

---

**RESEARCH ARTICLE**

# Cognitive Dissonance: Where We've Been and Where We're Going

Joel Cooper

---

Cognitive dissonance has been one of the most enduring and successful theories in the history of social psychology. This paper examines the origins of the theory and the controversies it engendered. I then examine the evolution of dissonance as it emerged from a theory focused solely on the inconsistency among cognitions to a more complex set of principles that accommodated the voluminous data that had been gathered throughout the ensuing decades. The paper considers what I refer to as the “Roadway to Dissonance” – an analysis of the process that leads from the perception of cognitions in the social environment to the unpleasant arousal state of dissonance and, further, how engaging in attitude, perceptual or behavioral change regulates that arousal. I then consider the transition of dissonance research from its focus on the individual to one that envisions the individual in the context of a social group. The social group perspective enables us to consider how people feel dissonance vicariously on behalf of their fellow group member. I conclude with an appeal for a two-pronged approach to dissonance in the coming decades in which we continue to make progress in the laboratory while simultaneously translating dissonance to help alleviate problems that are important in peoples lives.

---

**Keywords:** Cognitive dissonance; Vicarious dissonance; Motivation; Health; Hypocrisy

---

More than 60 years ago, Leon Festinger made a modest proposal by suggesting that people who hold two or more cognitions that are psychologically inconsistent experience a state of psychological discomfort called cognitive dissonance. Moreover, the state of dissonance has drive-like properties, motivating people to seek its reduction. That relatively straightforward description of the relationship among cognitions led to decades of research that supported, contradicted and modified the theory. It led to innovations in understanding people's motivations for the attitudes they hold, the behaviors they engage in and the preferences they express. It also led to innovations in leveraging the dissonance process to help people with important practical considerations such as improving their mental and physical health. In this paper, I will examine some of the initial controversies that propelled dissonance theory toward a decades-long journey as an important and controversial theoretical construct and offer a view of the current state of dissonance in the field of social psychology.

## In the Beginning

Cognitive dissonance burst onto the academic scene in 1957, but its roots can be traced back to the influence that Kurt Lewin had on Leon Festinger. Lewin was a proponent

of field theory as the lens through which to view human behavior (Lewin, 1951). Lewin emphasized the dynamic forces that push and pull at people as they navigate their social world, and this provided Festinger with the motivational basis for dissonance theory. In Festinger's view, the influential factors that affected people's lives were dynamic. People were motivated, driven and propelled by forces in the social world as well as from within their own personalities. He emphasized that view in his theory of social comparison processes (Festinger, 1954) in which he asserted that, to the extent that people are uncertain of the correctness of their own opinions and abilities, they are driven to compare themselves with the opinions and abilities of others. For Festinger, the drive is very real. It is not a sentiment or a preference, but rather a motivational necessity that people had to accommodate.

Social comparison generated considerable interest and addressed a basic motivation for people to engage in attitude change. Festinger proposed that people change their attitudes not only because of the legitimacy of the arguments they hear but also to satisfy a basic motivational drive. In the social comparison view, people are motivated to influence others or to succumb to others' influence in order to satisfy their drive to have correct and appropriate opinions.

Festinger realized that social comparison theory was unnecessarily narrow. It addressed people's motivation to change attitudes when they are confronted by discrepancies with other people's attitudes, but did not address the

myriad of other occasions in which people find themselves at odds with what they see around them. Festinger wondered how people would react if they noticed discrepancies with their past experience. In one classic example from his original work, he asked what people would feel if they were out in the rain but were not getting wet. In another, he wondered how people would feel if they noticed that their own behavior did not fit with social mores. In another, he wondered what people would experience if they found themselves behaving in ways that contradicted their own attitudes. Social comparison was an activity that people engaged in when they were confronted by a particular discrepancy in a particular circumstance. It occurred to Festinger that a social psychological theory needed to be broader than social comparison in order to accommodate the extraordinary number of circumstances in which people felt driven to avoid and reduce inconsistency. Cognitive dissonance theory was the expansion of social comparison. And much more.

### Dissonance Theory as Innovation

Cognitive dissonance theory was both innovative and provocative. Arguably, the least appreciated feature of dissonance theory was also its most innovative. Festinger used the term “cognitive” to precede dissonance, arguing that all types of thoughts, behaviors and perceptions were represented in people’s thinking by way of their cognitive representations. Social psychological theories of attitudes and attitude change generally involved people comparing their own attitudes to the attitudes of others, or comparing the basis for certain attitudes with information that a communicator might offer. With Festinger’s use of the concept of cognitive representations, attitudes, behaviors, social mores, communications – that is, virtually any phenomenon that people can perceive – all are grist for the mill of cognitive dissonance.

Drive reduction is the process that makes dissonance theory convert cognitive representations into attitude change and other regulation activities. As Festinger said, “The holding of two or more inconsistent cognitions arouses the state of cognitive dissonance, which is experienced as uncomfortable tension. This tension has drive-like properties and must be reduced.” Although Festinger had no direct evidence that drive-like properties actually existed, it rendered the dissonance process different from other theories that suggested that consistency is preferred to inconsistency. For Festinger, consistency among cognitions was not a preference but a drive. Just as people need to reduce their thirst by drinking and their hunger by eating, people who perceive inconsistency must find a way to reduce it. The drive to reduce inconsistency can be accomplished by a number of means, but attitude change became the most frequent resolution in the early research on dissonance.

A third innovation in dissonance research was to posit that dissonance has a magnitude. Various theories discussed preferences for symmetry, balance and consistency. Only dissonance theory discussed *magnitudes*. Just as people can be slightly hungry or extremely hungry, Festinger’s theory provided for different magnitudes

of dissonance. The greater the dissonance, the greater the urgency to make the cognitive changes necessary to reduce the unpleasant tension state.

### Dissonance Upsets Conventional Wisdom

In the history of science, a theory or perspective can become important because it is bold and controversial. It may not be correct in all of its details, but it upsets the conventional wisdom that came before. I would argue that the most fundamental assumption about human and infrahuman behavior in the decade of the 1950’s was learning theory. Scholars argued about the relative merits of approaches such as Skinner’s behaviorism or Hull’s drive theory, but few dared to question the fundamental notion that organisms approach rewards and avoid punishments. This was as true of humans in the workplace as it was for pigeons and rats in experimental cages.

Festinger and Carlsmith’s (1959) experiment upset the conventional assumptions. They established dissonance by having participants publicly rave about the pleasantness of a task that, in fact, had been quite dull and boring. The contradiction between their true attitude about the boring task and their statement that it was interesting created dissonance. The need to reduce dissonance led people to change their attitudes in the direction of their public statements. That prediction was not controversial. The controversial prediction arose from the nuance that Festinger & Carlsmith added to the experiment. Some participants had been offered a small amount of money to make the attitude discrepant statement (U.S. \$1) while others had been offered a substantially larger amount (U.S. \$20). Festinger & Carlsmith made the prediction that the \$20 incentive would lead to less dissonance than the small incentive because it helped people understand why they had acted in contradiction to their true beliefs. Participants who had only been offered \$1 had much less comfort from their small incentive and thus were predicted to experience a greater tension state. Consistent with those predictions, participants in the \$1 condition changed their attitudes more than the participants who were offered the large reward.

There are two ways in which this elegantly straightforward experiment upended traditional thinking. Within social psychology, the study made clear that dissonance theory was not the same as previous balance theories. The fact that dissonance has a magnitude and the magnitude can predict different degrees of cognitive change was different from prior theorizing. Psychology was no longer limited to describing balanced and imbalanced states but could now operate with dynamic predictions about the magnitude of the imbalance and the degree to which people would be motivated to change their cognitions.

The second, and perhaps most iconoclast contribution was its apparent reversal of the predictions that would be made by learning theories. Rather than creating change as a direct function of its magnitude, reward seemed to have had the opposite effect in the dissonance situation. People who made statements for large rewards were *less* likely to believe their statements than people who acted for small rewards. This seemed so antithetical to the existing zeitgeist

that it led to a flurry of important work trying to show that Festinger & Carlsmith's study produced its results from flawed operations (Chapanis & Chapanis, 1964; Elms & Janis, 1965; Janis & Gilmore, 1965; Rosenberg, 1965). The criticisms were useful not only because they brought attention to cognitive dissonance theory, but primarily because they led to numerous studies from a new group of dissonance researchers that ultimately supported many of Festinger's unorthodox predictions. By the end of the 1960's, dissonance was arguably the most prominently researched theory in social psychology.

Dissonance was also propelled forward by a spate of non-obvious predictions that were derived from the theory but that seemed as discordant with everyday observations as Festinger and Carlsmith's study was with learning theory:

- People come to like what they suffer to attain – and the more they suffer, the more they like it (Aronson & Mills, 1959).
- Children devalue a precious toy if they are warned not to play with it. Ironically, the milder the warning, the greater the devaluation (Aronson & Carlsmith, 1962).
- When confronted with a choice between two products, people raise their evaluation of the item they chose and lower their evaluation of the item they rejected, solely by the force of their having made a choice. Ironically, the more reason they had to like the rejected alternative before the choice, the more they devalue it after the choice (Brehm, 1956).
- People so abhor inconsistency that they may prefer to fail rather than succeed at a task if their prior experience led them to have expectations of failure (Aronson & Carlsmith, 1963).

As proponents of the theory continued to gather evidence the far-reaching nature of reduction, it also became clear that there were important theoretical issues that needed to be solved. Not every instance of inconsistent cognitions led to dissonance arousal. Modifying conditions were identified that needed to be accommodated. Moreover, at its core, what evidence was there for the mechanisms that cause people to change?

### **The Drive Properties of Dissonance: Reality or Metaphor?**

Festinger fashioned dissonance to have drive-like properties. While he did not label dissonance as a drive, he designed the concept so that it functioned like one. The three important features of his concept were that (1) it is experienced as discomfort, (2) it propels people to take action and (3) people feel more comfortable after the action has been taken. It is not clear whether he thought research would eventually find evidence for the drive or whether he was content to liken dissonance to a drive and use it as a metaphor to predict intriguing outcomes.

The first studies to examine whether dissonance functioned like a drive borrowed from research in human

learning. A robust finding in the learning literature was that humans and lower organisms who are in a heightened drive state show specific patterns of interference with learning. Whether it is a pigeon in a cage, a rat in a maze, or a human studying for an exam, high drive states interfere with complex learning and facilitate simple learning. Waterman and Katkin (1967) reasoned that if dissonance is truly a drive, then people who have high degrees of dissonance should have difficulty learning complex tasks but should easily learn simple tasks. They aroused dissonance by having students write an attitude-discrepant essay and then asked them to solve simple and complex learning tasks. The results showed facilitation of simple learning but not interference with complex learning. Pallack and Pittman (1972) conducted a conceptually similar experiment and found evidence for the other prediction: Dissonance resulted in interference with complex learning but, contrary to predictions, it did not lead to facilitation of the simple task.

A series of studies that I was involved in with my colleague Mark Zanna took a different approach. We (Zanna & Cooper, 1974) argued that if people changed their attitudes in dissonance experiments because they experienced aversive affect, then we should be able to reduce the attitude change if people attributed their arousal to a different source. We asked participants to ingest a pill as part of what they thought was a completely separate study. We had people engage in a counterattitudinal essay writing task and told half of them that any arousal they might be experiencing was due to the pill. The other half had no external attribution for their arousal. We reasoned that if attitude change is based on the arousal caused by inconsistent cognitions, then those participants who could blame their arousal on the pill would not be motivated to change their attitudes. Only those who thought their arousal was due to the inconsistency between their attitudes and their essay-writing behavior should change their attitudes, for that would be the way to reduce their arousal. And that is what we found.

In subsequent experiments, we increased our confidence that the engine that motivates attitude change following counterattitudinal advocacy is unpleasant arousal. In one experiment, we artificially decreased participants' arousal level by administering a mild sedative. We found that participants showed little attitude change after writing an attitude-discrepant essay because the sedative reduced their arousal levels. We also had some participants ingest a mild stimulant and, as predicted from the drive concept, found that the increased arousal levels led to greater attitude change (Cooper, Zanna & Taves, 1978).

Later, Croyle and Cooper (1983) took a more direct approach to find physiological markers of cognitive dissonance. A ubiquitous finding in the neuroscience literature is that stress and arousal affect a number of physiological markers including altered skin conductance responses. In essence, stress and arousal are accompanied by increasing sweating that can be measured on the skin through devices such as galvanic skin response. We confirmed the presence of changes in skin conductance: the higher the dissonance following a

counterattitudinal essay, the greater the change in skin conductance. Croyle and Cooper did not assess attitude change and skin conductance simultaneously in the same session, but Losch and Cacioppo (1990) did. They replicated Croyle & Cooper's findings, adding yet additional evidence that the arousal needed to be interpreted as negative and aversive in order for it to lead to the reduction of dissonance.

### Why Is There a Dissonance Drive?

Festinger invited us to use what we know about drives to make predictions about dissonance. As we have seen, the properties of drives seem to manifest when people's cognitions are inconsistent. Psychological discomfort is experienced (Elliot & Devine, 1994) and physiological markers of stress are activated (Croyle & Cooper, 1983). In addition, modern neuroscience has identified a number of brain regions that are activated when dissonance is present (Jarcho, Berkman & Lieberman, 2011; Van Veen, Krug, Schooler & Carter, 2009). As exciting as these findings have been, they leave open the question of why humans should have a drive for consistency. Normally, drives serve functions that are adaptive. The experience of hunger motivates eating and leads to survival. What function does dissonance serve that can confer it an adaptive value?

One answer to that question is provided by the Action-Orientation Model (Harmon-Jones, 1999). Harmon-Jones suggests that people's stance toward events in the world is adaptively better without ambivalence and conflict. Inconsistent cognitions interfere with our action tendencies and create a negative emotion, motivating us to rid ourselves of the inconsistency. We are not driven to reduce inconsistency per se, but rather driven to have an unambivalent stance toward the world to prepare us for effective action.

Another possibility, and one that I endorse, is that dissonance is a learned drive. I consider dissonance to be a secondary drive that is learned early in childhood and then becomes generalized to myriad issues that we deal with as we develop. In order to make this case, I present evidence for the revision of dissonance theory that Fazio and I called the New Look Model of Dissonance (Cooper & Fazio, 1984), which I believe more fully incorporates the findings and limitations of dissonance. The New Look model also makes children's learning of dissonance a more plausible aspect of normal development.

### THE 'NEW LOOK' MODEL: A cure for the 'but-onlys'

When Festinger and Carlsmith (1959) revealed counterattitudinal advocacy changed people's attitudes more when it was done in response to a small incentive rather than a large incentive it became immediately controversial. It initiated a flurry of studies by researchers who supported reinforcement incentive theories aimed at showing that the result was a mistake. Rosenberg (1965) asked participants to write essays taking a very unpopular position at The Ohio State University. He found that students who wrote the essays in return for a large incentive changed their attitudes more than those who wrote in return for a small incentive.

Studies that attempt to replicate previous research often do so in a different context, with a different attitude issue, and with wording that is similar, but not identical, to the original work. Linder, Cooper & Jones (1967) suspected that some of the changes made in Rosenberg's replication were not trivial, but vitally important. We tested the idea that participants in Rosenberg's research had not been given a choice in whether to write their attitude-discrepant essay whereas Festinger & Carlsmith's participants had volunteered to make their counterattitudinal statements. We found that decision freedom made an enormous difference in results. In a balanced replication, we showed that decision freedom was a crucial moderator of the dissonance effect. With decision freedom set high, people changed their attitudes as predicted by dissonance theory, but dissonance did not operate when people were forced to behave.

Therefore, dissonance emerged from the argument between incentive theorists and dissonance theorists unscathed, *but only* under conditions of high decision freedom (choice). As research accumulated, dissonance continued to receive support by finding additional moderator variables that allowed dissonance to function. For example, Davis and Jones (1960) found that advocating a counterattitudinal position led to attitude change *but only* if the communicator was publicly committed to her stance but not if she could take it back at a later date. In addition, Cooper & Worchel (1970) replicated Festinger and Carlsmith's original study and found support for the inverse relationship between incentive magnitude and attitude change *but only* if the communicator had actually convinced someone to believe in the counterattitudinal position. Cooper & Worchel's finding meant that the dissonance effect was dependent on having produced something unwanted – in this case, convincing a fellow student that a boring task was actually fun and exciting.

By the early 1980s, an image of dissonance emerged that reinforced the stability of the phenomenon: people change their attitudes in order to reduce inconsistency among their cognitions. However, the breadth of the phenomenon was limited by the spate of 'but onlys'. *If* the moderators were satisfied, then discrepancy led to the experience of dissonance. It could be said that cognitive inconsistency evokes dissonance,

- *But only* under conditions of choice
- *But only* under conditions of high commitment
- *But only* when it leads to an aversive or unwanted consequence
- *But only* when the consequence was foreseeable at the time of the choice.

If dissonance is a ubiquitous drive state that has to be reduced, the number of moderators seemed perplexing. Why doesn't the perception of inconsistency invoke the drive whenever that perception appears? Why does it need to be freely chosen? Why does it need to lead to a foreseeable aversive consequence in order for dissonance to occur?

Fazio and I concluded that dissonance is ubiquitous but its conceptualization is incomplete. In our view, dissonance begins with a behavior – i.e., it begins when people

act. Actions have consequences and it is the perception of those consequences that drives the dissonance process. As cognizant human beings, we assess the results of our actions, including the valence. We typically strive to engage in situations with consequences that are desirable and acceptable. Most of the time we are successful at this and thus most of the time we are not in a dissonant state. However, sometimes we notice that the consequences of our behavior are unwanted or negative. This happens in the real world and, with proper stagecraft, can be made to happen in the research laboratory. When we realize that we have brought about negative events, we are traveling on the road toward dissonance.

### On The Dissonance Roadway

In the New Look view, the road to dissonance begins with the perception that we have brought about a consequence that is aversive. By aversive, Fazio and I meant that a consequence of our behavior is unwanted. People can differ about what is unwanted. In the well-known report of a doomsday cult that was arguably the first published report of cognitive dissonance (Festinger, Riecken & Schachter, 1956), a group of California citizens known as the "Seekers" gave up their homes, jobs and possessions in order to prepare for the cataclysm that would put an end to the Earth. When the cataclysm did not occur, we can imagine that the Seekers realized that having lost so many relationships and possessions were unwanted consequences of their errant prophecy. We can also imagine that in classic laboratory experiments in cognitive dissonance, students must have found it aversive to have duped a fellow student to believe that a research experience was going to be exciting when it was actually boring or to convince someone to adopt an unwanted political position. In general, if our behavior leads to a consequence that we would rather not have brought about, it is considered aversive and leads to the possibility of dissonance arousal.

The next step in the dissonance process is a crucial one. When our actions result in unwanted consequences, we naturally ask ourselves who is to blame for having brought about the aversive events. Who is responsible? If I am responsible, then I experience dissonance. That is why choice or decision freedom is so important in producing dissonance. If we are forced to behave in a particular manner, then we can and do absolve ourselves of responsibility. If a person with legitimate authority tells me to advocate in favor of a position with which I disagree, I will conclude that it is not my fault that I did it. It is the authority's responsibility.

The motivating factor of responsibility is necessary for dissonance to occur. When we first realized how important free choice was to the dissonance process, we viewed it as a moderating variable that permitted inconsistent cognitions to result in dissonance. In the New Look model, Fazio and I saw personal responsibility as part of the very fabric of dissonance. Being responsible for an aversive consequence does not merely facilitate dissonance, it *is* dissonance.

Two corollaries to the New Look view can be derived. Because experiencing dissonance is unpleasant, we are motivated to avoid it. If we must accept responsibility for having brought about an aversive consequence, we

experience dissonance and then engage in any of the now-familiar strategies to reduce it. But if we can avoid it, we will do so. The first corollary, then, is that if responsibility is ambiguous, we are motivated to perceive our actions as being the responsibility of others. Gosling, Denizeau & Oberlé (2006) asked students at the University of Paris to write attitude-inconsistent essays about the university's admission policy. The degree of responsibility was made intentionally ambiguous. One group of students was given an opportunity to absolve themselves of responsibility by filling out a rating scale on the degree of responsibility they felt to write the essay. These participants seized the opportunity. They used the rating scale to convince themselves that they were not responsible. Gosling et al. (2006) found that the students who had not been asked about their responsibility changed their attitudes toward the admission policy. Those who completed the responsibility scale used the scale to avoid taking responsibility and did not change their attitudes.

The second corollary is that people will avoid responsibility for a consequence if they can convince themselves that it was unforeseeable at the time of their decision to act. For example, someone who agrees to write an essay favoring a position with which they privately disagree will not experience dissonance if they thought no one would read it. In the absence of a consequence, there is no dissonance. However, if the same person found that, contrary to what she was told, her attitude discrepant essay would indeed be read by a policy-making committee, she still will avoid dissonance because that consequence was not foreseeable at the time she made her decision (Cooper & Goethals, 1974; Goethals, Cooper & Naficy, 1979).

### Why Ride the Dissonance Roadway?

What is the purpose of venturing down the metaphorical dissonance roadway? What do people accomplish by changing their attitudes? For Festinger, it was the reduction of inconsistency. In the New Look perspective, the arousal state is not caused by inconsistency, but rather by the perception of having been responsible for bringing about an aversive event (Scher & Cooper, 1989). Cognitive inconsistency is relevant because having inconsistent representations often produces unwanted consequences – but not always. Scher & Cooper (1989) compared the role of consistency between cognitions with the role of consequences. We found that dissonance was aroused whenever a course of action produced unwanted consequences, regardless of whether behavior was consistent or inconsistent with attitudes.

This provides us with a new perspective on why people change their attitudes following attitude-inconsistent behavior. *The motivation for change is to render the consequences of a person's behavior non-aversive.* In Festinger & Carlsmith's (1959) foundational study, if a participant convinced a fellow student to believe that they are about to participate in an exciting experiment, that would create an unwanted consequence – unless the participant comes to believe that the experiment really was fun and exciting. In that case, the consequence of convincing the fellow student is no longer aversive. If a student writes an essay that might convince a fellow student or a Dean to raise

tuition rates, that consequence would no longer be aversive if the student comes to believe that a tuition increase would be a good idea. In summary, the motivational state of cognitive dissonance leads to cognitive changes, such as attitude change, that are specifically designed to render the consequence of a freely chosen behavior wanted and desirable rather than unwanted and aversive.

### **The Ontogeny of Dissonance: Further Thoughts**

I raised the rhetorical question of why we have a drive to reduce dissonance. One answer to that question was provided by Harmon-Jones (1999) in his action orientation model, described earlier. In that view, people need to take an unconflicted stance toward action, which is made difficult by indecision and ambivalence. As elegant as this view is, it has difficulty handling some of the caveats in the dissonance literature. People who are forced into inconsistency do not seem to feel a need to become consistent. People who choose to behave inconsistently do not feel a need to become consistent in the absence of aversive consequences, or if aversive consequences are unforeseeable.

I think it is likely that, at an early age, children learn to avoid dissonance (Cooper, 1998). If we think about dissonance as the avoidance of responsibility for bringing about negative consequences, the learning framework makes sense. In any household, children are taught to avoid bringing about negative events. This is not a statement about morality, although moral behaviors may be relevant. This is an assertion about not doing things that socializing agents such as parents, teachers and caregivers find unwanted. Did a child spill milk, knock over a lamp, hurt his sibling or act rudely? Did a child say a bad word, fail to put his belongings away or lie to his parents? By impulse or design, parents react to these transgressions with aversive responses including anxiety, punishment or withdrawal of positive regard, all with the aim of avoiding such actions in the future. Although each behavior is met with a specific aversive reaction, it may be that the general lesson for a child is that he or she must not act in a way that brings about an unwanted event. It becomes associated with negative parental reactions and, as would be predicted from models of classical conditioning, becomes a learned drive. Although the notion of dissonance as a learned drive is admittedly speculative, it does provide a partial answer to the question of why we adults experience the aversive arousal state of cognitive dissonance.

### **Vicarious Dissonance and the Social Group: Dissonance Moves Into the 21<sup>st</sup> Century**

As an outgrowth of an accidental meeting between a psychologist who studied cognitive dissonance and one who studied social identity theory, Cooper and Hogg (2007; see also Norton, Monin, Cooper & Hogg, 2003; Monin, Norton, Cooper & Hogg, 2004) outlined the way people can experience dissonance on behalf of members of their social group. Consider the following hypothetical event: You are attending a political meeting in a western democratic country and you, a conservative in this scenario, watch as a member of the conservative party rises to speak. The question being debated is whether the government should increase or decrease its subsidies to uni-

versities in the upcoming budget. The conservative party has long campaigned on reducing subsidies, thus putting pressure on universities to raise tuition rates or cut back on expenses. You support this position, the conservative party endorses this position and you are fairly certain that the member rising to speak endorses this position. As he begins to speak, you realize that he is advocating the opposite position. He is advocating higher subsidies and lower rates of tuition. You are sure that this is not your representative's position, your group's position or your position. Nonetheless, he seems to have voluntarily spoken on the more socialist side of the issue. How does that make you feel?

Hogg and I thought this would make you very uncomfortable based substantially on the vicarious arousal of cognitive dissonance. All that we know about cognitive dissonance suggests that our conservative politician would experience dissonance. His behavior has initiated a dissonance process: He voluntarily gave a speech that might convince people to support a policy with which he privately disagrees. But how would *you* feel? Would you feel annoyed by the politician's behavior, perhaps change your attitude to become more conservative as a counterbalance to what the politician just said? We thought there would be a different reaction; that people would come to feel the uncomfortable arousal state of cognitive dissonance. Precisely because you share common group membership with the politician, his behavior has an effect on you. Because of your shared group membership, we thought that you would experience an emotion similar to the politician's – i.e., you would experience dissonance. From what we know about the effects of cognitive dissonance on the person making the attitude discrepant statement, we can predict he will change his attitude in the direction of supporting greater government aid for education. Because of your shared group membership with the politician, so will you. You will experience dissonance vicariously, and need to resolve it as though you had been the person whose action was discrepant from your attitude.

The prediction that people can experience dissonance vicariously is based on a combination of dissonance theory with social identity theory (McKimmie, 2015; Tajfel, 1970; Tajfel & Turner, 1986; Hogg, 2001). The social group takes paramount importance in social identity theory because it is one of the major roots of people's self-worth. They form common bonds with fellow group members, taking satisfaction in the success of their group and the successes of the individuals who comprise the group. They also share the negative emotions (Mackie & Smith 1998), which we predicted would include cognitive dissonance.

As an illustration of vicarious dissonance, Norton, Monin, Cooper & Hogg (2003) asked Australian students at the University of Queensland to observe a fellow student who was asked to make a strong statement taking the position that university fees should be increased. The fellow student indicated that he was against a fee increase but nonetheless accepted the invitation to write it. Choosing to write a counterattitudinal statement knowing that it might be used to increase fees at the university should cause the speech writer to experience dissonance and change his attitude toward the fees. Our interest was not the writer (who was actually a confederate of the

experimenter) but rather the observer. The observer was a member of the same social group as the writer and we predicted that the observer would experience cognitive dissonance. We predicted the observer would become more favorable to increased fees.

The results showed that the observer changed his attitude in the direction of the writer's behavior. This occurred under the same conditions that we know are crucial for dissonance arousal:

- The writer had a free choice to write or decline to write his essay,
- There was the likelihood of an aversive event (convincing university officials) occurring from the behavior.
- Consistent with the melding of social identity theory and dissonance theory, attitude change occurred as a function of participants' attraction to their group. The more positively people felt about their group, the greater the attitude change.

We also found that vicarious dissonance was mediated by vicarious arousal. We asked participants how uncomfortable they thought they would have felt if they were in their fellow group member's shoes. The greater the discomfort they thought they would have felt in their partner's shoes, the greater the attitude change.

### **Hypocrisy: Experiencing dissonance by saying what you believe**

Elliot Aronson was one of the founders of cognitive dissonance theory. As a graduate student working with Festinger, Aronson was involved in many of the ingenious paradigms that produced the non-obvious findings of dissonance theory. Aronson and Festinger always disagreed on one major point: Aronson never believed that dissonance was caused by a discrepancy between any pair of cognitions, but rather that one of those cognitions had to be about the self (Aronson, 1968, 1999). Good people, he reasoned, do not do bad things. If I have a good sense of self-worth and feel positively about myself, then I would not dupe a fellow student to believe something that is not true nor would I suffer to attain a mediocre goal, and I certainly would not make a bad decision among choice alternatives. Dissonance, he believed, was a discrepancy between action and self-esteem.

Aronson also disagreed with the New Look version of dissonance. Thibodeau & Aronson (1992) argued that aversive consequences are not necessary for dissonance to be aroused. In support of their position, Aronson, Fried & Stone (1991) created a procedure to study dissonance that has become known as the hypocrisy paradigm. In two studies on AIDS prevention, Aronson et al (1991; Stone, Aronson, Crain, Winslow & Fried, 1992) had participants write speeches in favor of using condoms during every sexual encounter in order to reduce the risk of AIDS. Ostensibly, the reason for making the speeches was to convince younger adolescents to use condoms. The feeling of hypocrisy was created by asking participants to recall any instances in their own recent pasts that they had failed to use condoms. In Thibodeau & Aronson's (1992)

view, this procedure established dissonance by having participants focus on the discrepancy between their advocacy and their past behavior. They suggest that there were no aversive consequences, yet dissonance was aroused. Participants whose dissonance was created by hypocrisy increased their intention to use condoms.

In a subsequent analysis, Stone & Cooper (2001) challenged Thibodeau & Aronson's analysis of hypocrisy. We argued that hypocrisy creates dissonance because people's recall and awareness of their past behavior is, by definition, the recollection of a potential aversive consequence. Recalling the decision not to use condoms is, in itself, remembering when you freely behaved in a way that could have caused AIDS or unwanted pregnancy. In our view, speaking in favor of what you believed aroused dissonance because it brought to awareness your prior decision to act in a way that could have had gravely aversive foreseeable consequences.

The theoretical controversy notwithstanding, the hypocrisy paradigm propelled dissonance research into a new era. By invoking memories of the past as the source of potential aversive consequences, cognitive dissonance theory can become the theoretical basis for efforts to change behaviors in a way that is supportive of greater physical and mental health.

### **THE PRESENT AND FUTURE OF COGNITIVE DISSONANCE: From theory to application and back**

The field of social psychology has always had equal interest in theoretical advancement and practical applications of its theories. A premature application of theory into practice, however, can be risky for both uses, as such an application can lead to incorrect application of the theory because the theory was not sufficiently researched before it is applied. On the other hand, exclusive interest in theory building risks an indulgence on nuance while missing the opportunity to demonstrate the usefulness of our theoretical understanding.

The time is right for dissonance to show its mettle as a principle for real world change. This is not to say that dissonance has remained a laboratory science without practical application. To the contrary, *When Prophecy Fails* (Festinger et al., 1956) was an analysis and prediction of what would happen to real people in the real world who had committed themselves to a prediction that would be contradicted by reality. Cooper, Darley and Henderson (1974) studied the impact of dissonance on political election campaigns. Staw (1974) used dissonance theory to understand the reactions of Americans to the lottery that determined whether they would be drafted for the Vietnam War. However, research in the 21<sup>st</sup> century shows an accelerating trend for dissonance to be translated to real world problems from the business world, to health, politics and more. I believe that social scientists have learned so much about the dissonance concept as a force that drives our thoughts and behaviors, that we are in an excellent position to apply it confidently to improve aspects of people's lives.

Let us consider dissonance applied to mental health. Many decades ago, I argued that cognitive dissonance might be the underlying mechanism behind successful

psychotherapy, regardless of the type of therapy being offered (Cooper, 1980). From psychoanalytic approaches to cognitive and behavioral interventions, clients find themselves in a situation much like participants in Aronson & Mills' (1959) classic effort justification experiment. Aronson & Mills' participants came to like a goal they were trying to achieve as a function of the amount of effort they expended to achieve the goal. The greater the effort, the greater the liking for the goal. In psychotherapy, clients are asked to engage in difficult and unpleasant activities such as talking about their anxieties, resurrecting painful memories, interpreting some of their embarrassing behaviors and all the while paying for all of it with their time and their money. These freely chosen effortful behaviors lead to dissonance and, following Aronson & Mills' (1959), can lead to increased value of the goal that the clients are trying to achieve.

In order to test this proposition, I asked volunteers who had a self-diagnosed phobia about snakes to volunteer for a study designed to help them reduce their fear (Cooper, 1980). When participants arrived at the laboratory, they were introduced to Oz, our 6-foot boa constrictor, that was innocently curled up in a glass tank. An experimenter asked the participant to move as close to Oz as he possibly could. That distance was surreptitiously measured with marks that had been placed on the floor. The experimenter then asked half of the participants if they were willing to undergo our therapy, forewarning them that it might be difficult or embarrassing. The other half were not given any choice about engaging in the difficult, embarrassing therapy. The therapy itself was indeed effortful, but not in a way that participants may have anticipated. It was a purely physical effort therapy, involving lifting weights and doing gymnastic exercises. At the conclusion of several minutes of the effortful therapy, participants returned to the room in which Oz was lying and were asked to approach the snake a second time. The difference in how close they came to Oz served as our measure of success of the therapy. The results showed that the effects of effort were quite successful. As predicted by dissonance, participants in the high choice condition came more than 10 feet closer to the snake after the therapy, but in the low choice and test-retest control conditions, there was no improvement.

Several other studies supported the prediction that dissonance might be an active factor in producing positive changes in people's mental health. Using an effort justification approach, Axsom (1989) demonstrated that being personally responsible for engaging in an effortful therapy could help students alleviate speech anxiety. Similarly, effort justification was also found to be useful to alleviate clients' fear of assertiveness (Cooper, 1980). In the realm of physical health, Axsom & Cooper (1985) showed that dissonance could be used to help clinically obese people lose a significant amount of weight, and that the dissonance-produced weight loss lasted for at least six months following the procedure. Using a different dissonance-inducing paradigm, Mendonca & Brehm (1983) showed that giving obese children the perception that they chose which of two therapies to engage in produced greater weight loss than assigning children to a therapy.

In my view, these studies are interesting because they provided a link between theoretical issues that we have studied in the laboratory and real-world practices that can improve lives. However, many researchers stop short of the goal of turning the research into bona fide practices. My suggestion is for dissonance theorists to become more engaged in people's lives by providing treatments that are available for people to use. Axsom & Cooper (1985) used laboratory procedures to demonstrate that people can lose weight if they are motivated by dissonance, but no such treatment ever became available for people to use. Most of us remained wedded to our laboratories while practitioners were either unaware of the studies or unconvinced of their usefulness.

Times are beginning to change and dissonance theorists have been part of that change. 21<sup>st</sup> century literature shows an accelerating number of practical procedures that are being used and assessed, particularly in the health improvement field. Based on cognitive dissonance theory, the *Body Project* was developed as an intervention to help people with faulty body images and eating disorders (Stice, Rohde & Shaw, 2013). Evaluation studies have shown this approach to have significant impact on eating disorders among women in a United States sample (Green et al., 2018) and body image satisfaction among men in the United Kingdom (Jankowski et al, 2017). Dissonance theory has spawned other therapeutic procedures including therapies to help with smoking cessation (Simmons, Heckman, Fink, Small & Brandon, 2013), exercise (Azdia, Girandella & Andraud, 2002), substance abuse (Steiker, Powell, Goldbach & Hopson, 2011) and depression (Tryon & Misurell, 2008). This is as it should be, as arguably no theory has been more frequently studied, criticized, supported and modified than cognitive dissonance. In the laboratory and in the field, we have studied the subtleties and nuances of the dissonance process. It is appropriate that we accelerate the application of dissonance to processes and institutions that can provide real help to people.

### Back to the Lab

The call to place more emphasis on putting dissonance research into practice is simultaneously a call to continue studying dissonance in the laboratory. New perspectives on dissonance and new combinations of dissonance with other processes remain to be discovered. Any number of them may lead to new and valuable approaches that help people in their daily lives. One example of our own current research is the study of vicarious hypocrisy. As we noted earlier, the idea that dissonance can be experienced by one group member because of counterattitudinal behavior on the part of another group member arose from a union of dissonance theory with social identity theory. In social groups, members experience an intersubjectivity with other members of their group and feel as one with those members. We found (Norton et al, 2003) that group members experienced dissonance when their fellow group members chose to make statements that were contrary to their attitudes.

Recently, we suggested that a combination of personal hypocrisy with social identity can create vicarious

hypocrisy (Focella, Stone, Fernandez, Cooper & Hogg, 2016), much as common in-group membership caused vicarious dissonance in previous research. As an illustration, Focella et al. (2016) established vicarious hypocrisy by having participants witness a fellow student make a public pro-attitudinal statement about using sunscreen whenever one goes outdoors. The participants also witnessed the speaker admit that there had been occasions when she failed to follow her own advice – that is, she had forgotten or neglected to use sunscreen in the past. In a series of studies, we found that witnesses bolstered their own attitudes and intentions to use sunscreen, and also purchased more sunscreen, after observing the admission of hypocrisy by the fellow student. As predicted by vicarious hypocrisy theory, this occurred when the hypocritical student was in the same group as the participant and when the participant strongly identified with her group.

Vicarious hypocrisy raises an exciting new possibility for translating dissonance theory from experimental research to real-life application that would help people work to improve their health. The irony is that people generally agree with pro-health behaviors, but fail to have sufficient motivation to do them. The smoker wants to quit, the obese person wants to exercise and diet, the sunbather wants to be protected from skin cancer. Because these behaviors are pro-attitudinal rather than counterattitudinal, the best way for achieving change is to arouse the dissonance-based motivational drive of hypocrisy. As we have seen in laboratory research, arousing dissonance via hypocrisy has led to increase condom intentions to protect against HIV/AIDS, greater use of sunscreen to protect against cancer and other prosocial behaviors including water conservation.

Vicarious hypocrisy has the potential to be a magnifier; to spread the motivation efficiently to an entire group of people simultaneously. To this point, we have studied vicarious hypocrisy within contexts in which a single individual has observed another group member make a strong pro-attitudinal statement on an important health behavior such as using sunscreen, and also observed the individual admit to times that she or he has acted hypocritically. In principle, the vicarious hypocrisy procedure can be adapted for an entire social group. All of the members of a group can witness one of its members admit to hypocrisy. Vicarious dissonance predicts that all of the group members would experience hypocrisy and the entire group would be motivated to adopt the healthy behavior that is the focus of the intervention.

Future researchers should adopt a two-pronged approach to dissonance. While we continue to look for nuance and novelty in the laboratory, we need to accelerate the translation of dissonance from a well-respected laboratory tradition into principles that are important in people's lives. This may be accomplished most readily in the area of health, but can also affect the political and economic realms as well. How do we understand irrational behavior in the financial markets? How do we understand some of the unusual political attitudes of modern democracies that fawn over leaders who seem prepared to compromise those democracies? More than six decades

of research in cognitive dissonance should make us confident that we can effect these translations productively.

### Acknowledgements

I would like to acknowledge Lauren A. Feldman and Joseph J. Avery for their help on prior drafts of this manuscript.

### Competing Interests

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

### References

- Aronson, E.** (1968). Dissonance theory: Progress and problems. In R. P. Abelson, E. Aronson, W. J. McGuire, T. M. Newcomb, M. J. Rosenberg, & P. H. Tannenbaum (Eds.), *Theories of Cognitive Consistency: A Sourcebook* (pp. 5–27). Chicago, IL: Rand McNally.
- Aronson, E.** (1999). Dissonance, hypocrisy, and the self-concept. In E. Harmon-Jones, & J. Mills (Eds.), *Cognitive Dissonance: Progress on a Pivotal Theory in Social Psychology* (pp. 103–126). Washington, DC: American Psychological Association. DOI: <https://doi.org/10.1037/10318-005>
- Aronson, E., & Carlsmith, J. M.** (1962). Performance expectancy as a determinant of actual performance. *Journal of Abnormal and Social Psychology*, *65*(3), 178–182. DOI: <https://doi.org/10.1037/h0042291>
- Aronson, E., & Carlsmith, J. M.** (1963). The effect of the severity of threat on the devaluation of forbidden behavior. *Journal of Abnormal and Social Psychology*, *66*, 584–588. DOI: <https://doi.org/10.1037/h0039901>
- Aronson, E., Fried, C., & Stone, J.** (1991). Overcoming denial and increasing the intention to use condoms through the induction of hypocrisy. *American Journal of Public Health*, *81*(12), 1636–1638. DOI: <https://doi.org/10.2105/AJPH.81.12.1636>
- Axson, D., & Cooper, J.** (1985). Cognitive dissonance and psychotherapy: the role of effort justification in inducing weight loss. *Journal of Experimental Social Psychology*, *21*(2), 149–160. DOI: [https://doi.org/10.1016/0022-1031\(85\)90012-5](https://doi.org/10.1016/0022-1031(85)90012-5)
- Azdia, T., Girandola, F., & Androud, O.** (2002). Engagement, dissonance cognitive et identification de l'action: Le cas de l'escalade sportive. [Engagement, cognitive dissonance, and action identification: The case of sportive climbing]. *European Review of Applied Psychology*, *52*(2), 81–90.
- Brehm, J. W.** (1956). Postdecision changes in the desirability of alternatives. *Journal of Abnormal and Social Psychology*, *52*(3), 384–389. DOI: <https://doi.org/10.1037/h0041006>
- Chapanis, N. P., & Chapanis, A.** (1964). Cognitive dissonance. *Psychological Bulletin*, *61*(1), 1–22. DOI: <https://doi.org/10.1037/h0043457>
- Cooper, J.** (1980). Reducing fears and increasing assertiveness: the role of dissonance reduction. *Journal of Experimental Social Psychology*, *16*, 1–12. DOI: [https://doi.org/10.1016/0022-3514\(80\)90012-5](https://doi.org/10.1016/0022-3514(80)90012-5)

- Psychology*, 16, 199–213. DOI: [https://doi.org/10.1016/0022-1031\(80\)90064-5](https://doi.org/10.1016/0022-1031(80)90064-5)
- Cooper, J.** (1998). Unlearning cognitive dissonance: toward an understanding of the development of cognitive dissonance. *Journal of Experimental Social Psychology*, 34, 562–575. DOI: <https://doi.org/10.1006/jesp.1998.1365>
- Cooper, J., & Fazio, R. H.** (1984). A new look at dissonance theory. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology: Vol. 17* (pp. 229–264). Orlando, FL: Academic Press. DOI: [https://doi.org/10.1016/S0065-2601\(08\)60121-5](https://doi.org/10.1016/S0065-2601(08)60121-5)
- Cooper, J., & Goethals, G. R.** (1974). Unforeseen events and the elimination of cognitive dissonance. *Journal of Personality and Social Psychology*, 29(4), 441–445. DOI: <https://doi.org/10.1037/h0036199>
- Cooper, J., & Hogg, M. A.** (2007). Feeling the anguish of others: A theory of vicarious dissonance. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology: Vol. 39* (pp. 359–403). San Diego, CA: Academic Press. DOI: [https://doi.org/10.1016/S0065-2601\(06\)39007-7](https://doi.org/10.1016/S0065-2601(06)39007-7)
- Cooper, J., & Worchel, S.** (1970). The role of undesired consequences in the arousal and cognitive dissonance. *Journal of Personality and Social Psychology*, 16, 312–320. DOI: <https://doi.org/10.1037/h0029830>
- Cooper, J., Zanna, M. P., & Taves, P. A.** (1978). Arousal as a necessary condition for attitude change following induced compliance. *Journal of Personality and Social Psychology*, 36, 1101–1106. DOI: <https://doi.org/10.1037/0022-3514.36.10.1101>
- Croyle, R., & Cooper, J.** (1983). Dissonance arousal: physiological evidence. *Journal of Personality and Social Psychology*, 45, 782–791. DOI: <https://doi.org/10.1037/0022-3514.45.4.782>
- Davis, K. E., & Jones, E. E.** (1960). Change in interpersonal perception as a means of reducing cognitive dissonance. *Journal of Abnormal and Social Psychology*, 61(3), 402–410. DOI: <https://doi.org/10.1037/h0044214>
- Elliot, A. J., & Devine, P. G.** (1994). On the motivational nature of cognitive dissonance: dissonance as psychological discomfort. *Journal of Personality and Social Psychology*, 67, 382–394. DOI: <https://doi.org/10.1037/0022-3514.67.3.382>
- Elms, A. C., & Janis, I. L.** (1965). Counter-norm attitudes induced by consonant vs. dissonant conditions of role-playing. *Journal of Experimental Research in Personality*, 1(1), 50–60.
- Festinger, L.** (1954). A theory of social comparison processes. *Human Relations*, 7, 117–140. DOI: <https://doi.org/10.1177/001872675400700202>
- Festinger, L.** (1957). *A theory of cognitive dissonance*. Evanston, IL: Row-Peterson.
- Festinger, L., & Carlsmith, J. M.** (1959). Cognitive consequences of forced compliance. *Journal of Abnormal and Social Psychology*, 58, 203–210. DOI: <https://doi.org/10.1037/h0041593>
- Festinger, L., Riecken, H. W., & Schachter, S.** (1956). *When Prophecy Fails*. Minneapolis: University of Minnesota Press. DOI: <https://doi.org/10.1037/10030-000>
- Focella, E. S., Stone, J. A., Fernandez, N. C., Cooper, J., & Hogg, M. A.** (2016). Vicarious hypocrisy: Bolstering attitudes and taking action after exposure to a hypocritical in-group member. *Journal of Experimental Social Psychology*, 62, 89–102. DOI: <https://doi.org/10.1016/j.jesp.2015.09.014>
- Goethals, G. R., Cooper, J., & Naficy, A.** (1979). Role of foreseen, foreseeable, and unforeseeable behavioral consequences in the arousal of cognitive dissonance. *Journal of Personality and Social Psychology*, 37, 1179–1185. DOI: <https://doi.org/10.1037/0022-3514.37.7.1179>
- Gosling, P., Denizeau, M., & Oberle, D.** (2006). Denial of responsibility: A new mode of dissonance reduction. *Journal of Personality and Social Psychology*, 90, 722–733. DOI: <https://doi.org/10.1037/0022-3514.90.5.722>
- Green, M. A., Kroska, A., Herrick, A., Bryant, B., Sage, E., Miles, L., Ravet, M., Whitegoat, W., Linkhart, R., & King, B.** (2018). A preliminary trial of an online dissonance-based eating disorder intervention. *Eating Behaviors*, 31, 88–98. DOI: <https://doi.org/10.1016/j.eatbeh.2018.08.007>
- Harmon-Jones, E.** (1999). Toward an understanding of the motivation underlying dissonance effects: Is the production of aversive consequences necessary? In E. Harmon-Jones and J. Mills (Eds.), *Cognitive dissonance: Progress on a pivotal theory in social psychology* (pp. 71–103). Washington, DC: APA. DOI: <https://doi.org/10.1037/10318-004>
- Hogg, M. A.** (2001). Social categorization, depersonalization and group behavior. In M. A. Hogg, & R. S. Tindale (Eds.), *Blackwell Handbook of Social Psychology: Group Processes* (pp. 56–85). Oxford: Blackwell.
- Janis, I. L., & Gilmore, J. B.** (1965). The influence of incentive conditions on the success of role playing in modifying attitudes. *Journal of Personality and Social Psychology*, 1(1), 17–27. DOI: <https://doi.org/10.1037/h0021643>
- Jankowski, G. S., Diedrichs, P. C., Atkinson, M. J., Fawcner, H., Gough, B., & Halliwell, E.** (2017). A pilot controlled trial of a cognitive dissonance-based body dissatisfaction intervention with young British men. *Body Image*, 23, 93–102. DOI: <https://doi.org/10.1016/j.bodyim.2017.08.006>
- Jarcho, J. M., Berkman, E. T., & Lieberman, M. D.** (2011). The neural basis of rationalization: cognitive dissonance reduction during decision-making. *Social Cognitive and Affective Neuroscience*, 6(4), 460–467. DOI: <https://doi.org/10.1093/scan/nsq054>
- Lewin, K.** (1951). *Field theory in social science: Selected theoretical papers*. NY: Harper & Row.
- Linder, D. E., Cooper, J., & Jones, E. E.** (1967). Decision freedom as a determinant of the role of incentive magnitude in attitude change. *Journal of Personality and Social Psychology*, 6, 245–254. DOI: <https://doi.org/10.1037/h0021220>
- Losch, M. E., & Cacioppo, J. T.** (1990). Cognitive dissonance may enhance sympathetic tonus, but

- attitudes are changed to reduce negative affect rather than arousal. *Journal of Experimental Social Psychology*, 26, 289–304. DOI: [https://doi.org/10.1016/0022-1031\(90\)90040-S](https://doi.org/10.1016/0022-1031(90)90040-S)
- McKimmie, B. M.** (2015). Cognitive dissonance in groups. *Social and Personality Psychology Compass*, 9(4), 202–212. DOI: <https://doi.org/10.1111/spc3.12167>
- Mendonca, P. J., & Brehm, S. S.** (1983). Effects of choice on behavioral treatment of overweight children. *Journal of Social and Clinical Psychology*, 1, 343–358. DOI: <https://doi.org/10.1521/jscp.1983.1.4.343>
- Monin, B., Norton, M. I., Cooper, J., & Hogg, M. A.** (2004). Reacting to an assumed reaction: The role of perceived speaker attitude in vicarious dissonance. *Group Processes and Interpersonal Relations*, 7(3), 207–220. DOI: <https://doi.org/10.1177/1368430204046108>
- Norton, M. I., Monin, B., Cooper, J., & Hogg, M. A.** (2003). Vicarious dissonance: attitude change from the inconsistency of others. *Journal of Personality and Social Psychology*, 85, 47–62. DOI: <https://doi.org/10.1037/0022-3514.85.1.47>
- Scher, S. J., & Cooper, J.** (1989). Motivational basis of dissonance: the singular role of behavioral consequences. *Journal of Personality and Social Psychology*, 56, 899–906. DOI: <https://doi.org/10.1037/0022-3514.56.6.899>
- Simmons, V. N., Heckman, B. W., Fink, A. C., Small, B. J., & Brandon, T. H.** (2013). Efficacy of an experiential, dissonance-based smoking intervention for college students delivered via the Internet. *Journal of Consulting and Clinical Psychology*, 81, 810–820. DOI: <https://doi.org/10.1037/a0032952>
- Staw, B.** (1974). Attitudinal and behavioral consequences of changing a major organizational reward. *Journal of Personality & Social Psychology*, 29, 742–751. DOI: <https://doi.org/10.1037/h0036292>
- Steiker, L. H., Powell, T., Goldbach, J. T., & Hopson, L. M.** (2011). Dissonance-based interventions for substance using alternative high school youth. *Practice: Social Work in Action*, 23, 235–252. DOI: <https://doi.org/10.1080/09503153.2011.597209>
- Stice, E., Rhode, P., & Shaw, H.** (2013). *The body project: A dissonance-based eating disorder prevention intervention, updated edition*. New York: Oxford University Press.
- Stone, J., & Cooper, J.** (2001). A self-standards model of cognitive dissonance. *Journal of Experimental Social Psychology*, 37, 228–243. DOI: <https://doi.org/10.1006/jesp.2000.1446>
- Tajfel, H.** (1970). Experiments in intergroup discrimination. *Scientific American*, 223(5), 96–103. Retrieved from: <http://www.jstor.org/stable/24927662>. DOI: <https://doi.org/10.1038/scientificamerican1170-96>
- Tajfel, H., & Turner, J. C.** (1986). The social identity theory of intergroup behavior. In S. Worchel, & W. G. Austin (Eds.), *Psychology of Intergroup Relations*, Chicago: Nelson-Hall.
- Thibodeau, R., & Aronson, E.** (1992). Taking a closer look: reasserting the role of the self-concept in dissonance theory. *Personality and Social Psychology Bulletin*, 18, 591–602. DOI: <https://doi.org/10.1177/0146167292185010>
- Tryon, W. W., & Misurell, J. R.** (2008). Dissonance induction and reduction: A possible principle and connectionist mechanism for why therapies are effective. *Clinical Psychology Review*, 28, 1297–1309. DOI: <https://doi.org/10.1016/j.cpr.2008.06.003>
- Van Veen, V., Krug, M. K., Schooler, J. W., & Carter, C. S.** (2009). Neural activity predicts attitude change in neural activity. *Nature Neuroscience*, 12, 1469–1474. DOI: <https://doi.org/10.1038/nn.2413>
- Waterman, C. K., & Katkin, E. S.** (1967). Energizing (dynamogenic) effect of cognitive dissonance on task performance. *Journal of Personality and Social Psychology*, 6, 126–131. DOI: <https://doi.org/10.1037/h0024573>
- Zanna, M. P., & Cooper, J.** (1974). Dissonance and the pill: an attribution approach to studying the arousal properties of dissonance. *Journal of Personality and Social Psychology*, 29, 703–709. DOI: <https://doi.org/10.1037/h0036651>

**How to cite this article:** Cooper, J. (2019). Cognitive Dissonance: Where We've Been and Where We're Going. *International Review of Social Psychology*, 32(1): 7, 1–11. DOI: <https://doi.org/10.5334/irsp.277>

**Submitted:** 25 March 2019    **Accepted:** 25 March 2019    **Published:** 03 May 2019

**Copyright:** © 2019 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC-BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See <http://creativecommons.org/licenses/by/4.0/>.