmates serving long sentences for severe crimes, as the present study

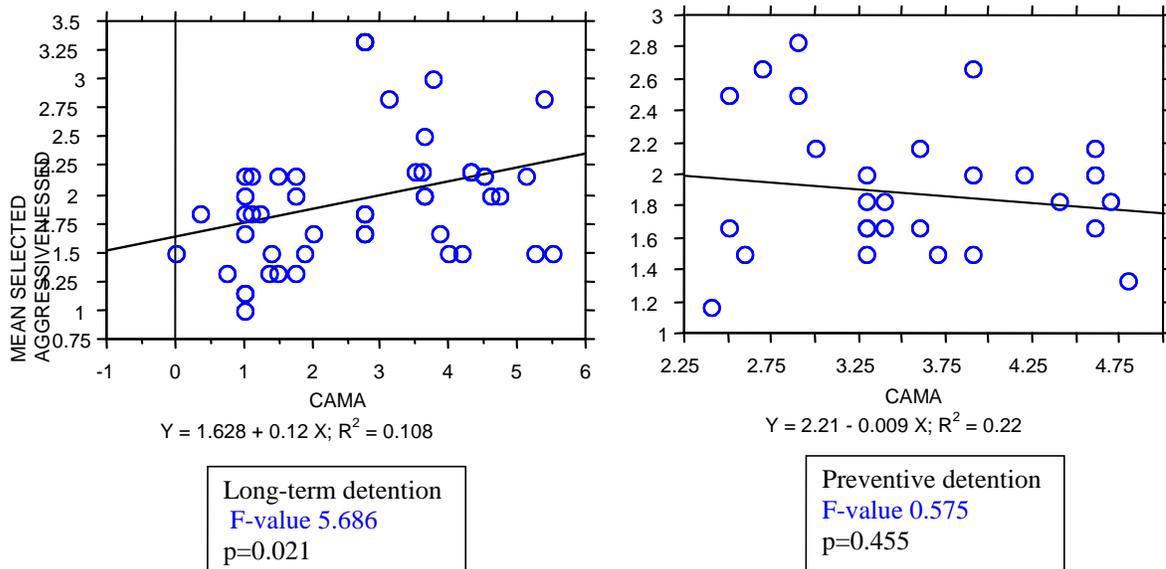


Fig. (3). Correlation between Questionnaire 3 results (CAMA aggressiveness test) and mean aggressiveness of responses selected by Questionnaire 2 participants.

shows. The more violent the inmate, the greater would be the net immediate reinforcement. The benefits from violent behaviour would include such immediate ones as intrinsic satisfaction from the violent act itself and such long-term ones as a possibly exciting lifestyle (O'Donoghue & Rabin, 2000; Rachlin, 2004). This may also be related to a more aggressive disposition underlying unlawful behaviours.

Pleasure is motivation in human general decision making (Cabanac, 1992; Dieckmann, Dickert, Peters, & Slovic, 2004; Johnston, 2003; Mellers, 2000; Slovic, Finucane, Peters, & MacGregor, 2002). Hedonicity is both a goal and information about progress toward this goal (Schnall, Clore, & Ryan, 2006). The above results, even if they only show correlations but not the causation, confirm that pleasure maximization may be a fundamental motivation for human aggressive behaviour too. As it has quite recently been found in animals, the brain responds to aggression in the same way as other pleasures (Kennedy & Couppis, 2008). It is therefore paramount to incorporate this concept into models of human motivation and choice (DeMartino, Kumaran, Seymour, & Dolan, 2006). In the absence of contextual cues or situational constraints, choices follow a pleasure-maximizing principle (Fischer, 2004; Mellers, Schwartz, & Ritov, 1999; Vastfjall & Garling, 2006).

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APPENDIX 1

Samples of Questionnaires 1 and 2.

Questionnaire 1

The respondents are asked four times to imagine being in each of 15 situations. A specific action tendency that is tailored to the situation under consideration is suggested in response to each question. The respondents have to indicate how intense pleasure or displeasure they would feel when experiencing each specific action.

You are in a parking lot waiting for a free space. Just when you find a free place, another driver arrives and takes it in your presence.

Look for another space

You are in a movie theatre and behind you there are two persons who are talking loudly. They disturb you

Move to another seat

You are on a train. In your compartment, arrives a mother with a noisy child.

Move to another compartment

You are watching television in a dormitory. A group of people enter and, without saying anything, they change the channel.

Leave without saying anything

You are waiting for some friends and decide to buy some nice fruits as a dessert. When you arrive home, you realize that half of them are rotten.

Forget about the fruits. Offer your guests something different for dessert

You are on a crowded bus. An old, tired lady arrives and asks a young person to give up his seat. The young person refuses.

Go to the back of the bus to avoid any conflict

You are in a parking lot waiting for a free space. Just when you find a free place, another driver arrives and takes it in your presence.

Honk your horn to show your displeasure

Questionnaire 2

The respondents are asked to imagine being in each of 15 situations and to indicate what they would feel inclined to do. Each vignette offers four possible behavioral responses of different intensity levels, that are tailored to the situation under consideration.

You are in a parking lot waiting for a free space. Just when you find a free place, another driver arrives and takes it in your presence.

Look for another space.

Honk your horn to show your displeasure.

Get out of your car and argue with the person.

Get out of your car and kick the person's car with your foot.

You are in a movie theatre and behind you there are two persons who are talking loudly. They disturb you.

Move to another seat.

Make an exasperating sound, indicating your displeasure.

Ask them to stop talking

Find the usher and tell him to stop the people from talking.

You are on a train. In your compartment, arrives a mother with a noisy child.

Move to another compartment..

Ask the child to behave.

Tell, with an impatient voice, the mother to control her child.

Chastise and slap the child.

You are watching television in a dormitory. A group of people enter and, without saying anything, they change the channel.

Leave without saying anything

APPENDIX 2**CAMA**

Aggression has proven to be a serious problem in society today. In this research we try to investigate how people relate to different types of aggressive acts. It is only natural that we all get angry in certain situations. Sometimes we would even feel it wrong not to get angry.

Below we present six situations in which some aggressive act might occur. We mention eight possible aggressive acts. We ask you to estimate if in your opinion each act is usually justified or not in each situation.

List of situations

1. IN SELF-DEFENSE
2. TO PROTECT ANOTHER PERSON
3. WHEN COMMUNICATION BREAKS DOWN
4. WHEN ANGRY
5. TO PROTECT ONE'S PROPERTY
6. AS A PUNISHMENT

List of aggressive acts

1. TO BE IRONICAL
2. TO THREATEN
3. TO STOP SOMEBODY FROM DOING SOMETHING
4. TO USE TORTURE
5. TO SHOUT ANGRILY
6. TO HIT ANOTHER PERSON
7. TO GET FURIOUS
8. TO KILL ANOTHER PERSON