The Advances in the History of Cognitive Dissonance Theory

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Abstract

This paper presents the advances in the history of cognitive dissonance theory. Cognitive dissonance has been one of the most influential and widely studied phenomena in the history of social psychology. The theory proposes that when people experience psychological discomfort (dissonance), they strive to reduce it through either changing behaviors and cognitions or adding new cognitive elements. The theory has been revised by researchers who emphasize the role of self-concept in the arousal of dissonance. In the late 1970s, the interest in cognitive research faded. However, this opened a new era of mini-theories which originate from cognitive dissonance theory. A good synthesis of mini-theories in future studies will move the dissonance theory further in explaining the conditions under which people strive towards consistency.

Keywords: Cognitive dissonance

1. Introduction

The theory of cognitive dissonance (Festinger, 1957) made a significant mark in the history of social psychology. It challenged the long-standing dominance of reinforcement theory (Aronson, 1992; 1997). In mid-1950s, the reinforcement theory was dominant in social psychology research. Psychologists were explaining social-psychological phenomena through behavioral approaches. To illustrate, reinforcement theorists explained conformity as an attempt not to feel anxious to be alone against an unanimous majority in Asch's well-known conformity experiment (1951). The reward was the comfort to be in agreement with others. In addition, reinforcement theorists explained that a credible source would be more persuasive because it was more rewarding (Aronson, 1992; 1997).

With the development of Festinger's Cognitive Dissonance theory (1957) and its classic experiment (Festinger & Carlsmith, 1959), a new era was opened for cognitively-oriented social psychologists. Many researchers departed from reward-reinforcement based explanations and moved to cognitively oriented explanations, generated from cognitive dissonance theory. It inspired researchers to apply this theory in a wide array of topics such as attitudes toward smoking, condom use and conservation of water and energy (Aronson, Fried, & Stone, 1991; Dickerson, Thibodeau, Aronson, & Miller, 1992; Nel, Helmreich, & Aronson, 1969 as cited in Aronson, 1992, 1997). It also inspired research in a variety of disciplines such as economics, law, philosophy, political science and anthropology. The impact of cognitive dissonance theory continued from the late 1950s to the mid-1970s. With a growing interest in purely cognitive processes such as information processes, the popularity of dissonance theory declined. However, the dwindling interest in dissonance theory did not have a long run. Motivational processes were combined with cognitive processes in mini-theories, which indicate reminiscent of dissonance theory in 1980s (Aronson, 1992; 1997).

2. Cognitive Dissonance Theory

The theory is built upon the notion that individuals strive toward consistency. If there are inconsistencies, they try to rationalize them to reduce psychological discomfort (Festinger, 1957). Festinger uses the term "*consonance*" in terms of consistency and uses the term "*dissonance*" in terms of inconsistency. He is proposing that dissonance might arise from logical inconsistencies, cultural mores, inconsistency between a cognition and a more encompassing cognition and past experiences. There is at least one cognitive element dissonant with behavioral elements. In the existence of dissonance, individuals are motivated to reduce the dissonance and avoid situations that increase it.

The magnitude of dissonance depends on importance or value of the elements (e.g. knowledge, belief, attitudes) that are dissonant. If a person gives importance to these elements, the magnitude of the dissonant relation between elements would be greater (Festinger, 1957). Accordingly, the magnitude of the dissonance would influence pressures to reduce or eliminate the dissonance (Festinger, 1957). As the magnitude increases, pressures to reduce dissonance and avoidance from situations that generate dissonance increases. Furthermore, Festinger (1957) suggests that individuals may change behavioral cognitive elements, environmental cognitive elements or add new cognitive elements to reduce dissonance. To illustrate, a habitual cigarette smoker who has learnt that smoking is bad for health may change his behavior (e.g. stop smoking), change his knowledge about the effects of smoking (e.g. smoking is not dangerous) or may add new cognitive elements that are consonant with the fact of smoking (e.g. "there is more danger in traffic") (Festinger, 1957).

Before the development of Dissonance theory, similar notions have been suggested by some scholars. For instance, Heider (1925, as cited in Festinger, 1957) states that unless there is balanced state in which two or more relations fit together, forces would act to change action or reorganize cognitions; otherwise, an imbalanced state would produce tension. After a few decades, Heider proposed similar arguments in *balance theory* (1958 as cited in Taylor, Peplau, & Sears, 2006). Furthermore in 1955, Osgood and Tannenbaum have brought out "*the principle of congruity*" which proposes that "people change their evaluation in the direction of increased congruity with the existing knowledge" (p. 43, as cited in Festinger, 1957). It means that if a person's knowledge is incongruent with other source of information, then person shows a tendency to change either the evaluation of existing knowledge or evaluation of the source to reduce incongruence. Similarly, Festinger (1957) explains the same processes in his cognitive dissonance theory. Nevertheless, Festinger might be considered as the first person who formulated these notions in a precise and applicable form, by providing implications in a variety of contexts.

The theory has wide implications and applications to a variety of contexts. For instance, in the process of decision making, people should handle the unpleasantness of having rejected an attractive alternative (Festinger, 1957). According to Lewin (1935, as cited in Festinger, 1957), once a decision has been made, individuals tends to stick to their decisions. This process namely, *the freezing effect of decision*" results from establishing consonant relations with the decision (e.g. chosen alternative seems to be more attractive) and eliminating dissonant relations (e.g. unchosen alternatives seem to be less attractive). Similarly, Brehm (1956, as cited in Aronson, 1969) found that after a decision has been made, subjects enhanced their liking for the chosen alternative and downgraded the unchosen alternative.

However, Festinger (1957) proposes that dissonance arises after a choice has been made. The magnitude of the postdecision dissonance depends on the importance of the decision, relative attractiveness of the unchosen alternative and the degree of cognitive overlap of the alternatives. In other words, if the decision is important, unchosen alternatives are attractive and the degree of overlap is low, the postdecision dissonance is stronger. In order to reduce postdecision dissonance, an individual may change or revoke the decision, change the attractiveness of the alternatives (e.g. by magnifying the importance of chosen alternative and minimizing attractiveness of unchosen alternative) or establish cognitive overlap (e.g. by creating similarities among chosen and unchosen alternatives). To illustrate, imagine a person who accepted the dinner party invitation and rejected a rock concert. The person may change his/her decision and go to the concert; or may attempt to think of negative things about the concert and positive things about the dinner party; or may believe that there would be good music in the dinner party as well.

3. Cognitive Dissonance Research

The cognitive dissonance theory was first tested by Festinger and Carlsmith (1959) in a laboratory experiment. They examined what would happen if two cognitions do not fit together that is, if a person believes in "X" but publicly states that he believes in "not X". They also examined how the amounth of pressure (reward) would influence the magnitude of dissonance. In the experiment, 71 students were asked to spend an hour on boring tasks, then some of the participants were asked to do a favor and persuade another subject that the tasks were interesting and enjoyable. A group of participants in experimental group were paid 1 $, while others were paid 20 $ to persuade subjects. Participants in control group were not asked to persuade any subjects. Afterwards, participants in experimental group were asked to rate their private opinions about whether the tasks were interesting and enjoyable.

In parallel with dissonance theory, researchers expected that dissonance would be reduced by changing private opinion and this opinion change would be smaller if there is large reward. In other words, it was expected that in the one dollar condition, the magnitude of the dissonance would be high (due to small reward), thus opinion change would be high.

However, in the twenty dollar condition, the magnitude of the dissonance would be small (due to great reward), thus opinion change would not be high. As expected, participants in one dollar group experienced more dissonance, and thus showed greater tendency to change their opinions to bring it into corresponce with what they have said. Overall, findings indicate that *greater reward* provides external justification for the dissonant act and thus creates less dissonance, while *smaller reward* does not provide any justification and thus creates more dissonance. To reduce dissonance, people tend to change their opinions through internalizing what they have said or done.

The study of Festinger and Carlsmith (1959) has been regarded as the classic experiment of cognitive dissonance since it provides the first ample evidence for the theory. It shows that if a person performs an unpleasant task that is insufficiently rewarded, his/her cognition of performing this unpleasant task is dissonant with his cognition of receiving no reward. Thus, the person reduces dissonance by seeking some justifications such as increasing the attractiveness of the goal. For instance in one study, Aronson and Mills (1959) investigated whether unpleasant experiences to attain membership in a group influences liking for the group. Consistent with the cognitive dissonance theory, it was expected that individuals who go through an unpleasant experience to become members of the discussion group would increase their liking for the group. To test this hypothesis, college women were randomly assigned to three experimental conditions: a severe initiation condition (they were asked to read embarrassing materials before joining the group), mild initiation group (they were asked to read less embarrassing materials before joining the group) and control group (they were not asked to read any material before joining the group).

Then, they were listened to a dull, banal group discussion. As a result, women who had unpleasant experience (severe initiation) perceived the group as being more attractive than those in mild initiation group and control group. The findings supported cognitive dissonance theory because unpleasant experience was dissonant with a dull discussion, and thus individuals distorted their existing perceptions of the group (its discussions) in a positive direction to reduce dissonance. As mentioned in the beginning of this paper, cognitive dissonance theory challenged reinforcement theory. The previous research provide supportive evidence for this argument because reinforcement theory suggests that people like things that are rewarded; however, dissonance research show that people like things for which they suffer (Aronson, 1992). Hence, it contributes to the literature by showing that reinforcement might not explain every social phenomena.

The previous research has shown that cognition of performing an unpleasant task is dissonant with cognition of receiving no reward (Festinger & Carlsmith, 1959; Aronson & Mills, 1959). Theorically, it would be expected that punishment yield an opposite effect. To test the effect of punishment on cognitive dissonance, Aronson and Carlsmith (1963) conducted a study among preschoolers in several discipline contexts. They allowed children play with some toys and then told them that they could play with all the toys except the most attractive one. In one condition, they used a severe threat to discourage children from playing with the forbidden toy while in the other condition, they used a relatively mild threat to discourage them from playing with the toy. The results showed that children in the severe threat condition refrained from playing with the attractive toy because they had sufficient justifications (e.g. being punished by experimenter). Similarly, children in the mild threat condition refrained from playing with the toy, however, their liking of the toy decreased. Consistent with the cognitive dissonance theory, in the existence of severe threat, the cognition that they did not play with attractive toy was consonant with the cognition that they would be severely punished if they played.

However, in the absence of severe threat, children experienced dissonance because the cognition of not playing with the attractive toy was dissonant with the cognition that it was attractive. To reduce dissonance, children derogated the toy. According to Aronson (1969), mild threat condition does not provide sufficient justification for not playing with the attractive toy, and thus children find additional reasons such as convincing themselves that the toy was less attractive. Surprisingly, the toy was seen as less attractive 45 days after the experimental manipulation, indicating long-lasting derogation of the toy. Interestingly, when Freedman (1965, as cited in Aronson, 1997) replicated "the forbidden toy" study with the original threat removed, children who were previously in the severe threat condition showed a tendency to play with the forbidden toy in the absence of threat. However, children who were previously in the mild threat condition were less likely to play with the forbidden toy even in the absence of threat. Because they convinced themselves that they weren't playing with the toy because they didn't like the toy (self-justification). By this way, they internalized attitude change. The study not only provides support for the power of self-justification, but also has important implications for child development. Interventions that target parents should emphasize the point that severe threat of punishment might not be an effective strategy to reduce aggressive behaviors. On the contrary, it might increase aggressive behaviors.

Therefore, parents should not use severe threat of punishment as a strategy to deal with children's problems. The cognitive dissonance research also contributed to social psychology by its new methodology. As mentioned in previous research, forced-compliance paradigm is one of the most widely studied paradigm in cognitive dissonance. In the forced compliance paradigm, subjects are let to execute an act either counterattitudinal (e.g. saying "not X" when one believes in "X") or countermotivational (e.g. not playing with an attractive toy) (Girandola, 1997). Afterwards, postbehavioral attitude change is tested. The tactic of "experimental reality" in which subjects become a part of the scenario is used in dissonance experiments (Aronson, 1992). In the majority of previous experiments, subjects make judgments about videos, however, in cognitive dissonance research real things are happening to real people. Even though dissonance research has been criticized for its use of deception, it contributed a lot to experimentation in social psychology research.

4. Revisions in Cognitive Dissonance Theory

Dissonance researchers have periodically revised the theory. One of the most important revisions was done by Aronson (1960, 1968 as cited in Aronson, 1992), through drawing attention to expectancies regarding the self. According to the researcher, dissonance would be aroused when a person performs a behavior that is inconsistent with his or her sense of self. To reduce dissonance, person is involved in the process of self-justification. Through this process, individual maintains a self-concept that is stable, predictable, competent and morally good. To illustrate, Aronson and Carlsmith (1962) manipulated participants' performance and expectancies concerning their performance. It was expected that a performance consistent with their expectations would be consonant, however a performance inconsistent with their expectations would arouse dissonance. As expected, participants whose performance was inconsistent with their performance expectancies changed more of their responses than those whose performance was consistent with their performance expectancies. It was surprising that individuals who expected to perform poorly but performed well experienced dissonance and tried to reaffirm their negative performance expectancies.

The discomfort with unexpected success indicates people's drive to achieve a self-relevant performance expectancy regardless of the performance being good or bad. These arguments might be based upon Bem's *self-judgment model* which proposes that each person observes his own behavior; and infers what his real attitudes are by discriminating the reinforcement contingencies (1965, 1967 as cited in Aronson, 1969). For instance, if a person observes that his performance is guided by a large reward, then it becomes difficult for him to believe that behavior reflects own attitudes. The modification of Aronson increased the predictive power of the theory by retaining the core notion of inconsistencies but giving more emhasis on the self-concept. It explains the conditions under which dissonance reduction occurs (Aronson, 1992). For instance, in the classic cognitive dissonance experiment (Festinger & Calsmith, 1959), if a person, who has lied to another person in the absense of sufficient justification, sees himself as a decent and competent individual, he may feel guilty and stupid and thus convince himself that it is not a lie. On the other hand, if that person sees himself as insensible or incompetent, then dissonance may not occur. As stated by Aronson (1969, p.28) "if a person sees of himself as a schnook, an un-schnooky behavior arouses dissonance". It indicates that dissonance exists when the behavior is dissonant with the self-concept.

In addition to the judgments about the task or group, dissonance-generated attitude change was studied in important contexts such as changing attitudes towards condom use and conservation of water. For instance, in one study college students were asked to make a speech to use condom. The results revealed that those who made this speech showed more intention to use condoms (Aronson et al., 1991). In a related study, college students who were asked to sign a flyer about water conservation, showed tendency to consume less water. (Dickerson et al., 1992 as cited in Aronson, 1992). In accordance with Aronson's propositions, dissonance arises when individuals behave inconsistently with their advices. Because an advice should reflect real attitudes. These studies are important in enlightening the role of hypocrisy technique in attitude change. When individuals are asked to persuade other individuals, unconsicously they evaluate their own behaviors. This technique might be applied to schools in order to decrease smoking habit, drug and alcohol usage among young people.

Besides, the theory has been reformulated by researchers' varying emphasis on arousal and psychological discomfort in dissonance-reduction process. Dissonance arousal is "the heightened arousal that results from feelings of responsibility of an unwanted event", dissonance motivation is "the pressure to change one's attitudes" (Cooper & Fazio, 1984, p.257). As previously mentioned, Festinger (1957) have conceptualized dissonance as a fundamentally motivational state. Additionally, he resembled reduction of dissonance to any attempt to reduce hunger, thirst or any drive. Over the years, some dissonance researchers have emphasized arousal or drive-like properties of dissonance while others have emphasized both dissonance arousal and dissonance motivation (e.g. Brehm & Cohen, 1962; Cooper & Fazio, 1984 as cited in Elliot & Devine, 1994).

Specifically, in their New Look model, Cooper and Fazio (1984) have proposed that dissonance arousal precedes psychological discomfort that motivates individuals to change attitudes. Although the arousal component is important and necessary for dissonance process, it is the psychological discomfort that motivates attitude change and thus reduces dissonance. In addition, Cooper and Fazio (1984) proposed that dissonance arises when a person feels responsible for bringing about aversive consequences. In other terms, aversive events following an action are essential for arousal of dissonance rather than inconsistency among cognition and behavior. However, some studies (Aronson et al., 1991; Dickerson et al., 1992 as cited in Aronson, 1992) showed that college students experienced dissonance even when they felt they did not do anything wrong such as lying, indicating the occurance of dissonance in the absence of aversive consequences. Although dissonance might arise in aversive consequences as it is in the forced-compliance dissonance paradigms, it might also arise in beneficial consequences such as condom use and water conservation.

5. The Waning of Interest in Cognitive Dissonance Research

The cognitive dissonance theory developed by Festinger (1957) inspired a great deal of exciting research for the next two decades. It challenged reinforcement theory by showing that people are not simple reinforcement machines, rather they think and make justifications (Aronson, 1992). Besides, it challenged psychoanalytic theory, specifically the notion of catharsis of aggression (Aronson, 1992). Most psychologists believed that if people released their anger, they would feel better, however, cognitive dissonance theory proposed that it would not reduce aggression. On the contrary people would try to find justifications for their hostility such as derogating the victim, and thus it would lead to more aggression. For instance, if a boss is angry to his wife but shows his anger to one of his employees, then he would feel guilty because this hostile behavior is not consistent with his decent and competent self. To reduce dissonance, he would find justifications that derogate the employee such as "he/she was not working effectively". Hence, it would increase aggression.

The cognitive dissonance theory opened a new era by combining motivation and cognition, thus produced "the revitalization of social psychology" (Aronson, 1992). However, by the mid-1970s, interest in motivational approaches to social psychology began to wane and purely cognitive approaches have gained interest. According to Aronson (1992), there are four important reasons for the waning of interest in dissonance. First, people did not believe that deception in dissonance experiments was acceptable. Second, people believed that dissonance might cause discomfort and procedures might harm individuals. Third, dissonance experiments required great amounth of time. Fourth, social cognition became popular and researchers discovered that the methodology in social cognition research was easier, less time-consuming and more ethical. Hence, researchers preferred easier, quicker, less time-consuming and more ethical methods in their research.

With the rising of social cognition, researchers temporarily abondoned motivational processes and started to examine purely cognitive processes. However, this new body of research was not unrelated to old studies about cognitive dissonance, indeed it was derivable from cognitive dissonance theory (Aronson, 1992, 1997). For instance, Lord, Ross and Lepper (1979, p. 2098) suggested a phenomenon called"biased assimilation", which refers to people's tendencies to accept confirming evidence and reject disconfirming evidence. In a similar vein, Festinger (1957) proposed in his theory that individuals would be less likely to accept arguments that are inconsistent with their initial attitudes. For instance, smokers would find skepticism in arguments such as 'smoking leads to cancer'. It is important to note that Lord et al. (1979) made purely cognitive explanations, disregarding cognitive dissonance.

6. The Reminiscent of Cognitive Dissonance Theory

In 1980s, researchers realized that purely cognitive explanations were not sufficient to understand social behavior and thus they combined cognition with motivation. This opened a new era of mini-theories, the origins of which derive from dissonance theory. The theories are self-affirmation theory (e.g. Steele, 1988), symbolic self-completion theory (e.g. Wicklund & Gollwitzer, 1982), self-evaluation maintenance theory (e.g. Tesser, 1988), self-discrepancy theory (Higgens, 1989), self-verification theory (e.g. Swann, 1984), action identification theory (e.g. Vallacher & Wegner, 1985) and the concept of motivated inference (e.g. Kunda, 1990 as cited in Aronson, 1992; 1997). According to Aronson, all of these mini-theories include how people cope with threats to the self-concept and thus they can be integrated under the framework of cognitive dissonance theory. Social psychologists should bring these theories together by finding the common grounds rather than differentiating them. A good synthesis of ideas and approaches would provide a better understanding of cognitive dissonance theory (Berkowitz & Devine, 1989 as cited in Aronson, 1992, 1997). The empirical study of self-verification theory might be a good example to show that mini-theories originate from Festinger's cognitive dissonance theory (1957).

In their study, Swann and Read (1981) found that people sought feedback that would confirm their self-perceived assertiveness and emotionalities because they believed this feedback was more informative and diagnostic about their self-concepts. The findings of this study is similar to the findings of Aronson and Carlsmith (1962) in which people changed their responses to achieve performance consistent with their expectancies. Both studies indicate individuals' need to form a stable self and predict their own behavior. According to Aronson (1992,1997), there is no need for a separate mini-theory since they both explain the same phenomenon. In a related vein, self-affirmation theory proposes that "people cope with one kind of self-threat by affirming an urelated aspect of the self". (Steele, 1988, p. 263). According to Steele (1988), dissonance does not arise from the inconsistency itself rather it arises from the threats that result from inconsistency toward self-integrity. To reduce dissonance, people engage in self-affirmation processes. As can be seen, the main argument of self-affirmation theory is largely in line with Aronson's (1960, 1968) self-concept revision of cognitive dissonance theory. Both arguments emphasize individuals' need to reduce threat towards the self, thus there is no need for a separate theory (Aronson, 1992, 1997). To have a richer understanding of dissonance, social psychologists should integrate recent findings under the same roof. A good synthesis of recent findings will enable researchers to move further in explaining the conditions under which people strive towards consistency.

7. Conclusion

In conclusion, cognitive dissonance theory proposes that when people hold two psychologically inconsistent cognitions (ideas, beliefs), dissonance arises. They strive to reduce dissonance through either changing behavior, changing cognitions or adding new cognitive elements (Festinger, 1957). Cognitive dissonance theory made a great impact in the history of social psychology. It challenged reinforcement theory by showing that people like things for which they suffer. Some researchers (e.g. Aronson, 1960, 1968) made revisions in the original theory by emhasizing the role of self-concept in the arousal of dissonance. However, in the late 1970s and early 1980s, the interest in dissonance research faded and purely cognitive studies has gained interest. This opened a new era of mini-theories, the origins of which derive from dissonance theory. The theory has made a comeback under a variety of different names (Aronson, 1992, 1997). Dissonance-generated attitude change research has important contributions to various settings. In future studies, dissonance research might be applied to reduce stereotypes and prejudice.

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