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# Cognitive Dissonance

by Leon Festinger

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LEON FESTINGER is professor of psychology at Stanford University. Festinger took his B.S. in psychology at the College of the City of New York in 1939. He received M.A. and Ph.D. degrees from the State University of Iowa, where he specialized in the field of child behavior, in 1940 and 1942 respectively. He remained at Iowa as a research associate until 1943 and for the next two years served as senior statistician on the Committee on Selection and Training of Aircraft Pilots at the University of Rochester. From 1945 to 1948 he taught at the Massachusetts Institute of Technology, and he was program director of the Research Center for Group Dynamics at the University of Michigan until 1951. Festinger went to Stanford from the University of Minnesota, where he had been professor of psychology since 1951. In 1959 the American Psychological Association awarded Festinger

its Distinguished Scientific Contribution Award.

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# Cognitive Dissonance

*It is the subject of a new theory based on experiments showing that the grass is usually not greener on the other side of the fence and that grapes are sourest when they are in easy reach*

by Leon Festinger

There is an experiment in psychology that you can perform easily in your own home if you have a child three or four years old. Buy two toys that you are fairly sure will be equally attractive to the child. Show them both to him and say: "Here are two nice toys. This one is for you to keep. The other I must give back to the store." You then hand the child the toy that is his to keep and ask: "Which of the two toys do you like better?" Studies have shown that in such a situation most children will tell you they prefer the toy they are to keep.

This response of children seems to conflict with the old saying that the grass is always greener on the other side of the fence. Do adults respond in the same way under similar circumstances or does the adage indeed become true as we grow older? The question is of considerable interest because the adult world is filled with choices and alternative courses of action that are often about equally attractive. When they make a choice of a college or a car or a spouse or a home or a political candidate, do most people remain satisfied with their choice or do they tend to wish they had made a different one? Naturally any choice may turn out to be a bad one on the basis of some objective measurement, but the question is: Does some psychological process come into play immediately after the making of a choice that colors one's attitude, either favorably or unfavorably, toward the decision?

To illuminate this question there is another experiment one can do at home, this time using an adult as a subject rather than a child. Buy two presents for your wife, again choosing things you are reasonably sure she will find about equally attractive. Find some plausible excuse for having both of them in your

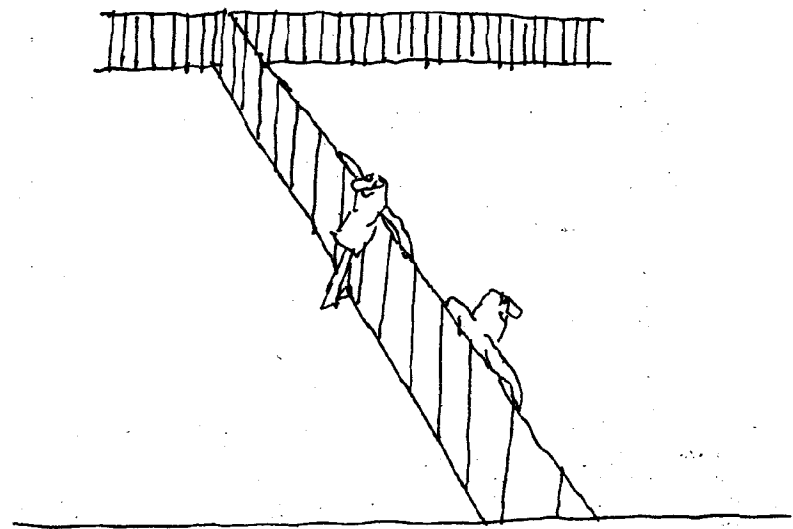
possession, show them to your wife and ask her to tell you how attractive each one is to her. After you have obtained a good measurement of attractiveness, tell her that she can have one of them, whichever she chooses. The other you will return to the store. After she has made her choice, ask her once more to evaluate the attractiveness of each of them. If you compare the evaluations of attractiveness before and after the choice, you will probably find that the chosen present has increased in attractiveness and the rejected one decreased.

Such behavior can be explained by a new theory concerning "cognitive dissonance." This theory centers around the idea that if a person knows various things that are not psychologically consistent with one another, he will, in a variety of ways, try to make them more consistent. Two items of information

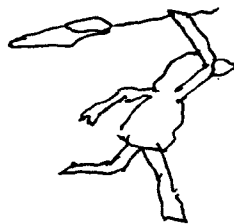
that psychologically do not fit together are said to be in a dissonant relation to each other. The items of information may be about behavior, feelings, opinions, things in the environment and so on. The word "cognitive" simply emphasizes that the theory deals with relations among items of information.

Such items can of course be changed. A person can change his opinion; he can change his behavior, thereby changing the information he has about it; he can even distort his perception and his information about the world around him. Changes in items of information that produce or restore consistency are referred to as dissonance-reducing changes.

Cognitive dissonance is a motivating state of affairs. Just as hunger impels a person to eat, so does dissonance impel a person to change his opinions or his behavior. The world, however, is much

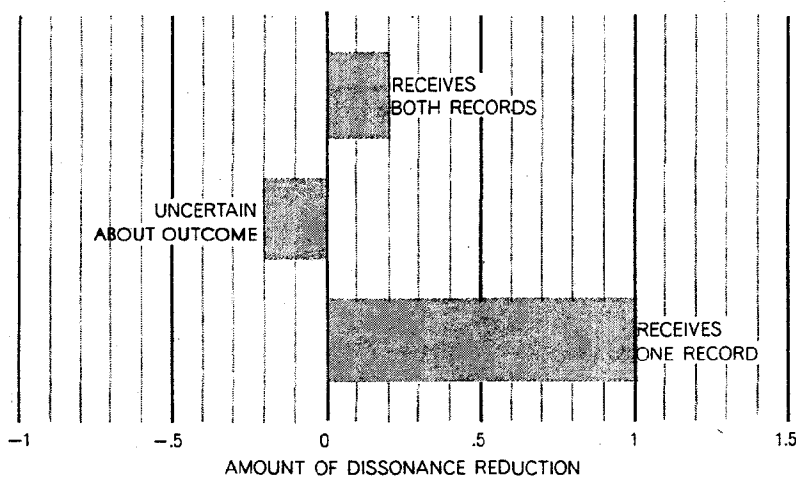


*The grass is not always greener on the other side of the fence*



Brechman

Consequences of making a decision between two reasonably attractive alternatives



**DISSONANCE REDUCTION** is a psychological phenomenon found to occur after a person has made a choice between two approximately equal alternatives. The effect of the phenomenon is to enhance the attractiveness of the chosen object or chosen course of action. The chart summarizes the results of an experiment in which high school girls rated the attractiveness of 12 "hit" records before and after choosing one of them as a gift. Substantial dissonance reduction occurred under only one of three experimental conditions described in the text. Under two other conditions no systematic reduction was observed.

more effectively arranged for hunger reduction than it is for dissonance reduction. It is almost always possible to find something to eat. It is not always easy to reduce dissonance. Sometimes it may be very difficult or even impossible to change behavior or opinions that are involved in dissonant relations. Consequently there are circumstances in which appreciable dissonance may persist for long periods.

To understand cognitive dissonance as a motivating state, it is necessary to have a clearer conception of the conditions that produce it. The simplest definition of dissonance can, perhaps, be given in terms of a person's expectations. In the course of our lives we have all accumulated a large number of expectations about what things go together and what things do not. When such an expectation is not fulfilled, dissonance occurs.

For example, a person standing unprotected in the rain would expect to get wet. If he found himself in the rain and he was not getting wet, there would exist dissonance between these two pieces of information. This unlikely example is one where the expectations of different people would all be uniform. There are obviously many instances where different people would not share the same expectations. Someone who is very self-confident might expect to succeed at whatever he tried, whereas someone who had a low opinion of himself might normally expect to fail. Under these circumstances what would produce dissonance for one person might produce consonance for another. In experimental investigations, of course, an effort is made to provide situations in which expectations are rather uniform.

Perhaps the best way to explain the theory of cognitive dissonance is to show its application to specific situations. The rest of this article, therefore, will be devoted to a discussion of three examples of cognitive dissonance. I shall discuss the effects of making a decision, of lying and of temptation. These three examples by no means cover all the situations in which dissonance can be created. Indeed, it seldom happens that everything a person knows about an action he has taken is perfectly consistent with his having taken it. The three examples, however, may serve to illustrate the range of situations in which dissonance can be expected to occur. They will also serve to show the kinds of dissonance-reduction effects that are obtained under a special circumstance: when dissonance involves the person's behavior

and the action in question is difficult to change.

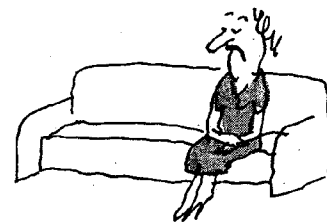
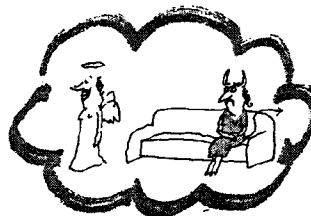
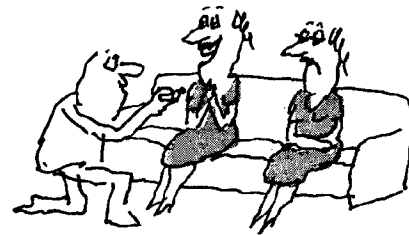
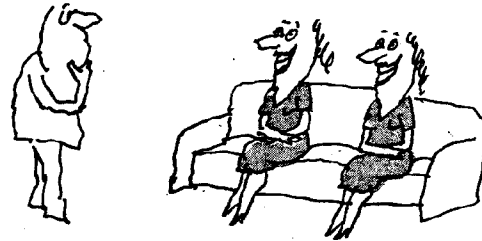
Let us consider first the consequences of making a decision. Imagine the situation of a person who has carefully weighed two reasonably attractive alternatives and then chosen one of them—a decision that, for our purposes, can be regarded as irrevocable. All the information this person has concerning the attractive features of the rejected alternative (and the possible unattractive features of the chosen alternative) are now inconsistent, or dissonant, with the knowledge that he has made the given choice. It is true that the person also knows many things that are consistent or consonant with the choice he has made, which is to say all the attractive features of the chosen alternative and unattractive features of the rejected one. Nevertheless, some dissonance exists and after the decision the individual will try to reduce the dissonance.

There are two major ways in which the individual can reduce dissonance in this situation. He can persuade himself that the attractive features of the rejected alternative are not really so attractive as he had originally thought, and that the unattractive features of the chosen alternative are not really unattractive. He can also provide additional justification for his choice by exaggerating the attractive features of the chosen alternative and the unattractive features of the rejected alternative. In other words, according to the theory the process of dissonance reduction should lead, after the decision, to an increase in the desirability of the chosen alternative and a decrease in the desirability of the rejected alternative.

This phenomenon has been demonstrated in a variety of experiments. A brief description of one of these will suffice to illustrate the precise nature of the effect. In an experiment performed by Jon Jecker of Stanford University, high school girls were asked to rate the attractiveness of each of 12 "hit" records. For each girl two records that she had rated as being only moderately attractive were selected and she was asked which of the two she would like as a gift. After having made her choice, the girl again rated the attractiveness of all the records. The dissonance created by the decision could be reduced by increasing the attractiveness of the chosen record and decreasing the attractiveness of the rejected record. Consequently a measurement of dissonance reduction could be obtained by summing both of these kinds of changes in ratings made before and after the decision.

Different experimental variations were employed in this experiment in order to examine the dynamics of the process of dissonance reduction. Let us look at three of these experimental variations. In all three conditions the girls, when they were making their choice, were given to understand there was a slight possibility that they might actually be given both records. In one condition they were asked to rerate the

records after they had made their choice but before they knew definitely whether they would receive both records or only the one they chose. The results for this condition should indicate whether dissonance reduction begins with having made the choice or whether it is suspended until the uncertainty is resolved. In a second condition the girls were actually given both records after their choice and were then asked to rerate



*Further consequences of making a difficult decision*

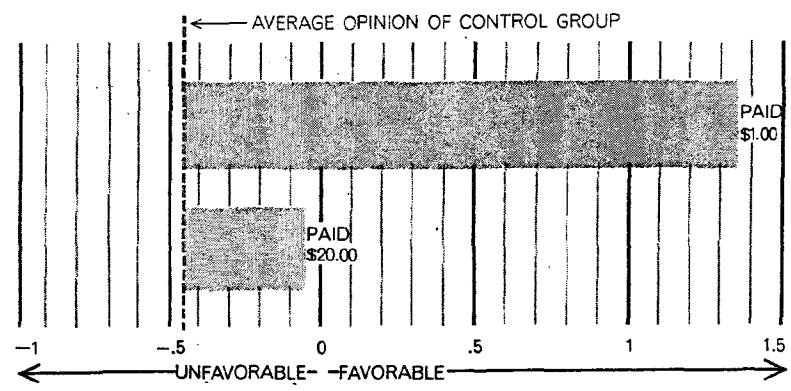
all the records. Since they had received both records and therefore no dissonance existed following the decision, there should be no evidence of dissonance reduction in this condition. In a third condition the girls were given only the record they chose and were then asked to do the rerating. This, of course, resembles the normal outcome of a decision and the usual dissonance reduction should occur.

The chart on page 4 shows the results for these three conditions. When the girls are uncertain as to the outcome,

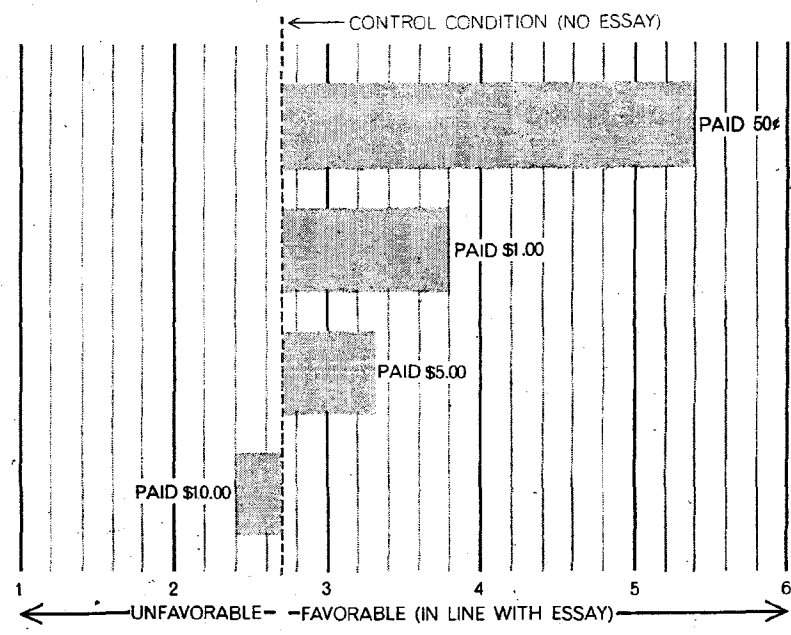
or when they receive both records, there is no dissonance reduction—that is, no systematic change in attractiveness of the chosen and rejected records. The results in both conditions are very close to zero—one slightly positive, the other slightly negative. When they receive only the record they chose, however, there is a large systematic change in rating to reduce dissonance. Since dissonance reduction is only observed in this last experimental condition, it is evident that dissonance reduction does not occur during the process of making

a decision but only after the decision is made and the outcome is clear.

Let us turn now to the consequences of lying. There are many circumstances in which, for one reason or another, an individual publicly states something that is at variance with his private belief. Here again one can expect dissonance to arise. There is an inconsistency between knowing that one really believes one thing and knowing that one has publicly stated something quite different. Again, to be sure, the individual knows things that are consonant with his overt, public behavior. All the reasons that induced him to make the public statement are consonant with his having made it and provide him with some justification for his behavior. Nevertheless, some dissonance exists and, according to the theory, there will be attempts to reduce it. The degree to which the dissonance is bothersome for the individual will depend on two things. The more deviant his public statement is from his private belief, the greater will be the dissonance. The greater the amount of justification the person has for having made the public statement, the less bothersome the dissonance will be.



**CONSEQUENCES OF LYING** are found to vary, depending on whether the justification for the lie is large or small. In this experiment students were persuaded to tell others that a boring experience was really fun. Those in one group were paid only \$1 for their cooperation; in a second group, \$20. The low-paid students, having least justification for lying, experienced most dissonance and reduced it by coming to regard the experience favorably.



**GRADED CHANGE OF OPINION** was produced by paying subjects various sums for writing essays advocating opinions contrary to their beliefs. When examined later, students paid the least had changed their opinion the most to agree with what they had written. Only the highest paid group held to their original opinion more strongly than did a control group.

**H**ow can the dissonance be reduced? One method is obvious. The individual can remove the dissonance by retracting his public statement. But let us consider only those instances in which the public statement, once made, cannot be changed or withdrawn; in other words, in which the behavior is irrevocable. Under such circumstances the major avenue for reduction of the dissonance is change of private opinion. That is, if the private opinion were changed so that it agreed with what was publicly stated, obviously the dissonance would be gone. The theory thus leads us to expect that after having made an irrevocable public statement at variance with his private belief, a person will tend to change his private belief to bring it into line with his public statement. Furthermore, the degree to which he changes his private belief will depend on the amount of justification or the amount of pressure for making the public statement initially. The less the original justification or pressure, the greater the dissonance and the more the person's private belief can be expected to change.

An experiment recently conducted at Stanford University by James M. Carlsmith and me illustrates the nature of this effect. In the experiment, college students were induced to make a statement at variance with their own belief. It was done by using students who had

volunteered to participate in an experiment to measure "motor performance." The purported experiment lasted an hour and was a boring and fatiguing session. At the end of the hour the experimenter thanked the subject for his participation, indicating that the experiment was over. The real purpose of the hour-long session, however, was to provide each subject with an identical experience about which he would have an unfavorable opinion.

At the end of the fatiguing hour the experimenter enlisted the subject's aid in preparing the next person for the experiment. The subject was led to believe that, for experimental purposes, the next person was supposed to be given the impression that the hour's session was going to be very interesting and lots of fun. The subject was persuaded to help in this deception by telling the next subject, who was waiting in an adjoining room, that he himself had just finished the hour and that it had indeed been very interesting and lots of fun. The first subject was then interviewed by someone else to determine his actual private opinion of the experiment.

Two experimental conditions were run that differed only in the amount of pressure, or justification given the subject for stating a public opinion at variance with his private belief. All subjects, of course, had the justification of helping to conduct a scientific experiment. In addition to this, half of the subjects were paid \$1 for their help—a relatively small amount of money; the other subjects were paid \$20—a rather large sum for the work involved. From the theory we would expect that the subjects who were paid only \$1, having less justification for their action, would have more dissonance and would change their private beliefs more in order to reduce the dissonance. In other words, we would expect the greatest change in private opinion among the subjects given the least tangible incentive for changing.

The upper illustration on the opposite page shows the results of the experiment. The broken line in the chart shows the results for a control group of subjects. These subjects participated in the hour-long session and then were asked to give their private opinion of it. Their generally unfavorable views are to be expected when no dissonance is induced between private belief and public statement. It is clear from the chart that introducing such dissonance produced a change of opinion so that the subjects who were asked to take part in a deception finally came to think better of the session than did the control subjects. It



*The effect of rewards on lying*

is also clear that only in the condition where they were paid a dollar is this opinion change appreciable. When they were paid a lot of money, the justification for misrepresenting private belief is high and there is correspondingly less change of opinion to reduce dissonance.

Another way to summarize the result is to say that those who are highly rewarded for doing something that involves dissonance change their opinion less in the direction of agreeing with what they did than those who are given very little reward. This result may seem surprising, since we are used to thinking that reward is effective in creating change. It must be remembered, however, that the critical factor here is that the reward is being used to induce a behavior that is dissonant with private opinion.

To show that this result is valid and not just a function of the particular situation or the particular sums of money used for reward, Arthur R. Cohen of New York University conducted a similar experiment in a different context. Cohen paid subjects to write essays advocating an opinion contrary to what

they really believed. Subjects were paid either \$10, \$5, \$1 or 50 cents to do this. To measure the extent to which dissonance was reduced by their changing their opinion, each subject was then given a questionnaire, which he left unsigned, to determine his private opinion on the issue. The extent to which the subjects reduced dissonance by changing their opinion to agree with what they wrote in the essay is shown in the lower illustration on the opposite page. Once again it is clear that the smaller the original justification for engaging in the dissonance-producing action, the greater the subsequent change in private opinion to bring it into line with the action.

The final set of experiments I shall discuss deals with the consequences of resisting temptation. What happens when a person wants something and discovers that he cannot have it? Does he now want it even more or does he persuade himself that it is really not worth having? Sometimes our common general understanding of human behavior can provide at least crude answers to such questions. In this case,

however, our common understanding is ambiguous, because it supplies two contradictory answers. Everyone knows the meaning of the term "sour grapes"; it is the attitude taken by a person who persuades himself that he really does not want what he cannot have. But we are also familiar with the opposite reaction. The child who is not allowed to eat candy and hence loves candy passionately; the woman who adores expensive clothes even though she cannot afford to own them; the man who has a hopeless obsession for a woman who spurns his attentions. Everyone "understands" the behavior of the person who longs for what he cannot have.

Obviously one cannot say one of these reactions is wrong and the other is right; they both occur. One might at least, however, try to answer the question: Under what circumstances does one reaction take place and not the other? If we examine the question from the point of view of the theory of dissonance, a partial answer begins to emerge.

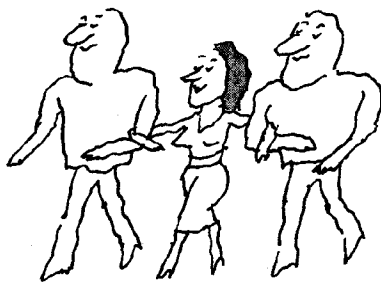
Imagine the psychological situation that exists for an individual who is tempted to engage in a certain action but for one reason or another refrains. An analysis of the situation here reveals its similarity to the other dissonance-producing situations. An individual's knowledge concerning the attractive aspects of the activity toward which he was tempted is dissonant with the knowledge that he has refrained from engaging in the activity. Once more, of course, the individual has some knowledge that is consonant with his behavior in the situation. All the pressures, reasons and justifications for refraining are consonant with his actual behavior. Nevertheless, the dissonance does exist, and there will be psychological activity oriented toward reducing this dissonance.

As we have already seen in connection with other illustrations, one major way to reduce dissonance is to change one's opinions and evaluations in order to bring them closer in line with one's actual behavior. Therefore when there is

dissonance produced by resisting temptation, it can be reduced by derogating or devaluing the activity toward which one was tempted. This derivation from the theory clearly implies the sour-grapes attitude, but both theory and experiment tell us that such dissonance-reducing effects will occur only when there was insufficient original justification for the behavior. Where the original justification for refraining from the action was great, little dissonance would have occurred and there would have been correspondingly little change of opinion in order to reduce dissonance. Therefore one might expect that if a person had resisted temptation in a situation of strong prohibition or strong threatened punishment, little dissonance would have been created and one would not observe the sour-grapes effect. One would expect this effect only if the person resisted temptation under conditions of weak deterrent.

This line of reasoning leaves open the question of when the reverse effect occurs—that is, the situation in which desire for the "unattainable" object is increased. Experimentally it is possible to look at both effects. This was done by Elliot Aronson and Carlsmith, at Stanford University, in an experiment that sheds considerable light on the problem. The experiment was performed with children who were about four years old. Each child was individually brought into a large playroom in which there were five toys on a table. After the child had had an opportunity to play briefly with each toy, he was asked to rank the five in order of attractiveness. The toy that the child liked second best was then left on the table and the other four toys were spread around on the floor. The experimenter told the child that he had to leave for a few minutes to do an errand but would be back soon. The experimenter then left the room for 10 minutes. Various techniques were employed to "prohibit" the child from playing with the particular toy that he liked second best while the experimenter was out of the room.

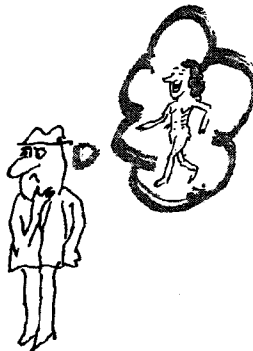
For different children this prohibition was instituted in three different ways. In one condition there was no temptation at all; the experimenter told the child he could play with any of the toys in the room and then took the second-best toy with him when he left. In the other two conditions temptation was present: the second-best toy was left on the table in the experimenter's absence. The children were told they could play with any of the toys in the room except



*Temptation accompanied by a severe threat*



*Temptation accompanied by a mild threat*



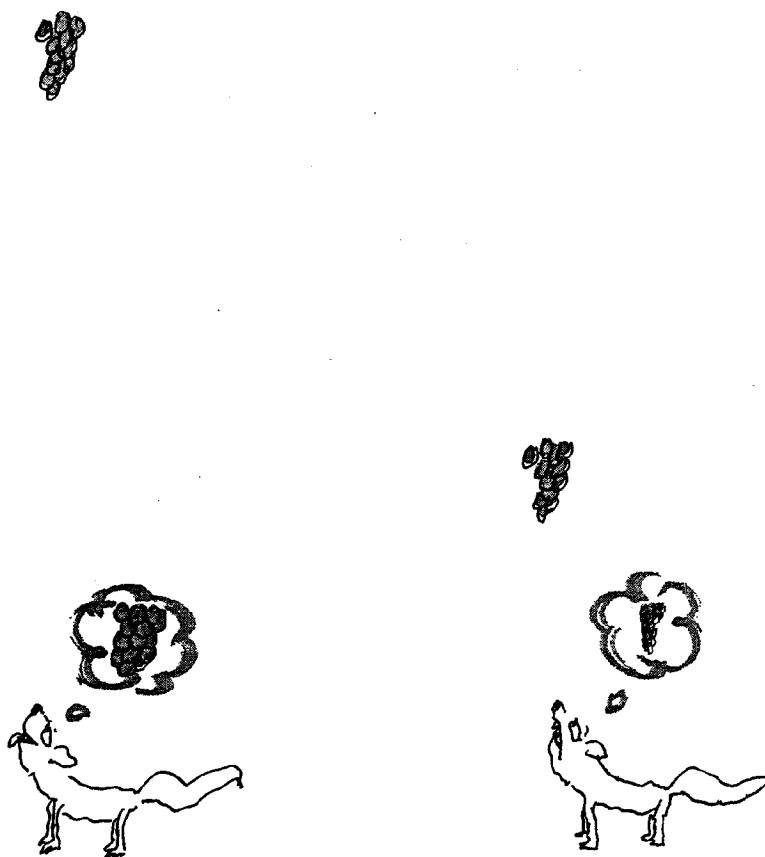
the one on the table. The children in one group were threatened with mild punishment if they violated the prohibition, whereas those in the other group were threatened with more severe punishment. (The actual nature of the punishment was left unspecified.)

During his absence from the room the experimenter observed each child through a one-way mirror. None of the children in the temptation conditions played with the prohibited toy. After 10 minutes were up the experimenter returned to the playroom and each child was again allowed to play briefly with each of the five toys. The attractiveness of each toy for the child was again measured. By comparing the before and after measurements of the attractiveness of the toy the child originally liked second best, one can assess the effects of the prohibition. The results are shown in the chart on page 9.

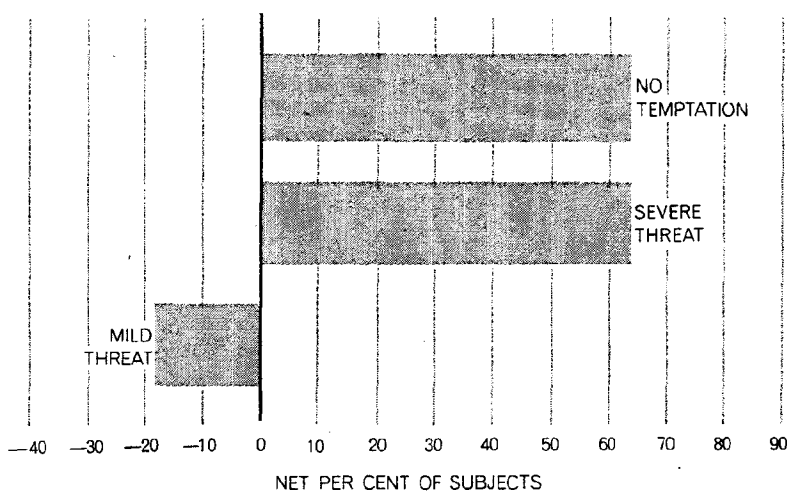
When there was no temptation—that is, when the prohibited toy was not physically present—there was of course no dissonance, and the preponderant result is an increase in the attractiveness of the prohibited toy. When the temptation is present but the prohibition is enforced by means of a severe threat of punishment, there is likewise little dissonance created by refraining, and again the preponderant result is an increase in the attractiveness of the prohibited toy. In other words, it seems clear that a prohibition that is enforced in such a way as not to introduce dissonance results in a greater desire for the prohibited activity.

The results are quite different, however, when the prohibition is enforced by only a mild threat of punishment. Here we see the result to be expected from the theory of dissonance. Because the justification for refraining from playing with the toy is relatively weak, there is appreciable dissonance between the child's knowledge that the toy is attractive and his actual behavior. The tendency to reduce this dissonance is strong enough to more than overcome the effect apparent in the other two conditions. Here, as a result of dissonance reduction, we see an appreciable sour-grapes phenomenon.

The theory of cognitive dissonance obviously has many implications for everyday life. In addition to throwing light on one's own behavior, it would seem to carry useful lessons for everyone concerned with understanding human behavior in a world where everything is not black and white.



Consequences of resisting temptation when deterrence varies



CONSEQUENCES OF TEMPTATION were explored by prohibiting children from playing with a desirable toy. Later the children were asked to re-evaluate the attractiveness of the forbidden toy. In one case the prohibition was enforced by removing the toy from the child's presence. In the second case the prohibition took the form of a threat of severe punishment; in the third case, a threat of mild punishment. The chart shows the net per cent of children who thought the forbidden toy more attractive after the experiment than before. ("Net per cent" means the per cent who found the toy more attractive minus the per cent who found it less so.) Evidently only those threatened mildly experienced much dissonance, and they reduced it by downgrading toy's desirability. Others thought the toy more desirable.

## COGNITIVE DISSONANCE

Leon Festinger    OCTOBER 1962

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## SUMMARY

According to the theory of cognitive dissonance, if a person knows various things that are not psychologically consistent with one another, he will try to make them more consistent. Cognitive dissonance is thus a motivating state of affairs. Just as hunger impels a person to eat, dissonance impels him to change his opinions and his behavior. Perhaps the best way to explain the theory of cognitive dissonance is by example. Festinger reports examples of three common situations in which the effects of cognitive dissonance are clearly present. These three examples illustrate not only how dissonance develops, but how it can be reduced.

After a person irrevocably selects one of two attractive alternatives, all the information he has concerning the attractive features of the rejected alternative are in conflict with the knowledge that he has rejected it. Such dissonance can be reduced in two ways: he can persuade himself that the attractive features of the rejected alternative are really not so attractive; or he can provide additional justification for his choice by exaggerating the attractive features of the chosen article. High-school girls were allowed to select only one record from a pair they had previously rated as equal. After the choice, the girls again rated the records; this time the selected record was rated higher than the other.

Cognitive dissonance can be produced by lying; there is an inconsistency between knowing that one really believes one

thing but has said another. When the statement is irrevocable, the main avenue for the reduction of this dissonance is a change of private opinion, but the degree to which the dissonance motivates the individual to change his opinion depends on two factors. First, the more deviant his public statement is from his private belief, the greater will be the dissonance. Second, the greater the amount of justification the person has for lying, the less bothersome will be the dissonance. In other words, those who are highly rewarded for lying are least likely to change their opinion to coincide with the lie.

The final example of dissonance deals with the consequences of resisting temptation. There are two common reactions when a person does not obtain something he wants. Everyone is familiar with the "sour grapes" reaction, but the opposite reaction may also occur: sometimes not achieving a goal seems to enhance its value. Under what circumstances does each reaction occur? The evaluation of such situations in terms of cognitive dissonance may provide a partial answer. When the goal is difficult or impossible to achieve, there is little dissonance created by not obtaining it, and as a result no devaluation of the goal is necessary to eliminate the dissonance. On the other hand, if there is insufficient justification for resisting temptation, considerable dissonance will be produced and the goal must be degraded to reduce it.

## II. GLOSSARY

*cognitive* — pertaining to an item of knowledge.

*cognitive dissonance* — a motivating state of affairs produced by two pieces of knowledge that are psychologically inconsistent.

*sour grapes* — debasing a goal that one has failed to achieve.

## III. ESSAY STUDY QUESTIONS

1. In what way is cognitive dissonance like hunger?
2. What evidence is there that cognitive dissonance does not occur during the process of making a decision, but only after the outcome is clear?
3. What are the ways of reducing dissonance after a decision?
4. The smaller the original justification for engaging in a dissonance-producing action, the greater is the subsequent change in private opinion. Explain.
5. When is the "sour grapes" phenomenon most likely to occur?
6. Give three experimental examples of cognitive dissonance.