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## **Reducing Cognitive Dissonance Through Effort Justification: Evidence From Past Studies and Daily Experience**

Kristin H. G. Maich\*

The present paper defines and examines past research in the area of cognitive dissonance and provides evidence for the occurrence of effort justification in animals, including humans. The ways in which cognitive dissonance and effort justification occur in everyday life are then discussed.

People generally consider the experience of tension to be both undesirable and unsustainable, thus people seek to reduce tension when it occurs. The phenomenon of cognitive dissonance occurs when an individual simultaneously holds two inconsistent cognitions as true (Festinger, 1957). Dissonance between cognitions manifests as tension-inducing psychological discomfort, which motivates an individual to reduce dissonance in order to establish psychological consistency. In general, people attempt to avoid situations that may result in cognitive dissonance. According to Festinger, when dissonance does occur, people attempt to reduce it in one of three ways: change one of the dissonant cognitions; add new cognitions that are consonant with what one already believes; or decrease the perceived importance of the dissonant cognition.

Effort justification is a way of changing the value of existing cognitions, and is one method by which humans may attempt to reduce dissonance. Individuals often expend much effort in pursuit of objectives they deem to be important. Previous literature has demonstrated that the amount of energy put towards the achievement of a goal may play a role in the development or change of an individual's attitude towards that goal. The value of an attitude target may be judged relative to the effort expended in its acquisition (Zentall, 2010); that is, one is motivated to place more value on a goal that has required greater effort to achieve. Axsom and Cooper (1985) posited that if indeed an objective (or the avenue via which a goal is obtained) is not initially attractive, an individual may later look to their own past

behaviour to determine their attitude towards that goal. If much effort has been spent in the attainment of a goal, it should come to be seen as worthwhile and therefore more attractive. A reward's perceived value is augmented in order to justify any arduousness involved in its acquisition (Zentall, 2010). This process minimizes cognitive dissonance.

The present paper will examine past research in the area of cognitive dissonance and provide evidence for the occurrence of effort justification in animals, including humans. This paper will then demonstrate how cognitive dissonance and effort justification may occur in everyday life.

### **Evidence for the Effort Justification Effect Justifying the Effort of Weight Loss Therapy**

Seeking to expand upon prior research, Axsom and Cooper (1985) investigated the workings of weight loss therapy in high and low effort expenditure conditions. Participants were individuals who responded to newspaper advertisements recruiting individuals interested in potential new weight loss methods. The sample consisted entirely of volunteers. The experimenters examined the relationship between the amount of effort expended and subsequent immediate and later weight change. It was predicted that compared to those in low effort and control conditions, participants who freely chose to take part in the high effort therapy sessions would later display the greatest amount of weight loss. The researchers further hypothesized that the weight loss experienced by the high effort participants would have an enduring effect over time.

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The researchers had aimed to examine the effect of choice on effort justification, but all participants reported a high level of freedom to participate. Thus, the choice manipulation did not have an effect on reported freedom of choice. However, the effort justification paradigm holds that freedom of choice *should* be high in order for cognitive dissonance to take place, and since this is precisely the sentiment expressed by the majority of the participants, Axsom and Cooper deemed the findings valid. As hypothesized, after three weeks, weight loss was significantly greater in the high effort group compared to the other groups. The major finding was that this weight loss was maintained, and indeed, was even greater, by participants in the high effort condition after 6 and 12 months. In comparison, low effort and control groups had not lost a significant amount of weight. Axsom and Cooper concluded that the high effort group's degree of weight change was both significant and consistent with the cognitive dissonance effect. Their findings have major implications for psychotherapy because of the long-lasting nature of the study's results. If effort justification effectively produces an enduring change in something as tangible as weight, then it may have similar effects when applied to other psychological concepts, such as decrease in frequency of negative thoughts or stress reduction in therapeutic scenarios. Simply by putting much effort into a course of therapy sessions, individuals may be assisting the process of their own attitude change.

### **Early Evidence Effort Justification in Humans**

Long before research found a relationship between effort justification and weight loss, cognitive dissonance theorist Leon Festinger and his colleague, James Carlsmith substantiated the effort justification effect in an experiment involving high or low payment sums to participants for their contribution to a lengthy, boring assignment (1959). Keeping the participants blind to the true purpose of the study, the researchers asked participants to act as proponents for a tedious task they had already completed, promoting it to other possible

participants. As predicted, Festinger and Carlsmith found that opinion change (i.e., enjoyability of the task from bad to good) was the largest in participants who were given a smaller reward (one dollar) than in those given a larger reward (20 dollars). Because there was less external reason (i.e., less money) for participants to champion the study in the one-dollar condition, the researchers proposed that the level of cognitive dissonance was highest when participants did act to endorse the study in this condition. Therefore, these participants were more motivated than the participants in the low dissonance (i.e., more money) condition to reduce dissonance. To reduce the dissonance, the researchers asserted, participants justified their effort by changing their own attitude towards the experiment. Festinger and Carlsmith concluded that the tendency to change one's opinion according to what one was induced to say is dependent on the amount of pressure felt by the individual. If the pressure was higher, such as in the greater monetary reward condition, the attitude change was weaker; if the pressure was weaker and the individuals felt their words were voluntarily spoken, the desire to reduce dissonance drove them to change their attitude so as to correspond to their behaviours.

### **Effort Justification Occurs in Rats**

Recently, researchers have proposed that the occurrence of effort justification may be less of a conscious process than previously expected. Lydall, Gilmour, and Dwyer (2010) pointed to past studies demonstrating that behaviour-induced attitude change existed in monkeys, children, and amnesiacs to support their suggestion that effort justification might be an automatic, not conscious, process. To determine whether complex cognitions are necessary for the occurrence of effort justification processes, Lydall et al. examined dissonance reduction in rats, expanding upon preliminary findings observed by Lawrence and Festinger (as cited in Lydall et al., 2010, p. 1135). Using 16 male rats, Lydall et al. defined high effort as the condition in which rats had to press a lever 50 times before receiving a sucrose reward, and low effort as receiving the reward after only 10

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presses of the lever. They also introduced waiting time as a variable: in two other conditions, rats were not required to press a lever to receive the sucrose reward, they merely waited the same amount of time as it took for the other groups to complete either 10 or 50 lever presses. Replicating the findings of Axsom and Cooper (1985) and Festinger and Carlsmith (1959), Lydall et al. (2010) found that rats in the high effort condition judged the sucrose reward to be significantly more palatable than did rats in the low effort condition. They further found that rats that had to work the lever valued the sucrose reward higher than those who simply waited for their reward. The researchers concluded that the effort justification effect had indeed occurred in the rat sample: rats valued the reward more highly when they had worked in a high effort condition to obtain it.

Lydall et al. (2010) were wary of attributing the rats' effort justification to the complex cognitive experience of dissonance, and examined the possibility that a process of "situational contrast" was instead occurring. They suggested that an aversive negative state is produced by the high degree of effort inputted, and that in comparison (i.e., via situational contrast) to this state of great exertion, the value of the effort's outcome (i.e., the reward) is increased. A study of pigeons by Clement et al. was described by Lydall et al. (p. 1136), where they had concluded that the pigeons' preference for colours that appeared following a great deal of effort during training was the result of within-trial contrast. Lydall et al. put forward this theory of situational contrast as a possible alternative explanation for the effort justification effect in rats, suggesting that the minimization of cognitive dissonance may be a process too complex to occur in non-human animals. Nevertheless, it is clear that effort justification had indeed occurred in the rat sample. Whether the justification was attributable to dissonance reduction or a simpler comparison effect is an area for future investigation. As Lydall et al. proposed, dissonance as a cognitive mechanism in humans could perhaps be attributable to a more parsimonious contrast effect, and this is an

area of research that presently requires more attention.

### **Experiences of Effort Justification**

#### **Personal Experience**

Upon graduating from university, a friend of mine, Sadie, found herself uncertain about what career path she wanted to pursue. She took a temporary part-time job working at a restaurant. After a few months, she decided to write the Law School Admissions Test (LSAT). Her mother was a lawyer, and all the lawyers she knew lived comfortable lifestyles; it seemed like a safe choice. Sadie spent the autumn studying for the LSAT, and despised it. She constantly complained about it, especially at first. She would always tell us that the LSAT was simply a means to an end, that it was a temporary but "necessary evil." She acknowledged that the Test was a painful experience, and law school might be too, but it would get her where she wanted to go.

In the fall, Sadie studied very hard, hardly ever having time to see her friends, and took the LSAT in December. Not having scored in a high enough percentile, she doubled her effort in January and took the test again in February. Unfortunately, Sadie was not accepted to law school that year. She decided to spend the summer continuing to practice for the LSAT and then re-apply to schools for the following year. Having spent nearly 8 months working towards this one goal, Sadie at this point began telling me that the past year and half spent studying for the LSAT had been well worth the time and effort, because she was much better prepared for it the next time around. By the time she was finally accepted to Queen's University in March of 2012, she was a steadfast proponent of the LSAT. She now refers to it as a formative and important process. Though she concedes that she may not use all of the skills that she had to learn for the test, she maintains that the process was nonetheless useful. She absolutely believes that any individual hoping to attend law school should not only be required to take the LSAT, but that it should be a difficult experience for them. She alleges that the

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challenging nature of the Test prepares students for the arduousness of law school.

In spite of the fact that Sadie had never really enjoyed the type of problem-solving involved in the LSAT, she began to change the way she spoke, and apparently felt, about the Test after having spent many months and much energy studying for it. Evidently, she was attempting to minimize the cognitive dissonance she was experiencing by changing her attitude towards the LSAT. She started to talk about the logic game component of the test, which she had despised for months, as though it was a practical and interesting way of thinking. Having expended such a great deal of effort and time working towards achieving a good score on the LSAT, Sadie's values had changed. Whereas she used to have only contempt for the Test, and regarded standardized tests to be "useless" in general, she now, upon attainment of her goal, exhibits only the most respect and near-admiration for the LSAT and the designers of the test. Sadie's experience with the LSAT was clearly a demonstration of effort justification. To eliminate the tension of working hard for a goal she didn't care for, Sadie changed the way she felt about the goal, thus reducing dissonance and rationalizing the great amount of work she had put into acquiring a good LSAT score.

### **Effort justification evidence in the news**

This past December, The New York Times reported the death of yet another American soldier in Afghanistan (Semple, 2011). Private Danny Chen was 19 when he died last autumn; the reported cause was suicide. Eight American soldiers were implicated in Chen's death, and last month, an American military investigator recommended court-martialing four of these eight soldiers (Semple, 2012). When the story emerged in December, Chen's parents claimed that he had struggled with a "campaign of hazing" that involved, but was not limited to, insulting Chen with racial slurs as well as physical attacks of violence against him.

Hazing has long been a military rite of passage. According to Semple (2011), the U.S. Army permits the application of "corrective

measures" as punishment by senior or higher-ranking soldiers, including reasonable amounts of forced exercise and verbal admonishments. In the case of Chen, these corrective measures, which included verbal and physical harassment, were administered because he apparently forgot to turn off the water heater after his shower.

In an investigation of the hazing of rookie athletes, Hinkle (2006) found that hazed athletes excused and even defended the practice of hazing, which she defined as including verbal as well as sexual and physical abuse. Hinkle suggested that this dissonant behaviour on the part of hazing victims is a way of minimizing the cognitive dissonance experienced by willingly taking the part of victim, an evidently high effort role. Obviously, because these athletes had exerted much effort in the process of being hazed, and had taken part in this highly aversive experience voluntarily, they felt the need to justify this dissonant behaviour. By viewing the hazing experience as ultimately rewarding, hazed victims were able to justify the effort (i.e., the negative experience) involved in their behaviour. Hazed athletes, Hinkle reported, would rationalize the experience by suggesting that hazing was a necessary rite of passage, and participation in it indicated a commitment to the sport.

Hinkle's findings pertaining to athletic hazing can be applied to the present situation of abusive hazing in the U.S. Army. Incoming soldiers are hazed by their superiors. Through the processes involved in the effort justification paradigm, they reduce dissonance by downplaying the negative aspects of hazing, and come to view it as a valuable activity. Hazed soldiers placed greater value on hazing, because they had worked so hard to get through their own experiences of hazing (Lydall et al., 2010). When these soldiers are later in a position of superiority, hazing inferiors for their errors is no longer seen as an aversive activity, but rather a necessary and positive rite of passage.

Clearly, for the family of Private Danny Chen, hazing is an instance in which the justification of effort by its administrators was not only unwarranted, but was an undesirable, self-defeating, and highly dangerous method of

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dissonance reduction. This particular example of hazing as an activity that continues to exist at least in part, due to effort justification techniques, demonstrates that the experience of cognitive dissonance, though uncomfortable, may not always be a psychological experience that should be avoided. At any rate, coming to value hazing may not have been the most desirable way for soldiers to reduce their dissonant tension. Had the soldiers who harassed Danny Chen dealt with the dissonant cognition by changing their previous cognition of hazing after experiencing it themselves through behavioural modification (i.e., concluded that due to the detrimental and aversive nature of its experience, hazing should not be practiced), instead of changing their attitude towards hazing by coming to value it, Chen may not have had to endure the same “rite of passage” that drove him to end his life.

### Conclusion

The experience of effort justification has been demonstrated to occur in humans and non-human animals, in varying situations. Although some suggest that justifying one’s effort occurs not to reduce the complex cognitive phenomenon of dissonance, but rather as a result of situational contrast (Lydall et al., 2010), it is clear that justification of expended time and energy does occur and does result in behaviour-induced value change.

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