



# **Cognitive Dissonance: Fifty Years of a Classic Theory**

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## Cognitive Dissonance: In the Beginning

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There are times in modern history that are relatively peaceful and quiescent, a taking stock of where we are and where we've been. The middle of the 1950s was such a period. The United Nations police action known as the Korean War had ended and Nikita Khrushchev, the Premier of the USSR had not yet threatened the Western hemisphere with nuclear missiles. It was a time for *I Love Lucy* and *Milton Berle* on the relatively new electronic gadget called television, Fred Astaire and Ginger Rodgers at the cinema, and the love affair with the Brooklyn Dodgers in baseball.

In the academic arena of psychology, the discipline of social psychology was blossoming. The geographic locus of theory and research was the United States, with much of the energy and enthusiasm coming from scholars who had emigrated from Europe during the build-up to Nazism, fascism, and the Second World War. During the war, much of the effort of psychologists was directed at issues that were important to the war effort. For example, in Kurt Lewin's laboratory at MIT, central questions involving the efficacy of democracy vs. autocracy were examined, as were more practical issues such as persuasion techniques that could encourage American families to eat formerly shunned cuts of meat – an important issue for a country trying to feed itself in times of war. Similarly, at Yale University under the guidance of Carl Hovland, a stellar team of psychologists had been examining techniques of persuasion that could convince American citizens to make the sacrifices necessary to allow the US and its allies to pursue the Second World War to its conclusion in Japan after the surrender of the Axis powers in Europe.

During the quiescent 1950s, the emphasis of social psychology was examining the way people functioned in groups and the influence that groups – or simply other individuals – had on an individual citizen. Only a few general theories had captured the imagination of social psychologists. Harold Kelley and John Thibaut created a framework for understanding social interaction (Thibaut and Kelley, 1959), Leon Festinger created social comparison theory to understand group influence on the individual (Festinger, 1954) and Hovland and his colleagues produced volumes applying a learning theory perspective to the analysis of persuasion (e.g., Hovland, Janis, and Kelley, 1953).

And then came cognitive dissonance.

### Getting Started with Dissonance

Leon Festinger, whose work on social comparison theory had already made him an influential figure in social psychology, made a very basic observation about the social lives of human beings: we do not like inconsistency. It upsets us and it drives us to action to reduce our inconsistency. The greater the inconsistency we face, the more agitated we will be and the more motivated we will be to reduce it.

Before formalizing the definition of dissonance, let us imagine some inconsistencies that can happen in social life. Imagine that you prepared at great length for a dinner party at your home. You constructed the guest list, sent out the invitations, and prepared the menu. Nothing was too much effort for your party: you went to the store, prepared the ingredients, and cooked for hours, all in anticipation of how pleasant the conversation and the people would be. Except it wasn't. The guests arrived late, the conversations were forced, and the food was slightly overcooked by the time all of the guests arrived. The anticipation and

expectation of the great time you were going to have are discordant with your observation of the evening. The pieces do not fit. You're upset, partly because the evening did not go well, but also because of the inconsistency between your expectation and your experience. You are suffering from the uncomfortable, unpleasant state of cognitive dissonance.

Imagine a second scenario. You are an avid baseball fan living in the United States. You believe that the World Series, played each year in a US city, truly selects the best team in baseball. Yes, you know this sport is played in Australia, Brazil, Panama, the Dominican Republic, Canada, Japan, and a host of other countries, but it rarely enters your consciousness. Baseball is American and the best players live there. But then a tournament is organized featuring most of the nations of the world that play the game. The United States is eventually eliminated and Japan wins. Once again, the pieces do not fit. You feel perplexed, agitated, and uncomfortable. In addition to being disappointed by the outcome, your suffering is compounded by the experience of cognitive dissonance.

Festinger was adamant about one point. People do not just *prefer* consistency over inconsistency. It is not that the baseball fan would have preferred his country's team to have won; it is that he must deal with the inconsistency that losing has created. The party host does not just wish the party had gone better; he must deal with the inconsistency between the hopes, aspirations, and effort that he put in prior to the party and the observation that the party did not go well. How can that be done? Surely, if the host changes his opinion about how well the party went, then there is no longer an inconsistency. Perhaps the guests loved a slightly blackened lamb and their quietness at the table reflected their enjoyment of the meal. The baseball fan can deal with his inconsistency by believing that the International World Tournament was not a true reflection of baseball ability. After all, many US players did not play; some played for teams representing countries their parents were born in rather than playing for the United States and, mostly, the US players were more involved in spring training for their upcoming season than taking this tournament very seriously.

Festinger's insistence that cognitive dissonance was like a drive that needed to be reduced implied that people were going to have to find some way of resolving their inconsistencies. People do not just *prefer* eating over starving; we are *driven* to eat. Similarly, people who are in the throes of inconsistency in their social life are *driven* to resolve that inconsistency. How we go about dealing with our inconsistency can be rather ingenious. But, in Festinger's view, there is little question that it *will* be done.

### Preparing for the End of the World

An article that appeared in a Minneapolis newspaper gave Festinger and his students an ideal opportunity to study inconsistency in a real-world setting. The article reported on a group of west coast residents who were united in a belief about a significant event: the belief that the Earth was going to be annihilated by a cataclysmic flood on December 21, 1955. All of the people would perish in the cataclysm except for those who believed in the prophecies emanating from the planet Clarion; they alone would be saved from the flood.

Festinger reasoned that if Earth survived December 21, then the people in the little group, dubbed The Seekers by Festinger, Riecken and Schachter (1956), would face a considerable amount of inconsistency on the next morning. While the rest of the world awoke to just another day, The Seekers would face a calamitous amount of inconsistency. The world's very existence would be inconsistent with their belief that the world as we know it was to have ended on the previous evening.

The Seekers was a serious group: this was not a collection of individuals who had a mild premonition of the world's demise. Their beliefs were specific and strong. As the December day approached, Seekers members sold their possessions and quit their jobs. Some, whose spouses did not share their beliefs, divorced. The Seekers members were united in their support of their leader, Mrs Marion Keech, who believed she was the medium through whom the unearthly beings on the planet Clarion communicated their wishes. She received her messages through automatic writing – a paranormal belief that a person's hand is seized by the spirits in another world and is used to communicate messages from the Great Beyond.

Clarion was specific. The group was to gather at Mrs Keech's home on the evening of December 20. They were to await the arrival of a spaceship that would come to Earth and whisk the group away from danger.

The Seekers were not publicity hounds. They sought no attention for their beliefs or their prophecy. When the reporter whose story appeared in the Minneapolis newspaper attempted to interview them, they grudgingly gave only the briefest interview. Publicity was not their goal; protecting themselves from the cataclysmic end of the Earth was.

As a social psychologist, Festinger saw the immediate relevance to the theory he was generating. If people are driven to deal with inconsistency, how would Marion Keech and her followers react to the morning of December 21 when the sun rose, the sky brightened, and the spaceship from Clarion failed to appear? The clear and specific anticipation of the world's demise, the elaborate preparations for the group to be saved, the broken marriages and other personal sacrifices, all would stand in stark contrast to the world's having made just another turn around its axis. Festinger and his colleagues predicted that the dramatic inconsistency would create the state of cognitive dissonance and the group would be driven to find some way to reduce it. They would need to find some way of restoring consistency to their mental maps of the cosmic events.

One of the researchers, Stanley Schachter, infiltrated the group. He carefully observed the group's preparations and specifically observed the events as they unfolded just after midnight on December 20. The group gathered near midnight, waiting for the arrival of the spacecraft. Tension and excitement were high. They had followed the Clarions' instructions meticulously. Mrs Keech's grandfather clock ticked the final seconds to midnight. No spacecraft. Someone in the group checked his watch and saw that his watch still read only 11:55. All watches were reset. At 12:05, even by the ticking of the newly set watches, there was still no spacecraft. Another member of the group suddenly realized that he had not fulfilled all of the instructions given by the Clarions. They had insisted that all metal objects be removed from the human space travelers. Thus, they came with no zippers, belt buckles, or bra straps. But now a Seeker realized that he had a metal filling in a tooth. He removed it. Still, no spacecraft.

There followed a terrible few hours following the midnight disconfirmation of the prophecy. People sobbed and wept. Had they been abandoned by the Clarions? Had they been wrong all along, just like their more cynical spouses and former friends had told them? Shortly past 4:00 am, Mrs Keech received her final message from Clarion. The message provided the answer to their questions, and also provided the opportunity to restore consistency between their doomsday beliefs and their observation that the spaceship had not come and there had been no Earth-destroying cataclysm.

*A message shows the path ... to restore consistency.* The Clarions' final message was brilliant. Through Mrs Keech's trembling hand, it said:

'This little group, sitting all night long, has spread so much goodness and light that the God of the Universe spared the Earth from destruction.'

So that was it. The beliefs had not been wrong after all. God had been planning to destroy the Earth. All of the preparations for the cataclysm had not been in vain. In fact, it was precisely and only because of the preparations, sacrifices, and faith of the group that the Earth still existed on the morning of December 21. The sun still shone because of them; people went to work because of them; people still had homes to return to and families to love them ... all because of the determination of the small group of Seekers.

Before December 21, Festinger et al. (1956) had made a prediction. They hypothesized that The Seekers, who shunned publicity and notoriety, would take their cause to the public following the disconfirmation. And The Seekers did that with gusto. As soon as their new belief was in place – as soon as they had generated the story that their actions had saved the world-they took their case to the public. They looked for social support for their story. They desperately wanted others to see that their actions had not been in vain, that their prophecy had not been disconfirmed, that there was no inconsistency between their belief in the cataclysm and the bright sunny day that had dawned on December 21.

The premise of dissonance theory is that people do not tolerate inconsistency very well. The Seekers had found a way, post hoc, to make their actions feel consistent to themselves and they now sought validation in having the world believe them. They printed flyers, called newspapers and magazines, offered to talk on radio programs, all in an effort to bolster their new found consistency.

There are probably many factors that influenced the group of Seekers in their actions. Who can guess what had initially influenced these individuals to believe in the prophecy and the automatic writing? Who can guess what motives each individual may have had in the wake of the disconfirmed prophecy? But one thing seems certain. Caught in a major inconsistency among their beliefs, behaviors, and observations of reality, The Seekers did just what Festinger and his colleagues predicted they would do: they were driven to find a way to restore their consistency – driven to find a new belief that would make sense of what they had done and driven to convince a sceptical world of the truth of their new position.

### **The Theory of Cognitive Dissonance: The Original**

A year after Festinger et al. (1956) reported their observations of the doomsday cult, Festinger (1957) published *A Theory of Cognitive Dissonance*. It was a relatively uncomplicated theory with a small number of basic propositions. Although it seemed, on the surface, to be similar to other theoretical notions, which held that people prefer consistency to inconsistency, dissonance theory would soon stir up a proverbial hornets' nest of controversy and propel it to become one of the best-known and prolifically documented theories in social psychology.

One of the brilliant innovations of cognitive dissonance theory was its use of a relatively new concept called 'cognition.' A cognition is any 'piece of knowledge' a person may have. It can be knowledge of a behavior, knowledge of one's attitude, or knowledge about the state of the world. Anything that can be thought about is grist for the dissonance mill. Using 'cognition,' dissonance theory could refer to many different types of psychological concepts. An action is different from an attitude which, in turn, is different from an observation of reality. However, each of these has a psychological representation – and that is what is meant by cognition.

The state of cognitive dissonance occurs when people believe that two of their psychological representations are inconsistent with each other. More formally, a pair of cognitions is inconsistent if one cognition follows from the obverse (opposite) of the other. An example will help: A person believes that he should give money to the poor but he passes by an indigent person on the street without contributing money to the man's cup. These two cognitions are dissonant because not giving money follows from the obverse of his belief. Not giving money follows logically from a belief that one should *not* contribute to the poor. But, in our example, the person held a belief that did not coincide with his behavior. We can say that the two cognitions were inconsistent or dissonant with each other.

If a person holds cognitions A and B such that A follows from the opposite of B, then A and B are dissonant.

We have millions of cognitions; some are currently in awareness but most are not. I may know that I am watching television and I may know that I am hungry. I can also become quickly aware of the day of the week, the distance between Los Angeles and San Francisco, or who won last year's Super Bowl. Most cognitions coexist peacefully in our minds, sharing nothing in common (e.g., my knowledge of my hunger and my knowledge of last year's Super Bowl winner.) Festinger divided cognitions between those that are irrelevant to each other and those that are relevant. It is in the latter category that cognitions can be consistent or inconsistent. We are comfortable with our consistent cognitions (e.g., I believe in giving to the poor and I donated coins to a poor person today; I was hungry so I ordered a meal in the restaurant.) Inconsistent cognitions, on the other hand, require some work in order to reduce the inconsistency. Why? In Festinger's terms:

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.

### **Dissonance has a Magnitude**

One of the features of the concept of cognitive dissonance that makes it different from other theories of inconsistency is that dissonance has a magnitude. The more discrepant two cognitions are, the greater the magnitude of dissonance. Imagine that I am a person who believes that the poor deserve my charity and that I should donate to them whenever I have a chance. One day, a volunteer knocks on my door and asks me for a donation to a local soup kitchen. If I give nothing, my decision will be markedly discrepant from my attitude and I should experience a large amount of the uncomfortable tension known as dissonance. If I write a generous check, I should experience no dissonance because I have acted in accord with my attitude. It is also possible for me to reach into my pocket, find a fistful of change, and then donate 10 cents to the volunteer. That should generate a lot of dissonance, because a 10 cent contribution does not make much of a dent in the budget of the soup kitchen. Nonetheless, it is less discrepant with my attitude than no contribution at all. So, the magnitude of cognitive dissonance will depend on the degree of discrepancy between the two cognitions. The greater the discrepancy, the greater the discomfort, and the more motivated I will be to reduce it.

### **The Many Ways to Reduce Cognitive Dissonance**

Once dissonance is aroused, it needs to be reduced. The more of the tension state I have, the more I will need to do to reduce it. By analogy, a person who is very thirsty is more likely to

find a way to get a drink and is likely to drink more than a person who is only slightly thirsty. So, too, with dissonance.

The many ways to reduce dissonance coincide with a more comprehensive view of the factors that affect its magnitude. Reducing the discrepancy is the most straightforward way to reduce dissonance. If my knowledge of my behavior and my knowledge of my attitudes do not match, I can change one or both. If I think contributing to the poor is a good idea, I can resolve to give considerable money the next time I see a beggar or write a larger check to the soup kitchen.

However, in my example, I have a dilemma. I have already refused to give any money to a beggar and I gave only a few coins to the soup kitchen. That's the reality, and the reality has limited my choices about how to resolve the discrepancy. It is difficult to distort the reality of my behavior. My cognition about my attitude, on the other hand, is more fluid and flexible. If I come to believe that I don't really support giving money to the poor, then my opinion will have been consistent with my behavior. The cognitive dissonance that was aroused because of the discrepancy between my attitude and my behavior would no longer exist.

In general, it is difficult to change a cognition about one's behavior. Therefore, when behavior is discrepant from attitudes, the dissonance caused thereby is usually reduced by changing one's attitude. The resistance to change of the behavioral cognition is what makes dissonance theory seem to be a theory of attitude change. Although all cognitions are important for cognitive dissonance theory, the relative ease of changing one's attitudes rather than one's behavior has made dissonance more relevant to attitudes than to any other concept.

Dissonance is impacted not only by the existence and the degree of discrepancy between cognitions but also by other factors. In my soup kitchen example, it may well be that there were good reasons to give only a small amount of money to the kitchen. Perhaps there was no money in my checking account and a few cents were all that I had. Perhaps I did not trust the beggar's authenticity, or perhaps I had contributed a large amount of money to a different social service organization that benefited the poor. All of these might be considered cognitions that are *consonant* with my small contribution.

In general, cognitions that are consonant with one of the discrepant cognitions can serve to reduce the total magnitude of dissonance.

Just as the magnitude of the discrepancy between two cognitions increases the tension state of cognitive dissonance, so the magnitude of consonant cognitions lowers the tension state. In the need to reduce dissonance, a person can work to lower the discrepancy between cognitions, or can work to add cognitions that are consonant with one of the cognitions. Another significant factor in determining the magnitude of dissonance is an assessment of the importance of the cognitions. Not all cognitions have equal importance.

The more important the discrepant cognitions, the more cognitive dissonance I will experience. The more important the consonant cognitions, the less will be my cognitive dissonance.

That provides another avenue for reducing dissonance. If I am suffering unpleasant tension because of my behavior toward the poor, then I can reduce the importance I place on my attitudes toward the poor. I can decide that my attitudes toward the poor are not very important to me compared to other major issues and values or that my behavior toward them was trivial and inconsequential (Blanton, Pelham, DeHart and Carvala 2001; Simon, Greenberg and Brehm, 1995). I can also work on bolstering the importance of any cognition

that supported my behavior toward the poor (Sherman and Gorkin, 1980). In my example of contributing toward the soup kitchen, I may decide that the horror I would experience from writing a bad check was so important that it justified my only reaching into my pocket to see what coins I had.

Before leaving the overall picture that Festinger painted in his original theory, it may be useful to summarize it with the following formula for the magnitude of cognitive dissonance:

$$\text{DISSONANCE MAGNITUDE} = \frac{\text{SUM (all discrepant cognitions} \times \text{importance)}}{\text{SUM (all consonant cognitions} \times \text{importance)}}$$

That is, the total magnitude of the tension state of cognitive dissonance is proportional to the discrepant cognitions a person has (the elements above the line in the formula) and inversely proportional to the number of cognitions that are consonant (below the line), each weighted by its importance.

As we shall see in this book, the research paradigms that have been used to test predictions from dissonance theory have relied upon attitude change as the predominant method to reduce dissonance. By focusing on the discrepancy between behavior and attitude, the direct reduction of dissonance by attitude change is the most likely and predictable means. But it is important to keep in mind that attitude change is not the *only* means of dealing with cognitive dissonance. Research has shown that, consistent with the general formula above, changes in importance of cognitions are an effective means of dissonance reduction (Simon et al., 1995). Similarly, research has shown that bolstering the supportive cognitions – those ‘below the line’ in the above formula – (Sherman and Gorkin, 1980), seeking new, supportive cognitions that support the discrepant action (Frey, 1981; Mills, 1965) also serves to reduce dissonance.

In fact, the doomsday cult studied by Festinger et al. reduced their dissonance by adding cognitions consonant with their behavior. Through the lastminute intervention of the Clarions, The Seekers had invented a cognition consonant with their prophecies, predictions, and sacrifices. It was only *because* of their prophecy and sacrifice that the world was saved. And to magnify the importance of that cognition, they celebrated that idea with news releases and interviews. Gaining public support for that belief made it seem all the more important. While The Seekers' thoughts and actions were undoubtedly determined by many factors, their post-disconfirmation scramble to find credible supporting cognitions seems to have been at the service of reducing their state of dissonance.

### **Liking What You Choose: The First Experimental Verification of the Theory of Cognitive Dissonance**

Jack W. Brehm was a PhD student of Leon Festinger's during the time that dissonance theory was being conceived. His doctoral dissertation provided the first experimental test of hypotheses derived from the theory. As a thought experiment to help bring Brehm's story to life, imagine that you are in the market to purchase a new car. Imagine, too, that you have done considerable research on various cars, consulted with your friends, and thought hard about how various cars make you feel. With this careful research, you have now narrowed your choices to two: a previously loved (i.e., used) Honda Civic and a new BMW sports car. Each has advantages and disadvantages. One is expensive, the other is cheap; one is attractive, the other is not; one is sexy, the other is not. You have made a list of advantages and disadvantages that looks something like this:



<i>If I choose ...</i>			
<b>Civic</b>		<b>BMW</b>	
<b>Advantages</b>	<b>Disadvantages</b>	<b>Advantages</b>	<b>Disadvantages</b>
Inexpensive	Ugly	Attractive	Expensive
Fuel costs	Not sexy	Fast	No room for groceries
		Sexy	
		Hi tech features	

You want to make the correct choice. You dispassionately examine your list make the most rational, unbiased decision you can make: you choose to purchase the BMW. You sign the paper, pay your deposit, and are ready to receive your car. However, something may feel just a little wrong. Do you notice the twinge of regret? Do you notice that you are a bit uncomfortable? Dissonance theory explains why. Even though you have made a rational choice – the best you could have made in the circumstance – you nonetheless experience the unpleasant emotional state of cognitive dissonance.

Here is why: you have a cognition about your decision – i.e., you are going to own the BMW. But, remember that you thought the BMW had disadvantages. It is small, providing little room for groceries, and it is very expensive. These cognitions are discrepant with your decision to buy the BMW. Think, too, about the good features of the Civic: It has low fuel costs and is inexpensive. You could have bought two Civics for the price of the BMW. How do you reconcile those cognitions with your decision to buy the BMW? These discrepancies create cognitive dissonance. These discrepancies lead to an unpleasant emotional state and, akin to the experience of aversive drives, you need to reduce it. And you will!

Your choices for reducing dissonance are several. Remembering the dissonance formula, your dissonance is high because you have discrepancies between several pairs of cognitive elements. You bought the BMW, which is discrepant from the cognition about its price tag. You rejected the Honda, which is discrepant from your cognition about its fuel economy. You can reduce dissonance by reducing the discrepancy. The easiest solution (one that does not involve changing your decision) is to change your attitude about some of the features of each car that are discrepant with your decision. For example, you can decide that it is wise to make a major financial investment in something as important as a car. And who needs good fuel economy anyway? By changing your opinion about these features, the discrepancy between the features and your decision is minimized and dissonance is reduced.

In addition to these strategies, you can recruit more ideas that are consistent with your decision to purchase the BMW. Suddenly, the thought of how many people will become friendly with you in your shiny new car strikes you as something you had never thought of before. And don't forget that the Civic only comes in colors you do not like and it is probably difficult to add air conditioning to the base car. Now, you have added consonant cognitions (below the line in the earlier formula) and successfully reduced dissonance.

You can reduce even more dissonance if you work on the importance of the various cognitions. If all of the cognitions that are consonant with your purchasing decision are very important and the cognitions that are discrepant with it are trivial, then dissonance is reduced still further. If it seems more important than ever before to have a car that is sexy and even more trivial that its repairs are expensive, then the magnitude of dissonance declines. With the change of importance, you do not need to switch the valence of a cognition – i.e.,

convince yourself that a feature you used to think was good is actually bad. You just need to change how much to value that particular cognitive element in the total array of consistent and inconsistent cognitions.

There is a beneficial and measurable consequence to the various machinations that help you reduce dissonance. Not only is the tension state of dissonance reduced, but your overall liking of the BMW will also be raised; similarly, the degree that you like the rejected Civic will be reduced. All of the changes of cognitions about the BMW (e.g., how much you like paying for it; how sexy it is; how important it is to attract more friends) and all of the changes in your thoughts about the Civic (e.g., how important it is not to be stuck with an unattractive car; how bad the air conditioner is likely to be) make you like the Civic less. If we measured your feeling about the BMW after you have reduced your dissonance, it should be more positive than it was before your decision. Similarly, the rejected Civic should be liked less after the dissonance reduction than before. Note that before your decision, you were logical and thoughtful. You had considered all of the features of the cars dispassionately and without distortion. You concluded that you liked the BMW more than the Civic; that's why you bought it. But after the decision, logic and dispassionate thoughtfulness were not the guiding principles. Rather, the guiding principles were at the service of distorting and modifying cognitions to help reduce cognitive dissonance.

Brehm's (1956) dissertation at the University of Minnesota was designed to measure the changes in attractiveness of decision alternatives in the laboratory. Women from the Minneapolis area were invited to come to the laboratory to offer their opinions about a number of household gadgets. They were shown an array of kitchen items such as a blender, a mixer, and a toaster. The participants rank ordered the items in terms of preference for owning one. They were also asked to rate the items on a scale of 1–100, representing the degree to which they liked each item. Then Brehm offered the women an opportunity to have one of the items. He told them that the research firm that was sponsoring the research had authorized him to allow the participants to have one of the items, and he then presented each woman with a choice. At this point, Brehm introduced an experimental manipulation. For some of the women the choice was between two items that they had ranked very highly – specifically, whichever item they had ranked second and third on the list of seven items. Other women were given a choice between their second and seventh ranked items.

Let us consider what the women may have been thinking. A decision selecting one of two household items, like a decision between the two cars in our thought experiment, should be made logically and dispassionately. Considering all of the good and bad features of both items, it would make sense that the participants would choose the higher ranked item, and they did so.

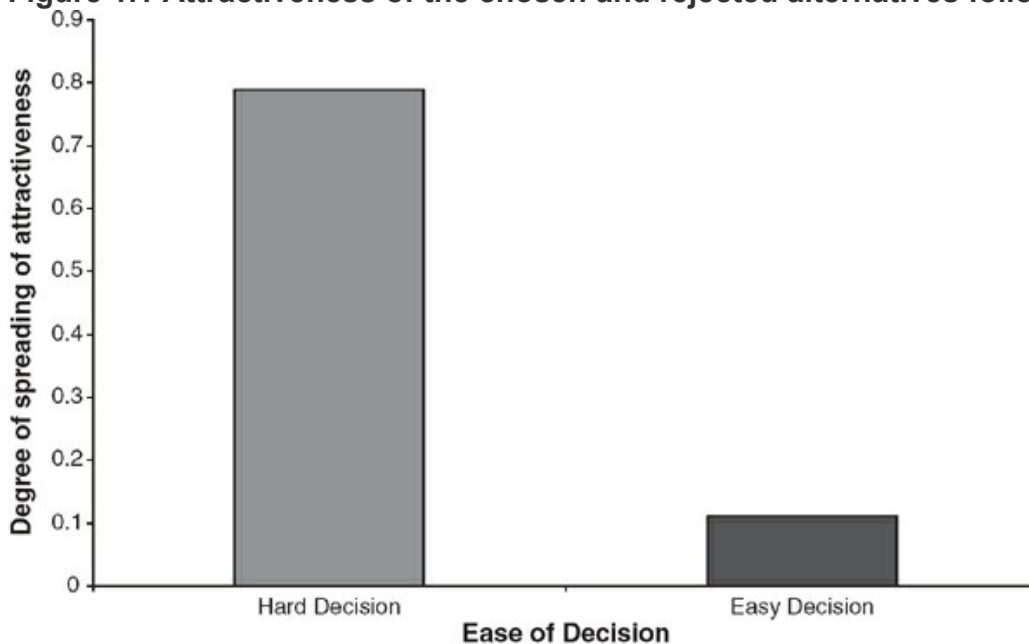
But wait! The choice of the higher ranked item brings with it any of the bad features of that item. A blender, beloved as it might be, is also noisy. And the rejected toaster is both quiet and reliable. These cognitive elements that were inconsistent with the choice of the blender create dissonance and, as with our automobile example, require work to reduce it. By the time the dissonance is reduced, we can predict that the degree of liking for the chosen alternative will be higher than it was before the choice and the degree of liking for the rejected alternative will be less than it was before the choice. Brehm asked the participants to rate the alternatives a second time in order to see if this is what occurred.

There is also a more nuanced prediction that was important in this research. When both items were liked very much, the choice was relatively difficult to make. The lower ranked item,

although liked less than the chosen item, was still pretty nice. It clearly had features that the housewives valued, for the item was ranked almost as highly as the item that was eventually chosen. The magnitude of dissonance resulting from this choice must have been quite high, which in turn made the discomfort high and motivated considerable work to reduce it. By contrast, choosing between the second and seventh ranked items was an easier one. True, there must have been some reasons to like item 7 and some reasons to be wary of item 2, but the magnitude of the dissonance should have been much lower. Following the decision, the participants should have been experiencing considerably less discomfort and have less of a need to distort their opinions of the two items.

Brehm's prediction was that women in the difficult decision condition would raise their evaluation of the chosen item and lower their evaluation of the rejected item – and would do this significantly more than they would in the easy decision condition. [Figure 1.1](#) shows what happened.

**Figure 1.1 Attractiveness of the chosen and rejected alternatives following a decision**



Source: Adapted from Brehm (1956)

The results show that the prediction was supported by the data. The participants in the difficult decision condition showed a spreading of the alternatives such that they liked the chosen item considerably more, and the rejected item significantly less, than they had rated the same items prior to the choice. One other finding is noteworthy. Some participants had been run in a control condition. In this case, Brehm gave each participant her second-ranked item as a gift. There was no decision that needed to be made. Brehm reasoned that the control condition would not arouse cognitive dissonance. After all, the participant had not made a decision that resulted in giving up some good feature of a rejected alternative or accepting an unwanted feature of the chosen item. She was simply presented with the item. Her feelings about what the good and bad aspects of that kitchen item would remain the same. Her rating would remain the same. Indeed, the participants in this condition showed no change whatsoever in their rating of the item they received as a gift.

### **A Summary of Dissonance following Free Choice**

In the language of dissonance theory research, Jack Brehm's experiment established a paradigm known as the free choice paradigm. His landmark study left us with several lessons:

- 1 Cognitive dissonance occurs following decisions.
- 2 It is reduced by attitude change that spreads the attractiveness of the choice alternatives. The chosen alternative becomes more attractive; the unchosen alternative becomes less attractive.
- 3 The more difficult the decision, the greater the dissonance.
- 4 Cognitive dissonance is a ubiquitous phenomenon. We make choices all of the time. Choosing among consumer items was merely a way to assess dissonance in the laboratory. However, in the real world, we make many decisions everyday. At universities, we choose courses to take, courses to teach, books to buy. At home, we choose television programs to watch, vacations to take, and even automobiles to purchase. Each time we make one of those decisions, we are subjected to the experience of cognitive dissonance and we are likely to take action to reduce it.

### **Saying What You do not Believe: Dissonance Arising from Induced Compliance**

As the 1950s drew to a close, dissonance theory emerged as a major player in understanding people's desire for consistency and, when consistency is disturbed, provided a theoretical framework for viewing the distortions people undertake in order to restore it. Festinger, Riecken and Schachter's (1956) study was as dramatic as Brehm's (1956) laboratory study was compelling. But the major controversy was yet to come. It is perhaps a stretch to say that the Soviet Union's launching of the Sputnik satellite shook up world politics and stimulated American technology in much the same way as the publication of Festinger and Carlsmith's induced compliance study in 1959 shook up experimental social psychology. Nonetheless, in a small way, the analogy holds.

Festinger and Carlsmith (1959) posed a relatively straightforward question which they answered with an ingenious experiment. They asked what the consequence would be if someone were induced to act in a way that was contrary to his or her attitudes? In a more modern frame of reference, we could ask the following question: what would be the consequence for a person's emotional state if she argued publicly for the value of bringing democracy to Iraq via the 2003 military invasion when, privately, she was against the war? The inconsistency between attitude and belief would bring about the unpleasant state of cognitive dissonance. Needing to reduce that dissonance, the speaker would need to reduce the discrepancy between what she said and what she believed. Because it is nearly impossible to change what she said or to deny that she said it, the most straightforward way to resolve the dissonance would be to change her attitude in the direction of the speech. Therefore, dissonance theory predicts that being induced to make a counterattitudinal statement would lead to attitude change in the direction of the speech. The speaker giving a speech in favor of the Iraq War would likely be motivated to change her private attitude to become more favorable to the war in Iraq. Once again, dissonance theory comes into focus as a theory of attitude change because, in the battle between changing one's attitude and changing one's behaviour, attitudes are the easiest to change.

In a laboratory at Stanford University, Festinger and Carlsmith staged an experiment that was creative in its manipulations and startling in its results. Let's set the stage as a participant in the experiment may have viewed it. You arrive at the research building at the appointed time, you take a seat in the waiting room, and after a short period of time the researcher's door

swings open and you are invited inside. He tells you that he is researching various 'measures of performance' and he would like you to perform a straightforward task. You are shown a peg board on which there are several dozen rectangular pegs. Your job is to turn each of the pegs a quarter turn with your left hand and then turn them back again. You will repeat this task with your right hand. When that is over, you will do it again. Then, you will move to a board on which there are several dozen spools of thread. You will take each spool off with your left hand, replace them, and repeat the process with your right hand.

Is the experimenter fooling? Apparently not, because he has a stopwatch and clipboard in his hand and he instructs you to begin. After several minutes of following these instructions, you are bored nearly to tears by the monotonous drudgery that constitutes the tasks of this experiment. Finally, you are done. The experimenter thanks you and is ready to send you to the department secretary who will give you the experimental credit that you were to receive for participating. Of course, he will first 'debrief' you by telling you a little bit more about the experiment. The experimenter now begins a complicated story designed to convince you to comply with a request to make a speech in which you will take a position that is at variance with your attitude.

He tells you that you were actually in a control condition of a more complicated experiment. If you had been randomly assigned to the experimental condition, he continues, you would not have been sitting in the waiting room alone while you waited for him to open the door. Instead, a confederate of the experimenter would have entered the room, told you that he had just completed the experiment, and that you would be happy to know that it was one of the most fun and enjoyable experiences he'd ever had in a research study. The confederate would have said this because (the experimenter tells you) the true purpose of the study is to compare the performance on these peg-turning tasks of people like yourself who had no particular expectation of how good and fun it would be with people who were expecting it to be fun. In fact, he says, the next student who is in the waiting area is in that experimental condition and will soon be greeted by that paid confederate and told how much fun the task will be.

But where is that confederate? The researcher, talking partly to himself and partly to you, mentions that the confederate should have been here already. 'Where is that confederate?' he muses. He missed a session yesterday, too. And then, the researcher is struck with an inspired thought: 'Hey, I have an idea. Why don't you serve as the confederate? I can hire you to be a confederate, and you can be "on-call" whenever my regular confederate can't make it. Would you like to do that? It would certainly help me out. You can start today ... right now. All you have to do is to go out to the waiting room, pick up your books, and casually tell that student sitting there how much fun this study was, how exciting it was to be in it, and how much you enjoyed it. Would you do this for me?'

If you were the research participant, what do you think you would do? Almost all of the students agreed to help the researcher. They entered the anteroom, found the student waiting there, and told him how much fun they should expect the study to be. When finished with the little playacting, the students went to the departmental secretary, received credit for their participation, and filled out a general department survey in which they rated how much fun they actually thought the experimental task had been.

Almost all of what the students had been told was a ruse designed to get them to say something they did not believe. There was no measure of performance study and there was no 'waiting subject' sitting in the anteroom. The 'waiting subject' was really a confederate; the

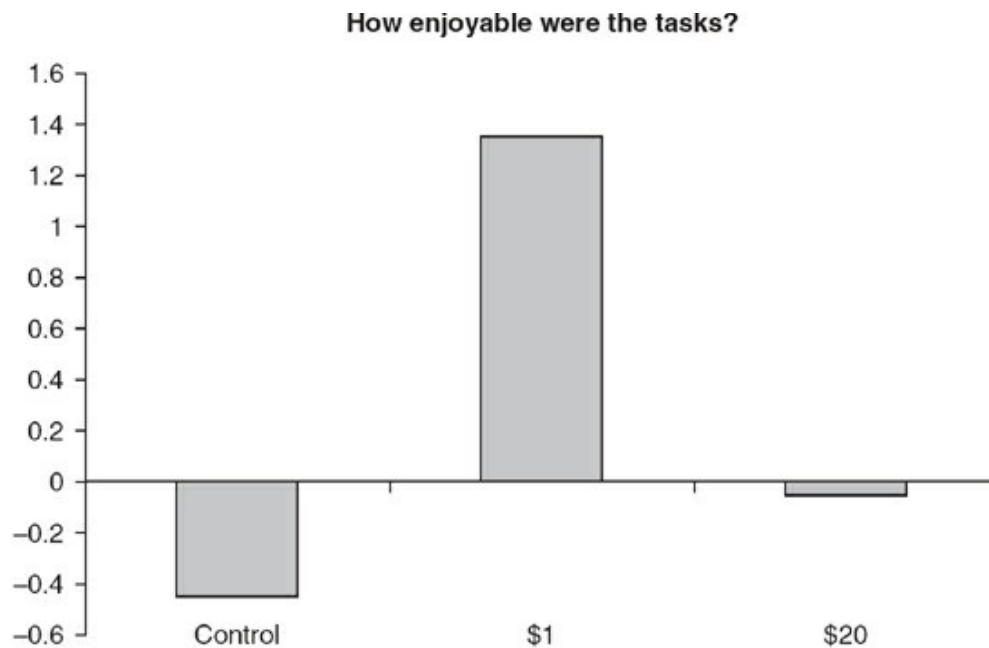
real subject was not. By having the real participants engage in a task so overwhelmingly tedious, Festinger and Carlsmith could be certain that they would have formed negative attitudes about the task. Indeed, a control group of participants who only performed the peg-turning and spool-sorting tasks rated it as boring and unpleasant. Experimental participants had made a forceful statement about how interesting the task was but, in truth, their private opinion of the task was that it was boring. Clearly, the situation was set up so that cognitive dissonance would be aroused. The way to reduce it was to reduce the discrepancy between attitude and behavior, which could be accomplished by changing their attitude toward the task. That is precisely what the participants did.

Festinger and Carlsmith's study may seem like an elaborate ruse just to convince someone to say something that was at variance with their attitudes. However, we now need to introduce another independent variable in this study. What I have not told you yet was that all of the students, except those in the control condition, had been offered a financial inducement in order to comply with the request. When the experimenter thought of his ingenious plan to sign the student up as a substitute confederate, he offered a financial incentive. For half of the students, he offered the sum of \$20; for the other half, he offered \$1. There was no difference in the compliance rates. Students were willing to tell the waiting subject that the task was terrific whether they had been offered the small or the large sum.

Did the magnitude of incentive make a difference in students' final attitudes? Would people be more likely to believe what they said if they agreed to say it for a small or a large amount of money? Here, Festinger and Carlsmith (1959) made a prediction that seemed less than obvious in terms of everyday wisdom but which followed logically from the theory of cognitive dissonance. They predicted that the speech given for a small amount of money would produce more favorable attitudes toward the task than the speech given for a large amount of money. Remember our dissonance formula above. The discrepancy between believing the task was boring but saying it was exciting created cognitive dissonance. But dissonance is not just about discrepancy. It is also about cognitions consistent with the behavior. The cognition about the inducement was such a cognition. It goes below the line in the formula and serves to reduce the total magnitude of dissonance. A large incentive (\$20) was much more important and influential than a small incentive (\$1) and therefore served better to reduce the total magnitude of dissonance.

Because people experienced more of the unpleasant tension of dissonance in the \$1 condition than in the \$20 condition, Festinger and Carlsmith predicted that participants offered \$1 would come to like the task more than participants who had been offered \$20. The results shown in [Figure 1.2](#) support this prediction. When asked how much they enjoyed the task, participants who had been offered only \$1 to make the counterattitudinal statement to the confederate rated the task as significantly more enjoyable than students who had either been paid the larger sum of \$20 or in the control condition.

**Figure 1.2 Evaluation of boring tasks: degree of positive feelings toward a task**



Source: Adapted from Festinger and Carlsmith (1959)

### Political Attitudes and Induced Compliance

One of the methodological considerations that went into the study by Festinger and Carlsmith was to try to create an attitude in the laboratory that was novel. The peg-turning and spool-sorting tasks were novel; people had no pre-existing attitudes, and the boredom of the tasks made virtually everyone believe that the tasks were uninteresting. A very positive feature of this procedure was the control over the initial attitudes that people had before they reduced their dissonance. Republicans, Democrats, Libertarians, and Greens would have no reason to differ on their attitude toward the task. The less positive feature is that the attitude issue seems contrived and less relevant to real-world issues.

The first study to use the induced compliance procedure on real-world attitudes was conducted by Bob Cohen and reported in Brehm and Cohen's (1962) influential book, *Explorations in Cognitive Dissonance*. In the early 1960s, students at Yale University were embroiled in a controversy with the New Haven, CT, police department and generally felt negatively toward the police. They specifically were angry at the severity of the actions that the police had taken against the students. Participants were contacted in their dormitories and were asked if they would write 'a strong and forceful essay' taking the position that the extreme actions of the New Haven police were justified.

Participants complied and wrote the essay favoring the New Haven police. As an inducement, they were offered either a very small incentive (50 cents), a large incentive (\$10), or a variety of incentives in between (\$1 and \$5). When their attitudes toward the police were assessed after the writing of the essay, Cohen found an inverse linear relationship between incentive magnitude and attitude change. Consistent with Festinger and Carlsmith's findings, the lower the incentive, the greater the attitude change. The higher the incentive, the smaller the attitude change.

Although Festinger and Carlsmith's landmark study is probably the best remembered of the induced compliance research, it was Cohen's methodology that established the research

paradigm for the hundreds of studies to come. Asking people to write essays or make speeches on topics with which they did not agree became the essential method for creating the discrepancy that aroused cognitive dissonance. Looking for the inverse relationship between the magnitude of incentive and the degree of attitude change became the signature of cognitive dissonance following induced compliance.

### **Induced Compliance: Why the Controversy?**

Festinger and Carlsmith's (1959) experiment set off a flurry of controversy. There was a boldness and a swagger to the early dissonance experiments. Festinger and his students were confident of their ability to bring interesting and important issues into the laboratory and make them real for experimental subjects. There was a flair and a stagecraft not only to Festinger and Carlsmith's experiment but to so many that followed shortly thereafter. Festinger and his students, including Elliot Aronson, J. Merrill Carlsmith, Judson Mills, and Jack Brehm invented elaborate scenarios to study the effects of such issues as threat, effort, and expectancies on the arousal of dissonance. There was no issue too abstract or too difficult to put into the laboratory and no manipulation that they could not carry off in a believable way to research participants. Creating involved participation in elaborate scenarios became a hallmark of the dissonance research.

But more important than the style of the research was its substance. Here was a theoretical stance whose basic assumptions seemed straightforward enough, but whose predictions and derivations flew in the face of the prevailing *Zeitgeist* of the time: learning theory. In the 1940s and 1950s, B.F. Skinner, Clark Hull, and a number of influential psychologists were in the midst of arguments about how to conceptualize the role of reinforcement in shaping learning. The emphasis of learning theory was the study of nonhuman animals, but one implication for human behavior was clear and common to all learning theories: Organisms learn by reward and punishment. The greater the reward, the greater the learning.

Although learning theory had not been applied with great precision to the human condition (although see Skinner, 1953), its general principles were assumed. In the study of attitudes, for example, Carl Hovland and his colleagues at the Yale Communication and Attitude Change program had published volumes on how persuasion works, and all of it was guided by general notions of reinforcement. We change our attitudes when we are rewarded to do so. We like objects we are rewarded for interacting with. We want to believe what experts believe because having similar attitudes as experts is rewarding (Hovland, Janis, and Kelley, 1953).

Money is an obvious example of a reward. Suppose you find a sum of money on the street. There is a good chance that you will come to have positive affect about that street and perhaps visit that street more often in the future. If you make a statement that someone pays you money for, there is a good chance that you will like what you said and be willing to say it again. The higher the reward, the more this should be true.

The results of Festinger and Carlsmith's study contradicted this framework. The participants liked what they had said the *less* they were paid for it. The smaller the reward for saying that the boring task was interesting, the more the participants believed what they had said. The higher the reward, the less they believed it. Learning theory had been the underlying principle of work in psychology, particularly in the United States. Now the theory of cognitive dissonance was threatening to question the dominance of reinforcement and learning. At the very least, it had made clearly derived predictions about the relationship of rewards to attitude change and supported those predictions. This was not going to be left unchallenged. There



will be more to say about the controversy after we look at another of the iconoclast predictions made by dissonance theory.

### Liking What You Suffer for

What does a punishment feel like? It makes us feel bad, it discourages us from performing the behavior for which we were just punished, and it serves as a reminder to avoid the stimulus or situation that provoked the punishment. Punishments come in many varieties from severe corporal punishment to the more mundane negative reactions we may suffer from friends, teachers, or relatives who disapprove of something we do. Overall, it is safe to say that, at a minimum, we do not like being punished and that punishments typically produce negative affective states. Words like dislike, harm, aversion, and suffering seem to fit within the general rubric of being punished.

Imagine a situation we might be in that brings us pain and suffering. We are in a group that decides to learn to rock climb. We find an instructor in the Yellow Pages who, it seems, has a somewhat sadistic sense of what it takes to learn to climb a wall. He puts us through a tortuous training program designed to make us confront our fear, toughen our skin, strengthen our legs, all for the purpose of climbing a rather ordinary 20-foot wall. Did the suffering the instructor put us through make us thoroughly dislike the wall-climbing experience? Were we sufficiently punished to refrain from wall climbing in the future, to have a negative reaction to the thought of wall climbing, to hate the instructor and his 20-foot wall?

Although there is logic to predicting that the punishment, suffering, and effort that went into the wall-climbing experience would produce negative reactions, Elliot Aronson and Jud Mills (1959) used the theory of cognitive dissonance to predict otherwise. They reasoned that the suffering that goes into a given activity is inconsistent with people's desire not to suffer. In the case of the wall-climbing example, the ordeal that we allowed ourselves to undergo with the instructor is inconsistent with our typical preference not to suffer. These two cognitions are inconsistent and therefore should lead to the experience of cognitive dissonance. In addition, the wall we climbed was a rather ordinary challenge that, to a dispassionate observer, should not have required the suffering the instructor put us through. How can we reduce the dissonance? One effective way would be to raise, rather than lower, our evaluation of the wall climbing. If we thought the wall was an amazing challenge and that wall climbing was an exhilaratingly positive experience, those cognitions would support (i.e., be consistent with) the suffering we endured. Putting it all together, Aronson and Mills (1959) suggested that from the perspective of cognitive dissonance theory, enduring punishing activities such as those our instructor heaped upon us, should increase the positivity of our attitudes toward the activity for which we suffered.

They designed an experiment to test this prediction. Female students from the University of Minnesota were asked if they would like to join a new club being formed on campus – a sexual discussion group. When they arrived for the first meeting of the group, a researcher told them that it was not a good idea for just anyone to join a group on such a sensitive topic as sex. Therefore, they would first need to pass a screening test in order to gain entry. What happened next depended on the experimental condition to which the students had been randomly assigned. Some students were in a high embarrassment condition. They were asked to read aloud some explicit four-letter words and then to read an explicit sexual passage drawn from a lurid novel. Other students were assigned to a low embarrassment condition. Their screening test consisted of a much milder initiation in which they read words like 'love' and 'petting,' but did not have any explicit sexual material to read aloud. When the

students finished their screening test, they were admitted to the sexual discussion group.

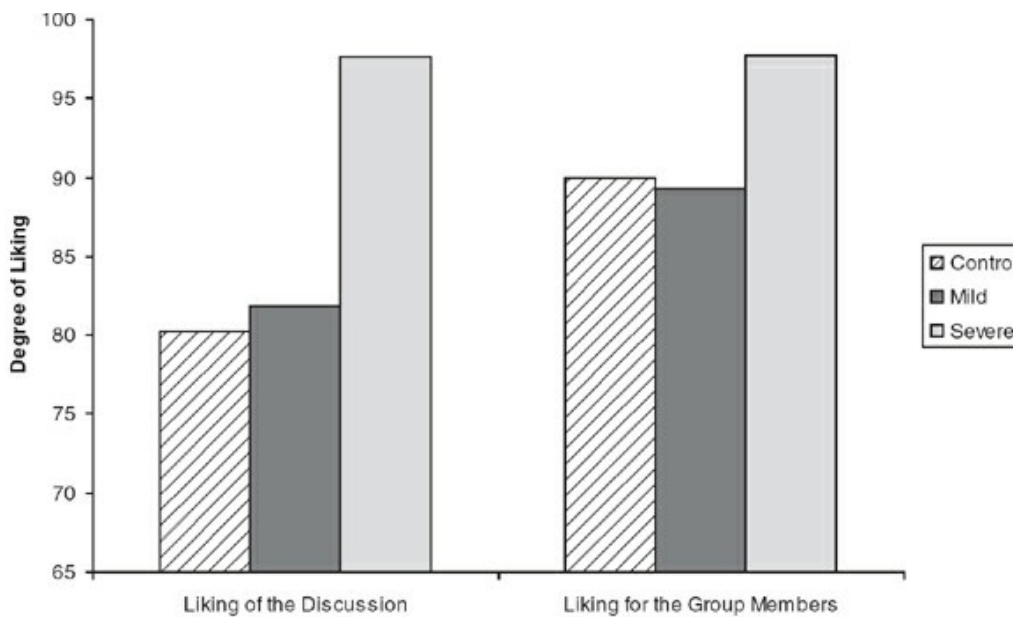
What Aronson and Mills wanted to accomplish next was to have all of the participants exposed to the same group members who were having the same conversation. That way, the only difference between the two groups would be the amount of embarrassment the students had suffered during the screening test. The experimenters explained that the group session had begun a few minutes before, and there had been some reading that the students had done prior to the discussion, so that it would be best for the new members to listen to today's ongoing conversation via earphones. They would be able to join the group in person at the next meeting. With this cover story, and without telling the participants, the experimenters were able to turn on a tape recording of a staged conversation. All of the participants heard precisely the same voices having precisely the same conversation.

And what a conversation it was! Rather than a conversation designed to be exciting, this one was staged to be boring and monotonous. It stumbled and bumbled its way through several minutes of dry conversation on the secondary sexual characteristics of lower mammals. As Aronson and Mills described it, the participants 'contradicted themselves, mumbled several non sequiturs, stated sentences that they never finished ... and in general conducted one of the most worthless and uninteresting discussions imaginable' (1959: 179).

The cognition that the students had suffered through an embarrassing procedure for entry into this sexual discussion was dissonant with the cognitions that (a) the students would prefer not to be embarrassed and (b) the conversation was dreadful. One way of reducing cognitive dissonance was to find something wonderful about the experience that would be consistent with, or justify, the suffering. Despite what the participant heard on the tape, she could decide that the conversation was lively and stimulating; she could decide that the group members seemed lively and interesting people. Those students whose screening test was easy and not embarrassing would have less motivation to distort their evaluation of the group and its members.

Before leaving the session, the students were asked to rate the discussion they had heard and were also asked to rate their impressions of the members. As Aronson and Mills had predicted, women in the high embarrassment group who had a lot of dissonance to reduce, rated the discussion and the group members more highly than did the women in the low embarrassment group. The results are shown in [Figure 1.3](#).

### **Figure 1.3 Evaluation of interest of discussion by participants**



Source: Adapted from Aronson and Mills (1959)

The figure also shows the results of ratings made by students who had been assigned to a control condition. These students also volunteered to be in the sexual discussion group, heard the same conversation as the women in the high and low embarrassment group, but did not have any screening test to undergo. As you can see, the control group subjects thought the group and its members were dull. So, too, did the students in the low embarrassment group. But the students in the high embarrassment group, who had heard precisely the same tape recording as all of the other students, felt that the conversation and the members were significantly more interesting.

Like many studies that use novel procedures, it is possible to think of alternative explanations. In the case of Aronson and Mills's study, you might have several questions about how well the manipulation of embarrassment really fits the theory. Was reading the lurid passage and four-letter words really embarrassing? If it was embarrassing, is that the same as the kind of physical effort and suffering portrayed in the rock-climbing example? Several studies have replicated Aronson and Mills's basic finding, but the study that probably used the most unassailable manipulation of suffering was conducted by Gerard and Matthewson (1966). For their suffering manipulation, the investigators had participants agree to undergo electric shock in order to join a group discussion. They found that the higher the level of shock, the more the participants enjoyed the group and the discussion.

### Threats and Expectancies: Rounding Out the Early History

The excitement of the first studies in cognitive dissonance did not stop at induced compliance, free choice, and effort justification. Applying the insights of cognitive dissonance to make novel predictions took several additional forms. Aronson and Carlsmith (1962) posed an interesting dilemma. Suppose you had a child who had a penchant for eating candy. You wanted him to reduce his sweets consumption. It occurs to you that you can use an admonition to stay away from the candy jar, particularly when you are not present to monitor his behavior. So you prepare to tell him that he should keep away from the sweets while you are out of the house. To reinforce what you say, you plan to tell him what you will do if he fails to listen to your directive. You will .

What should come next? Something firm and harsh or something soft and mild? As before, a broad view of reinforcement and learning theory would suggest that a high threat will serve as a deterrent and lead to a negative evaluation of the stimulus – that is, the candy. Dissonance theory predicts something quite different. The deterrence for eating candy should be as mild as possible. It should be just sufficient to convince the child to refrain from eating, but no more threatening than that.

To show that this is true, Aronson and Carlsmith (1963) had children play with some attractive toys. Then an adult experimenter pointed to the most attractive toy in the room, a robot, and told the children, 'I have to leave the room for a moment. While I am gone, I do not want you to play with this toy.' He pointed to the robot and placed it on a table within reach of the children. For the children who had been randomly assigned to the high-threat condition, the experimenter continued his warning by saying, 'If you play with the robot while I am gone, I will be very angry with you. I will have to pick up my toys and go home.' In the low-threat condition, the adult merely told the children that if they played with the robot he would be 'mildly annoyed.'

All children refrained from playing with the toy as the adult had asked them. However, not playing with the toy was discrepant from the children's cognition that they wanted to play with this attractive toy. How could the children reduce dissonance? Aronson and Carlsmith predicted that the children would come to change their attitude about the toy. By devaluing it, they would restore consistency. Not playing with a robot creates no dissonance if you do not like the robot. Children in the high-threat condition had an additional reason to support their behavior of not playing with the robot. The adult would be very angry and take all of the toys away.

This cognition would be sufficient to reduce the children's dissonance. They did not need to devalue the toy because they had a very good reason to support their behavior. When Aronson and Carlsmith asked the children to rate how much they liked the robot, children in the mild-threat condition rated it significantly lower than did children in the high-threat condition. Mild threat led to internal attitude change; severe threat did not. The moral of the story is that if you want to have your child keep his hands out of the candy jar, use a mild admonition and he may well change his mind about how much he likes your candy.

### **Expecting Success; Expecting Failure**

Everyone likes to be successful. Everyone likes to improve his or her skills. Is there a golfer amongst us who would not like a lower score, a skier who would not like to conquer a higher mountain, a chess player who would not like to achieve a higher ranking? Thinking through the implications of cognitive dissonance, Aronson and Carlsmith (1962) suggested that there may be at least one such time: people who think poorly of their ability, who think they are unsuccessful, are people who are likely to expect not to succeed. The expectation for failure is a cognition and any evidence discrepant with that cognition should cause cognitive dissonance. People who think highly of themselves and expect to succeed would suffer dissonance by failing, but people who think poorly of their ability might experience dissonance from success.

Aronson and Carlsmith (1962) tested this notion by giving people a novel task to perform. They were given pairs of pictures and asked to choose which of the pair was actually a picture of a schizophrenic. (In truth, there were no right answers to the task; all pictures were of

students enrolled at Harvard University.) Some of the participants went through round after round of the task and were given false feedback that they were almost always wrong. They were very poor at the discrimination of who was schizophrenic. Other students received the opposite (false) feedback and learned that they were very good. On the very last round, participants indicated what their answers were and received feedback. Half of the participants found that they were successful; half found they had given the wrong answers. Feedback on the final round was orthogonal to what students had learned about their ability from the prior rounds. Therefore, the design of the study had four conditions. Some students expected to be successful and found that on the last round they performed either consistently with that expectation or inconsistently with it. The other students expected to be unsuccessful, and found that the last round confirmed or contradicted that expectation.

A mysterious 'accident' then occurred. Through a technological glitch, the experimenters lost the data from the last round. The participants were asked to choose between the pairs of pictures again. They were told they could change their answers or stay with the same answers; they just needed to do the round over. It was a relatively easy matter for the participants to remember what they had chosen before the data were lost. So, they could choose to stay with their original answers, or change them to the other picture in the pair. People who were unsuccessful in the last round could easily become successful by changing their choice.

For participants who had expected to be successful because they had been successful on the first several rounds but who had failed on the last round, choices were changed. That is, knowing that they had made the wrong choice on the last round, they changed their choices to achieve success. Not so for those who expected to fail because they had failed on the first several rounds. They stuck with their original choices and failed again. Even more interesting were those who had expected to fail and found that they had done very well on the last round. All they needed to do was to choose the same pictures on the last round as they had chosen previously. But they didn't. Apparently, the dissonance created by the discrepancy between their negative expectation and their positive performance motivated them to change their answers. It seemed more comfortable to perform as they had expected rather than to suffer the state of cognitive dissonance that would arise from the discrepancy.

### Lessons from the Early Days

The elegance of early cognitive dissonance theory was that it was basic and uncomplicated, yet it made predictions that were novel and non-obvious. It drew on a few basic principles whose a priori basis was appealing: that people are driven to achieve consistency and are motivated to make changes in the wake of inconsistency.

There were several features of cognitive dissonance theory that transcended the basic concept of consistency. The first was Festinger's reliance on the concept of cognition. By focusing on 'pieces of knowledge,' as he phrased it, dissonance theory could consider relationships between concepts that, until then, had been treated separately. Attitudes, beliefs, perceptions of the environment, values, and behaviors all fell under a single rubric and all were grist for the mill to determine the level of consistency or inconsistency.

The second major contribution of cognitive dissonance theory is its prediction of a *magnitude* of dissonance. Festinger was not the first to theorize about the consequences of inconsistency. One of the earliest contributions to the literature in social psychology was Fritz Heider's (1946) exposition of psychological balance. Like Festinger, Heider believed that

people intrinsically dislike inconsistent states. It makes us more comfortable if, for example, we like a particular movie and a friend of ours likes the same movie than if we disagreed with our friend. We are pleased by harmonious balance, which is a concept similar to consistency. But Festinger and Heider came from vastly different traditions when thinking about people's mental states in a social environment. Heider came from a Gestalt tradition in which certain relationships among objects in the physical world were simply preferred to other relationships. Heider's genius for social psychology was that he saw that similar principles applied to the social world. Just as we prefer to see such principles as continuity and closure in the perceptual world, so too do we prefer to see consistency in our social world.

By contrast, Festinger came from an intellectual tradition fostered by Kurt Lewin. In that tradition, people navigated a world in which there were motivational pushes and pulls; there were underlying psychological forces that drove our behavior. So, it was more natural for Festinger to expound a theory of cognitive consistency based on forces and drives rather than perceptual preferences. And once the concepts of drive and arousal were introduced, it was not a major leap to theorize about magnitude. There can be more drive or less drive, depending on the amount of dissonance that is aroused in a given situation. It was the ability to predict the *situations* in which there would be more or less dissonance that gave the theory its very special properties. Few would have argued that making a speech contrary to one's attitudes is inconsistent and should lead to change. However, the hypothesis that there is more arousal when the magnitude of incentive is low rather than high is what made the dissonance theory predictions special.

And controversial – which brings us to the next phase of the work in dissonance theory.

- cognitive dissonance
- cognition
- inconsistency
- attitude change
- cognitive theories
- soup kitchens
- embarrassment

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