

## **Mirth and Aggression**

This paper explores the emotion of mirth and its relation with laughter and aggression. Mirth is a positive affect, and can lead to smile and laughter. Although smile and laughter may have separate evolutionary origins, they appear to be in a continuum in humans. In primates, the equivalent of laughter occurs in the context of play and fun, while the smile equivalent is a sign of submission. (Alice V. M. Samson and Bridget M. Waller, 2010)

In humans, the act of laughter generally conveys happiness, is innate, and has little variability across individuals. Although the neurological pathways of laughter haven't yet been resolved, it is believed to be dopamine based. Regarding the social aspects of laughter, humans laugh 30 times more in presence of others than they do alone (Provine & Fischer, 2010), but the amount of mirth generated by a humorous joke remains the same despite presence of other's laughter. Laughter and Duchenne smile is produced unconsciously, and faking it then is difficult (Martin, 2010).

The relation between laughter and aggression has been explored by Freud and Gruner. Freud believed that jokes create circumstances which make it possible for individuals to release repressed aggression and sexuality. Jokes thus must contain aggression and sexual themes hidden by clever 'jokework' within them. Superiority theory posits that mirth is a response to a sudden sense of superiority over someone. It thus has elements in common with Freud's theory. Usually aggression and subsequent victory over others is said to be the prime cause of laughter.

Both theories have had an ambiguous success with empirical findings. Freud's theory predicts that those with a repressed personality find aggressive humour funnier, but findings show that more aggressive individuals find aggressive jokes funnier. Also, those with a healthy attitude towards sexuality found sexual humour funnier than those who had repressed sexuality (Martin, 2010). Psychopaths are less inhibited than normal individuals, and Freud's theory predicts that they would show less enjoyment of

humor, but Holmes (1969) showed that psychopaths found hostile humour funnier than nonsense humour. It has thus been suggested that it is not repression but the degree to which individuals can relax their repression that determines the sense of humour. Thus those with greater flexibility to inhibitions find hostile and sexual humour funnier, and this has been borne out by studies. One important finding related to Freud's theory is that individuals in whom repression against violence had been activated tend to find aggressive humour less funny(Singer, Gollob, and Levine, 1967).

Regarding superiority theory, Grunner stated that more aggressive the content of humour, funnier it is, and this has been borne out empirically. Other works have shown that actually it's the pain caused that is related to funniness rather than aggression. Thus it is consistent with superiority theory that states that humour arises from someone else's suffering(Gruner, 2011).

## HYPOTHESIS

This paper attempts to draw the pathway between aggression and mirth.



According to aggression-frustration hypothesis, anger is produced due to frustration which may lead to aggression(Berkowitz, 1993). Further, frustration may be caused due to painful stimuli. Interestingly, it not the production of aggressive behavior that is frowned upon by human communities but the circumstances in which such behavior is produced. Thus 'righteous' aggression is a positive behavior and not considered aggression, and the same set of physical actions are negatively viewed when produced in different circumstances. Thus inhibition of aggressive actions is a cognitive calculation not necessarily available to the conscious mind.

Further belief of 'aggression' is a state of mind, where certain actions of the individual are viewed aggressive. An individual may consider his behavior to be aggressive while other may not, and vice versa.

The paper proposes that 'belief' of aggression followed by the cognitive need to inhibit aggression results in production of mirth.

## METHOD

### Study 1

Two groups of 30 participants were subjected to pain by pinching their hands, which were tied to the desk, immobilizing them. The intensity of the pain was increased uniformly over a period of time. In the experimental group, the pinching was done by an aggressive looking male who was revealed to the group to be a teacher to the group, while the control group was pinched by less aggressive looking male participant who was said to be a first year student. The prediction was that the first group laughed earlier displaying a smaller threshold for laughter, and the control group laughed later in time, thus displaying a higher threshold to laughter.

Since pain produces aggression unconsciously, any pain will produce symptoms within participants of aggression such as frowning, and autonomic nervous system response, which indicate to the participant that they're in an aggressive frame, and since an burly and socially superior (teacher) is the cause of aggression, and it needs to be reined in, the subject laughs. In the second group, since the cause of aggression is not a social superior, the aggressive behavior need not be reined in, hence laughter produced, if at all, will be produced late. In fact laughter is produced only when the pain becomes unbearable, and the participant realizing the superiority of the experimenter in this respect, and his own helplessness, has a cognitive need to suppress his aggression, hence laughter ensues.

## Study 2

In this study, three groups of 30 students each play a game with a two different male experimenter, where the first group is told that their experimenter is a visiting faculty of certain college, while the other group is told that he is a young student. The game is gives the participants a chance to either cooperate or betray the experimenter. The first group cooperates while the second and third don't. The second group betrays the faculty experimenter, while the third group betrays the young student.

It is predicted that the first group won't laugh during the conversations in which the participant and experimenter decide on the strategy of cooperation, while the group 2 and 3 will, and group 2 will laugh the most.

Hence lying, which is a form of aggression, followed by the need to suppress aggression, creates mirth.

In this study, there is no negative affect that causes aggression, and such aggression is termed 'instrumental'.

## Study 3

In the above experiments, appears that pain (of individual) and aggression (by individual) produces laughter, but why should we assume an intervening step of 'belief' of aggression.

Here we have 3 group of 10 students watch a video of someone being insulted by the experimenter.

One video has the person stare blankly back by the experimenter (mild insults by given experimenter), other stares back as well (strong insult given by experimenter), while the third stares down. The insults were increased in intensity.

It is predicted that the persons who stares blankly back is perceived as more aggressive than one who looks down. And the person whom the experimenter insulted the most is also perceived as the more aggressive person. Hence while not doing anything but looking at someone who insults you is

considered aggression, the person who is aggressed more is seen as a more aggressive individual! Thus when a person is insulted by someone, simply staring back at the insulter will be aggression, hence there is a 'belief' in the person's mind that, when insulted, simply staring back is his aggression. He thus has a choice, to either continue with the aggression and even escalate it, or a need to reduce it. So does a need to reduce aggression result in laughter?

#### Study 4

There were 5 groups of 10 students who were asked to respond to 10 questions by the experimenter. On video was a person marking them on their answers. After each answer, the person in the video could be neutral, or could generate insults ranging from mild (indirect) insult to generate strong insult on Likert scale designed for the purpose..

It was predicted that a neutral expression would not produce mirth in the participants, but insults would produce varying amounts of mirth. Extremely mild insult may not generate laughter because it may not produce enough aggression 'belief' in the participant since his autonomic nervous system may not be activated, while very strong insults may not generate laughter since participant may not feel a need to control his aggression(believing it to be justified), and medium level of insults will produce most laughter.

#### DISCUSSION

The enigma is the process where a negative affect like pain can end up producing the positive affect of mirth. We have tried to explore the conditions that lead to mirth. There seem to be 3 independent processes that occur that lead to mirth. They are: belief of aggression, need to control aggression, and the presence of negative affect. The third factor not only leads to 'belief in aggression' factor, but also

itself directly modify the amount of mirth generated. If the negative affect present in the body is high, it can interfere with the feeling of mirth. This occurs in the first study, when up to a certain amount of pain the person produces laughter, but beyond it produces either expression of pain or anger. Thus higher the belief of aggression and provided there is a need to control it, higher the laughter. And lower the negative affect in the mind, higher the laughter, although since negative affect acts on the belief of aggression, it is expected to have an inverted U shape curve.

Thus mirth, in a way, is a form of deception, where a stimulus that normally produces negative affect creates a positive one (mirth) instead.

Alice V. M. Samson and Bridget M. Waller. (2010). Not Growling but Smiling: New Interpretations of the Bared-Teeth Motif in the Pre-Columbian Caribbean. *Current Anthropology*, Vol. 51, No. 3. Retrieved October 06, 2013, from <http://www.jstor.org/discover/10.1086/651090?uid=3738256&uid=2&uid=4&sid=21102738518483>

Berkowitz, L. (1993). *Aggression: Its causes, consequences, and control* (p. 485).

Gruner, C. R. (2011). *The Game of Humor: A Comprehensive Theory of Why We Laugh* (Google eBook) (p. 226). Transaction Publishers. Retrieved from <http://books.google.com/books?id=TfYuWVVSZVsC&pgis=1>

Martin, R. A. (2010). *The Psychology of Humor: An Integrative Approach* (p. 464). Academic Press. Retrieved from [http://books.google.com/books?hl=en&lr=&id=ieAcp2Z\\_zkIC&pgis=1](http://books.google.com/books?hl=en&lr=&id=ieAcp2Z_zkIC&pgis=1)

Provine, R. R., & Fischer, K. R. (2010). Laughing, Smiling, and Talking: Relation to Sleeping and Social Context in Humans. *Ethology*, 83(4), 295–305. doi:10.1111/j.1439-0310.1989.tb00536.x