RESISTANCE AND PERSUASION

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LEA 2004
LAWRENCE ERLBAUM ASSOCIATES, PUBLISHERS
Mahwah, New Jersey London

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Looking Ahead as a Technique to Reduce Resistance to Persuasive Attempts

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Social influence always involves resistance on the part of the target of influence. Regardless of the pressures toward acceptance of the influence, there is always a countervailing force in the form of resistance that reduces the likelihood of persuasion being effective. Successful influence, then, will be achieved only when the forces toward acceptance are greater than the forces stemming from resistance. As Knowles and Linn (this volume) so aptly point out, bringing about a situation where the forces toward acceptance are greater than the forces toward resistance can be achieved either by increasing the positive forces for persuasion or by decreasing the resistance that prevents persuasion.

Like other chapters in this book, we will focus on techniques to increase persuasion by decreasing resistance. A variety of techniques are discussed in this book that vary in their nature (e.g., cognitive versus affective) and in their subtlety (e.g., direct versus indirect). These techniques include interrupting resistance (Knowles & Linn, chapter 1 of this volume), using resistance paradoxically against itself (Knowles & Linn), persuasive message factors (Briñol, Rucker, Tormala, & Petty, this volume; Tormala & Petty, this volume; Wegener, Petty, Smoak, & Fabrigar, this volume), affect induction (Feugen & Brehm, this

volume), forewarning (Quinn & Wood, this volume), self-affirmation (Jacks & O'Brien, this volume), positive thinking (Johnson, Smith-McLallen, Killeya, & Levin, this volume) and threats to self-image (Sagarin & Cialdini, this volume). We focus on a different technique—contemplation of the future as people make decisions in the present. We shall demonstrate that thinking about possibilities in the future can serve as a powerful force to overcome resistance to persuasion. The goal of this chapter is to demonstrate that future focus can be an effective technique for reducing resistance to persuasion, and to begin to uncover the affective, cognitive, and motivational reasons that underlie successful persuasion. Following a discussion of counterfactual generation, we shall consider prefactual thinking, especially anticipated regret, and its possible role in increasing and decreasing resistance to change. Then, we will broaden the focus to consider how techniques that involve thinking about the future can generally reduce resistance to social influence.

LAYING THE FOUNDATION: COUNTERFACTUAL THINKING

The initial ideas for this chapter have their roots in earlier work that we and others have done in the area of counterfactual thinking. Following the seminal paper by Kahneman and Miller (1986), which described the development of counterfactual comparison standards, there was a virtual explosion of research into when, why, and with what effects people generate alternatives to reality (see Roese & Olson, 1995). This research identified the antecedent conditions for counterfactual thinking, the mutations of reality that are most likely, the emotional consequences of counterfactual thinking, and the functions of counterfactual generations (Markman, Gavanski, Sherman, & McMullen, 1993, 1995; Roese, 1994).

While most of this work focused on counterfactuals for negative outcomes that had already occurred in the past ("What might have been, if only—"), some folks were beginning to investigate the interesting possibility that people might anticipate future regret by imagining their future actions, the possible negative outcomes of those actions, and counterfactual thoughts that would follow these future negative outcomes (Gleicher, Boninger, Strathman, Armor, Hetts, & Ahn, 1995; McConnell et al., 2000; Miller & Taylor, 1995). Engaging in prefactual thinking and anticipating future regret for various choices and outcomes would affect decision strategies because people would be motivated to reduce the likelihood and the amount of future regret.

Several studies seem to indicate that people indeed anticipate future regret under certain circumstances and that such prefactual thinking affects choices. For example, Boninger, Gleicher, and Strathman (1994) asked participants to think about either the consequences of using the insurance option in a game and finding out that it was unnecessary versus not using the insurance option in the game and finding that it *was* necessary. The specific prefactual that participants generated very much affected their insurance purchase decision in the direction that would reduce the regret elicited by that prefactual. Similar results were reported by Taylor (1989) and by Simonson (1992).

Regret theory (Bell, 1982; Loomes & Sugden, 1982) explicitly outlined the role of prefactual thinking in decision making. These theorists argued that anticipation of different amounts of regret for choices that might turn out badly is an important part of the choice process itself. In addition to assessing the absolute level of pleasure or pain associated with an outcome, people are also concerned with minimizing future regret for their choices. Recent studies have focused on this process of regret aversion. Zeelenberg, Beattie, Van der Pligt, and de Vries (1996) found that people prefer gambling choices where the outcomes of alternative gambles will never be learned. This avoids any possibility of future regret. Larrick and Boles (1995) and Ritov (1996) have also demonstrated that the anticipation of regret and the motivation to minimize future regret can explain choices when the future is uncertain (see also Bar-Hillel & Neter, 1996; Tykocinski & Pittman, 1998).

Based on this diverse research, it is clear that anticipated regret can very much affect the decisions that people make in the present. The principle that is operating is a relatively simple one: By anticipating future feelings, people can act in the present so as to minimize their future regret. We wondered whether this seemingly powerful tendency could possibly explain one of the most fascinating phenomena identified by social psychologists, the tendency to react against the suggestions and demands of others such that when others "push" one alternative, it can actually increase the likelihood of choosing other alternatives. This phenomenon, cognitive reactance, has been shown to be a strong and robust reaction to social influence pressure (Brehm, 1966).

ANTICIPATED REGRET AND COGNITIVE REACTANCE

Imagine a situation where an individual can choose between Alternative A and Alternative B. Someone tells this individual that she should really choose Alternative A. This has the paradoxical effect of increasing the likelihood (compared to the base-rate) that the individual will choose Alternative B. Brehm (1966) explained cognitive reactance in terms of a motivation to reinstate freedom of choice. Whenever one's freedom to do something is threatened or eliminated, one will act so as to reinstate that freedom. Telling people to choose Alternative A threatens their freedom to choose Alternative B, and the best way to reestablish this freedom is to actually choose Alternative B.

This reinstatement of freedom explanation has remained pretty much intact over the years as the explanation for cognitive reactance. In light of the recent work on anticipated regret, we wondered whether there might be a feasible alternative explanation. We proposed that reactance findings might be recon-

ceptualized in terms of the anticipation of the amounts of future regret for compliance versus reactance. That is, the choice to go against the dictates of another may be due, in part, to the amount of future possible regret that is anticipated for negative consequences after choosing either the "forbidden" or the "promoted" alternative. In that individuals reliably go against the demands of the other, it seemed possible that they anticipate greater regret if negative outcomes follow compliance with the dictates of another than if the same negative outcomes follow defiance against the dictates. To minimize future regret, individuals will exhibit reactive behavior rather than compliance.

We examined our anticipated regret possibility as a way to understand why and the conditions under which people would show resistance to the dictates of another person. We were particularly interested in two issues. First, do people *spontaneously* anticipate regret when making decisions? In all the studies of anticipated regret cited above, either participants were directly instructed to anticipate future regret or conditions were established that made it very likely that people would focus on future outcomes and feelings. Second, by focusing specifically on interpersonal persuasion situations where people are "pushed" to make a particular choice, situations that typically arouse cognitive reactance, we could determine whether anticipated regret was a factor in reactant behaviors.

EMPIRICAL INVESTIGATIONS

As a first step, it was important to investigate perceptions of post-decision regret experienced by people who did or did not follow the dictates of another and experienced a negative outcome. To examine this, participants were asked to read scenarios that featured two individuals who were each debating between purchasing one of two stocks (Kahneman & Miller, 1986). Both protagonists received advice from one of three types of sources: a stranger, a friend, or a stockbroker. One of the individuals in the scenario (Mr. Paul) followed the advice, whereas the other (Mr. George) reacted against the advice. Both individuals learned that had they chosen the other stock, they would have been better off by $1200. If compliance followed by a negative outcome is seen as leading to more regret than reactance followed by the same negative outcome, we should find that the compliant actor (Mr. Paul) would have more regret attributed to him than would the reactive actor (Mr. George).

In addition, the different experimental conditions examined whether the source of the directive was important in affecting the amount of regret that one is seen as feeling for either complying with, or reacting against, another's edict. In the majority of the research on reactance involving social threats, the threatening agent is a stranger. We were interested in examining regret as a response to the directives of a high-expertise source (stockbroker), a well-liked source (friend), and a neutral target (a stranger). People should expect greater regret following an undesirable outcome if one complies with a stranger instead of complying with an expert or a liked other. That is, the salience of the "if only I hadn't listened to that person . . ." counterfactual would be stronger for a stranger than for a target who is greater in expertise or likability, producing greater regret in the former case relative to the latter two cases. It is probably quite unusual for one to follow the stock advice of a complete stranger (compared to a friend or a stockbroker), and counterfactual thinking is more likely to follow from atypical events (Kahneman & Miller, 1986; Wells & Gavanski, 1989). Judgments of regret for protagonists who reacted against the other target should be greater for the high-expertise target (i.e., someone who should know what they are doing) than for the other two targets. That is, it is easier to kick oneself for not going along with the advice of an expert. Such an effect is in part due to the fact that going against the advice of an expert is a choice that increases the a priori probability of a negative outcome.

TABLE 8.1
Amount of Regret Attributed to Compliant and Reactive Scenario Actors

	Which actor feels more regret?	
	Compliant	*Reactive*
Dichotomous judgment of regret		
Stockbroker	14%	86%
Friend	26%	74%
Stranger	42%	58%
Continuous ratings of regret		
Stockbroker	5.16	7.19
Friend	5.85	7.04
Stranger	6.04	6.65

Contrary to our initial expectations that compliance leads to a greater attribution of regret than reactance (thus providing an alternative explanation for reactance effects), the actor who resisted the persuasive attempt (i.e., reactive behavior) was perceived as feeling more retrospective regret than the actor who complied. That is, it is *not* the case that observers feel that compliance will lead to greater potential regret than will reactance. These results suggest that reactance is not a strategy to minimize future regret in persuasion situations. As can be seen in Table 8.1, the predictions for target type were confirmed—greater regret for complying with a stranger than for complying with an expert or a friend, and greater regret for reacting against an expert than against a friend or a stranger. This pattern of results was replicated in a number of other scenario-style studies that varied in domain (e.g., gambles, lotteries), level of threat, and protagonist (e.g., third party versus self). Across these various studies, resistance to the persuasive message—in the form of reactive behavior—was perceived as resulting in greater retrospective regret than was compliant behavior (Crawford, Lewis, McConnell, & Sherman, 1998).

Although these findings may seem at odds with the fact that reactance is often observed in persuasion situations (Brehm & Sensenig, 1966; Heller, Pallak, & Picek, 1973; Snyder & Wicklund, 1976; Worchel & Brehm, 1971) and at

odds with our prediction of reactance as a response to anticipated regret, they are not necessarily incompatible. To our knowledge, no research on reactance in choice situations has involved an examination of post-outcome perceptions of regret. In the scenario studies, we assessed participants' judgments about how people would feel *after* the negative outcomes were known. The reactance literature, as well as our account of reactance, involves the influences on people's behavioral choices *before* the outcomes are known. Earlier in the development of our reasoning, we argued that what would drive reactant behavior would be a predecision anticipation of regret. That is, in anticipation, future feelings of regret for negative outcomes after following someone else's directives would be perceived as greater than these feelings of regret for negative outcomes after reacting against them. This involves the anticipation of future regret rather than the perception of regret after the fact.

It may be that predictions of future regret do not match the post-outcome inferences made by observers in the scenario studies. Moreover, it may even be the case that predictions or postdictions of regret do not match actual regret that is experienced by compliant and reactant people. Indeed, there is research consistent with this possibility, including work by Gilbert, Pinel, Wilson, Blumberg, and Wheatley (1998) on errors in affective forecasting. In their work, they found that people misanticipate the extent to which they will feel negative emotions following events such as experiencing a romantic break-up, having a preferred gubernatorial candidate lose the election, or assessing blame when reading a vignette about a child's death. Thus, Gilbert et al. (1998) found that people's expectations about how they will feel if certain events occur may not correspond to how they actually feel after those events transpire. Gilovich and Medvec (1995) also reported that the things that people eventually regret most are not necessarily the things for which they anticipated the most regret.

These studies raise the intriguing possibility that people may misanticipate their future feelings, make decisions based on such (mis)anticipation, and then actually experience different (and perhaps worse) feelings than were anticipated. That is, a certain level of regret based on compliance or reactance may be anticipated prior to a decision, and this expectation may influence behavior, but the expectation of regret may not match what is actually experienced following an undesirable outcome.

If anticipation of future regret plays a role in whether one complies with the dictates of another person, we must consider not only the accuracy but also the spontaneity of the anticipation of regret. Researchers who investigate the effects of anticipated regret on decisions make the assumption, at least implicitly, that regret is anticipated spontaneously when one is faced with a decision. Anticipated regret can affect one's tendency to comply with or react against an influence attempt only if one spontaneously considers future regret when deciding what to do. It is possible that individuals make decisions based upon only what is salient *at the time* of the decision, and if the possibility of regret is not salient, then its anticipation may not enter into the decision-making process.

TABLE 8.2
Anticipated Regret and Choice Data

		Team pushed by other persons	
		Team X	*Team Y*
Anticipated Regret			
Team chosen	Team X	4.10	4.81
	Team Y	5.20	4.31
Choice (percentages):			
Anticipated regret condition:	Team X	73	26
	Team Y	27	74
No anticipated regret condition:	Team X	32	85
	Team Y	68	15

Note. From Crawford, McConnell, Lewis, and Sherman (2002)

To examine the issues of the spontaneity of anticipated regret and its role in compliance or reactance to persuasive attempts, we (Crawford, McConnell, Lewis, & Sherman, 2002) presented two equally attractive alternatives, i.e., football teams, on which to gamble. Participants were "pushed" to choose one team (e.g., Team X) by another student (actually a confederate) in the experiment. Participants were told, "You definitely have to pick Team X." Half of the participants (the anticipated regret condition) completed measures of anticipated regret that explicitly directed them to consider how much regret they would feel if they chose Team X and Team Y won, and how much regret would they feel if they chose Team Y and Team X won. From our previous scenario studies, we expected that participants in this experimental setting would anticipate greater regret for reactive, rather than for compliant, behavior. That is, when Team X is pushed, participants would anticipate greater regret for choosing, and losing, with Team Y (i.e., reactance) than they would if they chose Team X and lost (i.e., compliance). The results confirmed these predictions. As can be seen in the top portion of Table 8.2, in the anticipated regret condition, our participants anticipated greater regret for choosing the threatened alternative and losing than for choosing the promoted alternative and losing. That is, our participants expected to feel greater regret after a loss following defiance than after a loss following compliance.

To examine whether the anticipation of regret affected subsequent choices, participants were asked to select the team that they wanted to bet on to win. We expected that in the anticipated regret condition, following their consideration of future regret, participants would select the promoted alternative in an attempt to minimize their potential regret following a loss. If resistance to the persuasive attempt is seen as potentially more aversive than compliance (as the anticipated re-

gret data indicated), then participants in the anticipated regret condition should minimize regret by complying with the push. As can be seen in the lower portion of Table 8.2, the choice data support this contention. That is, when participants were explicitly focused on the possibility of future regret, they were significantly more likely to comply with the persuasive attempt. In fact, over 73% of the participants in this condition complied with the influence attempt.

What of the participants who were not explicitly focused on the possibility of future regret? If regret is spontaneously anticipated, then those who were not directed to consider regret should show the same pattern of choice as the anticipated regret condition participants. This did not occur. When not focused on future regret, participants showed resistance to the persuasive attempt. That is, when one alternative was promoted, these participants were significantly more likely to show reactance, preferring to choose the threatened alternative. In fact, these participants reacted against the dictates of the other more than 76% of the time. Thus, participants who anticipated regret prior to making their choices showed a markedly different pattern of results (i.e., compliance) than did participants who were not asked about future regret (i.e., reactance).

Following selection of a team, all participants learned that their chosen team had lost. All participants then reported their current level of regret immediately after learning the outcome of the game. Across all of our participants, compliant behavior led to more regret after the fact than did reactance. Importantly, the interaction between choice and whether regret had been anticipated prior to making the choice was not significant. That is, greater regret was experienced following compliance than reactance regardless of whether or not participants were directed to think about the possibility of future regret. Although these results do not support our contention that reactance effects may be reinterpreted in terms of anticipated regret, it does appear that in response to an influence attempt, people do not spontaneously consider the possibility of future regret. However, if focused on that possibility, they (mis)anticipate the regret that they would feel in response to reactive behaviors, which leads them toward a behavior that results in greater actual regret after the fact. Thus, having people anticipate future regret is a way to increase compliance with a "push" and to overcome resistance to being influenced.

As we have seen, whenever one is trying to persuade another person to act, there is resistance (in the form of psychological reactance) that is aroused. It is necessary to overcome this resistance if the persuasive attempt is to be successful (Knowles & Linn, this volume). Simply asking people, prior to their behavioral choice, to anticipate the regret that they might feel in the future for complying with versus reacting against the persuasive attempt appears to be one way to overcome the resistance and increase compliance.

Are there other ways to overcome the resistance that occurs when the freedom to do something is perceived as having been threatened or eliminated? There is evidence that if the reactance aroused in a persuasive attempt situation can be overcome, not only does compliance increase, but also choice of a promoted

course of action increases to a level greater than is observed in the absence of any threat to freedom. Imagine once again that you have the choice between Alternative A and Alternative B, and imagine again that an agent of influence tells you that you "really have to choose Alternative A." As we know, such a persuasive attempt has the effect of increasing the likelihood of your choosing Alternative B. Further imagine another condition where, prior to your choice, another person (actually a confederate of the experimenter) responds to this threat to freedom by saying "I haven't made up my mind. It's my choice, and I'll choose what I want." This reinstatement of personal freedom, a release from reactance, actually increases the percentage of participants who comply with the influencing agent's push for Alternative A even more than it does for a group that never had its freedom threatened (Worchel & Brehm, 1971). Thus, the arousal of reactance and the subsequent reduction of this resistance by the release from reactance is an effective way to increase compliance.

Indeed, such a reinstatement of perceived choice may be exactly why the "high choice" condition in cognitive dissonance experiments is so effective in leading to attitude change (Linder, Cooper, & Jones, 1967). At first, the participant's freedom to choose what to write or to say is threatened. However, by focusing on the seeming degree of personal freedom to write or say what one wishes, the threat is negated and a great deal of persuasion results.

These findings suggest that any direct attempt at persuasion involves two quite different and opposite effects—an arousal of resistance that decreases compliance and a positive persuasive impact that increases compliance. The former generally predominates when there are threats to perceived freedom; but if this resistance component can be negated, as through the induction of considerations of future regret (Crawford et al., 2002) or by the reinstatement of perceived choice (Worchel & Brehm, 1971), compliance can be dramatically increased.

PERSUASIVE ATTEMPTS ELICIT DUAL PROCESSES: REACTANCE AND COMPLIANCE

Although reactance has primarily been understood as a phenomenon where threat to choice induces a motivation to reinstate freedom (Wright & Brehm, 1982; cf., Heilman & Toffler, 1976), very little speculation about the underlying processes associated with reactance and responses to it have been articulated. We propose that influence situations involving reactance and compliance can be fruitfully understood by considering them in a dual-process framework (Chaiken & Trope, 1999). Specifically, we suggest that reactance against an influence attempt is a spontaneous, relatively automatic process. Threats to freedom, like other motivated responses, such as dissonance (Festinger, 1957), drive reduction (Hull, 1951), and goal-directed behavior (Kruglanski, 1996), often influence behavior without there being conscious mediation or awareness. On the other hand,

we propose that the compliant behavior observed in our anticipated regret condition is a more controlled process. (However, other instances of compliant behavior, such as the click, whirr phenomenon discussed by Cialdini (1993), certainly involve automatic and nonconscious processes.)

As we have seen, people do not seem to anticipate regret spontaneously in advance of making decisions, and when they do, their behavior becomes compliant rather than reactive (Crawford et al., 2002). That is, we found that people do not appear to anticipate the regret they may feel in an influence situation unless explicitly directed to do so. Those who made their choice *immediately* after receiving the influence attempt revealed reactance by picking the football team *not* pushed by the other student. However, those participants who considered anticipated regret after the push complied with (rather than reacted against) the other student's edict. Thus, it appears that reactance was the spontaneous response to the influence attempt, but compliance was observed when decision makers were induced to consider additional information (in this case, future feelings of regret) before making their decision.

Although our findings suggest that reactance is spontaneous, one may wonder why reactance would be a relatively automatic process. We would argue that mainstream, Western culture values autonomy, self-determination, and independence (e.g., Bandura, 1997; Fiske, Kitayama, Markus, & Nisbett, 1998; Ryan & Deci, 2000; Triandis, 1995), and that the importance of these values is reinforced often and from a very early age. Thus, the need for autonomy becomes a chronic construct that automatically guides behavior (Higgins, King, & Mavin, 1982). Even though compliance may not be a spontaneous response in influence situations, it certainly may triumph in decision making once more controlled processes are invoked. For example, if people explicitly consider how much regret they might feel following an undesirable outcome if they follow or if they do not follow another's demands, their focus may shift from concerns about "me losing my freedom" to "me feeling bad for the actions *I choose* to take." Consciously choosing a course of action that rejects another's request is likely perceived as increasing the sense of volition, action (vs. inaction), and thus blameworthiness for one's bad decision, making the prospect of choosing an independent course of action that results in now-considered failure especially unattractive (Gilovich & Medvec, 1995; Kahneman & Miller, 1986; Markman et al., 1995). To the extent that decision makers focus on how their not going along with another's demand is *an action they are taking* that could result in undesirable consequences, they may find compliance more attractive. Again, this line of reasoning is consistent with our empirical findings (Crawford et al., 2002).

Even though this analysis suggests that compliance in reactance-evoking situations results from controlled rather than from automatic processes, we suspect that this might not always be the case. For instance, people who chronically anticipate the future and think about its consequences might spontaneously consider future feelings before making decisions. For instance, Gleicher et al. (1995) found that an individual difference, consideration for future consequences (CFC), reliably predicted those who engage in prefactual thinking when anticipating how current decisions will affect the future. Those greater in CFC, for example, were more likely to buy insurance to minimize potential future regret. We hypothesize that those greater in CFC may be more likely to anticipate regret spontaneously, similar to our anticipated regret condition participants, and thus be relatively more likely to comply with rather than react against another's demands even when not explicitly asked to consider anticipated regret. This possibility is still consistent with our dual-process assertion, but this process account predicts that compliance may be a relatively more automatic process for some people than it is for others.

It is interesting to consider this dual-process explanation for reactance-evoking situations because most contemporary models of attitudes and persuasion are dual process in nature as well (e.g., Chaiken, Liberman, & Eagly, 1989; Petty & Cacioppo, 1981; Petty & Wegener, 1998). For instance, targets of persuasion attempts emphasize controlled processes in attitude formation and persuasion (e.g., rely on argument quality) instead of automatic processes (e.g., use heuristic cues) when they have sufficient cognitive resources (Petty, Wells, & Brock, 1976), are greater in need for cognition (Cacioppo & Petty, 1982), and are in negative moods (Schwarz & Clore, 1996). Similarly, we might expect that people who have sufficient cognitive resources, are greater in need for cognition, and are in negative moods would be relatively less likely to show reactance and be more likely to think about the future, to misanticipate future regret for compliance versus reactance, and thus be more likely to comply in influence situations (yet, perhaps ultimately be less satisfied). Indeed, the case of negative mood may be especially relevant to the present analysis. Explicitly asking people to consider future negative consequences and anticipated regret may increase their negative mood, which may bring about more controlled processing, resulting in compliance. Thus, less reactance and more compliance may result because negative mood encourages the use of effortful, controlled processes (Schwarz & Clore, 1996), and because focusing on anticipated regret may emphasize concerns about how one's own volitional actions (i.e., going against another's request) may lead to a bad outcome rather than focusing on concerns about losing one's freedoms.

ANTICIPATED REGRET AS A COMPLIANCE TECHNIQUE

The most important aspect of the findings of our research (Crawford et al., 2002) is that anticipated regret can be used as an effective technique in persuasion situations to help overcome resistance to the persuasive attempts of others and reduce reactance to those attempts. Some agents of influence are well aware of this technique. People selling life insurance typically ask potential customers to imagine the regret they would feel (interestingly, after they have died) if they were to die suddenly and their families were left without the financial capacity

to ensure a good quality of life. The seller is in essence telling customers to imagine the large amount of regret they would feel from making a certain choice (forgoing insurance) and having the outcome turn out badly.

Persuasion always takes place in the face of some resistance. Whether one is a Freudian psychologist, an insurance salesperson, or a social psychologist trying to understand attitude change and influence, the presence of resistance to change is obvious. The trick is to overcome this resistance. Our findings indicate that one possibility is to use a focus on future regret as a way to overcome resistance to influence. By associating future regret with reactance, the forces of resistance are weakened, and compliance is more likely. This idea that anticipated regret could function as a technique to overcome resistance to being influenced was an appealing one. We then wondered whether other known effective techniques for inducing compliance and overcoming resistance might function through a similar process of anticipated regret. In addition, this consideration takes us beyond cognitive reactance and is applicable to other forms and bases of resistance as well.

Scarcity. When we are told that something is scarce, it is almost certain to create the thought of missing out on an opportunity. This focus on scarcity is clearly evident in the world of sales and marketing. There are statements of "last day of sale" and "only a limited supply." There is the ubiquitous clock on the Home Shopping Network, showing that one has only a very limited time to call in for the current offer.

Several lines of social psychological research have focused on the demonstration of scarcity as an effective compliance technique and on the processes by which this technique works. Cialdini (1993, 1994) outlined scarcity as one of his principles by which interpersonal influence is effective. He proposed that objects and opportunities appear more valuable when they are less available, even if those objects and opportunities have little intrinsic attraction for us. Cialdini offered two interpretations for the effects of scarcity on persuasibility. The first account involves the use of a simplifying principle or heuristic—"If it is scarce, it must be valuable." This interpretation of the effectiveness of scarcity involves an increase in the attractive forces that promote persuasion.

Cialdini (1993, 1994) offered a second interpretation of the power of scarcity that is much closer to our focus on anticipated regret. He suggested that as things become less and less available, we perceive a loss of freedom to have them. "If I don't comply and purchase it now, this object will be unavailable in the future, and I will very much regret not having it." To preserve our freedom (à la reactance theory), we must buy the item before it is too late. In other words, it may be an anticipation of future regret that explains why scarcity is an effective way to overcome resistance to being influenced. The knowledge of a product's scarcity may well elicit thoughts of anticipated regret if the item is not purchased right now. This interpretation is based on inducing future regret for resisting the persuasive attempt. Thus, in this case, scarcity works by weakening the forces of resistance through the anticipation of future regret for non-

compliance (Knowles & Linn, this volume). Obviously, this has much in common with our analysis of anticipated regret as a technique for inducing compliance.

There has been some empirical work on the effects of scarcity. Ditto and Jemmott (1989) demonstrated a scarcity principle in evaluative judgments such that identically described medical conditions are evaluated as more detrimental when they involve rare conditions. Likewise, scarce positive health assets are rated as more beneficial than are more common assets. Although the findings of Ditto and Jemmott (1989) indicate strong effects of scarcity, they are not in the realm of interpersonal persuasion, and thus extrapolation to compliance settings must be done with caution.

Brannon and Brock (2001a) examined the effects of scarcity in the realm of the effectiveness of persuasive messages. They found that responses to persuasive messages led to more extreme attitudes (both positive and negative) when the message was about a seemingly rare attribute that the participant supposedly possessed rather than a more common attribute. Interestingly, Brannon and Brock (2001a) offered an explanation that is opposite to the simplifying heuristic explanation offered by Cialdini (1993, 1994). They proposed that thoughtful, elaborative processes are used for information about scarce attributes. These thoughtful, systematic processes might well be evoked by the anticipation of regret for missing out on a scarce item. Thus, the forces that weaken resistance to influence also lead to greater systematic processing. This proposal implies that if the basic evaluative information in a persuasive message about a product or act is strong, compliance would be greater if the product were scarce, due to the systematic processing of the information. However, if the evaluative information is weak or negative, scarcity would lead to less compliance. In fact, exactly such effects of scarcity in a compliance setting have been recently reported by Brannon and Brock (2001b). Thus, scarcity can overcome resistance to compliance when the reasons for compliance are compelling. This finding that compliance is more likely when effortful processing is induced and persuasive arguments are strong is consistent with our dual-process explanation of influence situations.

Fear Appeals. For many years, both social and health psychologists have tried to draw firm conclusions about the effects of the fear level of an appeal on the degree of persuasibility or compliance (Leventhal, 1970; Rogers, 1983). Fear is a future-oriented emotion. Thus, to the extent that fear is an effective way to induce social influence and to overcome resistance to persuasion, it is because of its ability to focus recipients of communications on negative future consequences. By associating negative affect with resistance to persuasion, fear appeals can weaken this resistance. Thus, fear appeals may share certain processes with the already discussed techniques of anticipated regret and scarcity.

Early research indicated that moderate levels of fear appeals were most effective (Leventhal, Watts, & Pagano, 1967; Rogers, 1983). Low levels of fear

did not portray negative enough future scenarios to motivate participants to comply. High levels of fear may have frightened participants too much and increased resistance and defensive avoidance. A recent meta-analysis showed that strong fear appeals produce high levels of susceptibility to persuasion (Witte & Allen, 2000). In addition, strong fear appeals also motivate adaptive danger control actions, such as message acceptance, and maladaptive fear control actions, such as defensive avoidance or reactance. Thus, strong fear appeals combined with high-efficacy messages produce the greatest influence, whereas strong fear appeals combined with low-efficacy messages produce the greatest levels of defensive avoidance (Witte & Allen, 2000). This is reminiscent of the effects of scarcity, where high scarcity plus strong messages are the most effective, whereas high scarcity plus weak messages are the least effective. Perhaps strong fear appeals also work by inducing systematic and elaborative processing, which again is consistent with our dual-process explanation of influence situations.

Consideration of the effects of fear appeals demonstrates clearly the push–pull nature of compliance and persuasion that we noted previously in our discussion of the effects of release from reactance and of the dual-process nature of persuasion attempts—both a tendency to go along with the influence induction and a tendency to resist it. With fear arousal as a compliance technique, there are two different kinds of resistance that must be overcome—the inherent resistance to any persuasion attempt plus the defensive resistance caused by the arousal of fear. When the outcomes are too horrible to imagine, participants may resist careful consideration of the entire message.

In relating fear appeals to the anticipated regret technique, one might propose that there is a certain aspect of anticipated regret to fear appeals (i.e., "If you continue to smoke, all these horrible things will happen to you, and you will regret it"). On the other hand, it seems clear that fear appeals focus a person far more on the future outcome itself rather than on the future regret that might follow that future outcome. Thus, it occurs to us that we may be dealing with effects that are far more general than the use of anticipated regret as a compliance technique in situations that elicit cognitive reactance. We shall now propose that many kinds of considerations of the future, in addition to regret, scarcity, and fear, may be effective in inducing compliance. We shall discuss several of these more general techniques.

THINKING ABOUT THE FUTURE AS A GENERAL COMPLIANCE TECHNIQUE

Predicting the Future

As we have seen, directly asking someone to do something, or telling them what to do, is generally ineffective in gaining compliance. This ineffectiveness is in large part due to the resistance aroused by trying to force one's will on someone. Sherman (1980) identified a simple yet effective strategy for avoiding this resistance. Instead of directly asking people to do something, one simply asks them to predict what they *would* do *if* someone were to ask them to do it. Sherman (1980) found that compared to a control group that was simply asked to execute the behavior, participants who were asked to predict what they would do were terribly wrong in their predictions—and they were consistently wrong in the direction of overpredicting socially desirable behaviors. For example, when people were directly asked to devote an afternoon's time to help a charity some time during the current semester, only 2% complied with the request. However, when asked to predict what they would do if someone asked them to devote an afternoon to help a charity, 40% predicted that they would agree to help. Of course, most of these people were wrong in their prediction, given that only 2% who were directly asked agreed with the request. More importantly, this error of prediction was self-erasing. That is, when participants who had made predictions were actually called (under different circumstances) a couple of weeks later and were asked to devote an afternoon to help a charity, 38% complied (mainly those who had predicted that they would help if asked). Thus, the compliance rate was increased by 36% by simply asking participants to predict their own future behavior before presenting them with the full-blown request. This result has been replicated for a number of different behaviors. Compliance rates have been increased for agreement with requests to sing the Star-Spangled Banner (Sherman, 1980), for voting in elections (Greenwald, Carnot, Beach, & Young, 1987), for recycling (Sprott, Spangenberg, & Perkins, 1999), and for eating healthful food (Sprott, Fisher, & Spangenberg, 2001).

Why do predictions of future behavior increase compliance rates? The key to increasing compliance rates by predicting the future is that the prediction of a behavior arouses less resistance than actually committing to the behavior. It is simply far easier for one to predict that one will do something than to agree to do it. Agreeing to an action in the "hypothetical future" is benign and one need not resist any direct persuasive attempt. Thus, the technique of increasing compliance through future prediction works by diminishing the negative aspects associated with compliance. In this way, resistance is weakened.

Importantly, once the (mis)prediction is made, the likelihood of subsequently agreeing to the full-blown request is greatly increased. This technique of reducing resistance by first asking for a benign request has some similarities with the foot-in-the-door technique (Cann, Sherman, & Elkes, 1975; Freedman & Fraser, 1966). With that technique, some minor request is asked for (and almost always agreed to) prior to asking the target request, which is a more time-consuming request. The agreement to the initial small request increases (compared to a control group) compliance to the larger request quite significantly. The difference between the prediction technique and the foot-in-the-door technique is that the former involves prediction and compliance requests for exactly the same behavior. The foot-in-the-door technique involves requests for two different behaviors in the two phases. In addition, the prediction technique asks participants to anticipate the future and to think about what they might do at a later time. Thus, this technique has much in common with the anticipated regret, the scar-

city, and the fear techniques that have already been discussed. All of these involve an anticipation of a future event in order to increase compliance with a request.

Several process explanations have been offered to explain the self-erasing error of prediction effect. Commitment and consistency (Cialdini, Reno, & Kallgren, 1990), norm salience (Sherman, 1980), and impression management (Tedeschi, Schlenker, & Bonoma, 1971) have all been offered as explanations. More recently, Spangenberg, Sprott, Obermiller, and Greenwald (2002) have proposed a dissonance reduction interpretation. They suggest that the self-prediction makes salient the discrepancy between one's principles and one's past behaviors that were in violation of these principles. This dissonance is subsequently reduced by compliance with the actual later request.

Regardless of the correct explanation for the effectiveness of the prediction technique for overcoming resistance and increasing compliance, the important point for now is that this is another example of how anticipation of the future can increase the likelihood that a person will comply with a request or be otherwise influenced to do something by weakening the resistance to social influence. The idea that thinking across time might be used as a general technique to overcome resistance to persuasion is also consistent with the known effects of imagining and explaining hypothetical future events.

Imagining and Explaining Hypothetical Future Events

Similar to the effects of predicting the future on subsequent judgments and behavior, simply imagining or explaining the future can increase one's subjective likelihood that an event will occur. Thus, Carroll (1978) asked participants to imagine one or the other outcome of the 1976 presidential election (prior to its occurrence). Those who imagined a victory by Carter judged that outcome as more likely, and those who imagined a Ford victory judged that Ford was more likely to win. Similarly, asking participants to imagine and explain a hypothetical victory by one or the other team in an upcoming football game very much influenced their judgments of who would win the game, with the team imagined as winning being seen as more likely to actually win (Sherman, Zehner, Johnson, & Hirt, 1983).

Imagining and explaining a hypothetical future event can affect not only one's judgments of the probability of future events, but also one's actual future behavior as well. Sherman, Skov, Hervitz, and Stock (1981) had participants imagine and explain their own hypothetical future success or failure at an upcoming anagram task. Those who explained success performed significantly better than did a control group that explained nothing. Interestingly, a group that explained failure and then stated explicit expectations also outperformed the control group—perhaps due to resistance to and reactance against the possibility of failure.

Most important for our current concerns, simply imagining engaging in a future behavior has the effect of increasing compliance rates with a later request regarding that behavior. Gregory, Cialdini, and Carpenter (1982) asked participants to imagine themselves subscribing to a cable television service and enjoying the benefits of the service. These participants were significantly more likely later to agree to sign up for a cable service than were people who simply received information about the service but did not imagine using it.

Through what process does explaining and imagining a hypothetical future event have its effects? Koehler (1991) proposed that explaining and imagining a specific outcome or event leads the person to establish what is described as a focal hypothesis. Once a focal hypothesis is established, the person adopts a "conditional reference frame" under which the hypothesis is assumed to be true. By evaluating the hypothesis in a biased way (Klayman & Ha, 1987) and by not adjusting properly from an assumed truth (Gilbert, Krull, & Malone, 1990), the person ends up believing in the focal hypothesis and behaving in ways (including compliance) consistent with the truth value of the focal hypothesis. The biasing effects of testing a hypothesis include differential prominence of aspects of the event, one-sided interpretation of evidence, and an incomplete search for information. Consistent with the "conditional reference frame" interpretation, Anderson (1982; Anderson & Sechler, 1986) reported that asking participants to consider the alternative possibilities eliminates the effects of imagination or explanation. Considering alternatives prevents the adoption of a focal hypothesis, along with its subsequent biasing effects on judgment and behavior. In addition, imagining a future compliant act may reduce the negative thoughts and feelings associated with the act. In this way, resistance to an influence attempt in the future is weakened, and compliance increases.

With regard to the effects of predicting future behavior, we have seen that the mere act of asking someone if he or she (hypothetically) would agree to a request in the future if asked to do something increases compliance rates to a subsequent request. We now suggest that directly asking someone to commit to do something in the future as opposed to right now can also substantially increase compliance rates. Such an effect would strongly indicate that thinking about oneself and one's surrounding circumstances in the future is not the same as thinking about oneself right now. More specifically, such an effect would suggest that less resistance to influence is elicited when a request is made for some time in the future. Just as in the effects of misprediction of the future, where it seems easier to say "yes" to something that is not real than to something that has immediate and more than hypothetical consequences, it may be easier to say "yes" to something that is not imminent. As we shall see, one reason why this effect occurs is that people misconstrue the future in terms of how difficult it might be to carry out a request. That is, it seems easier to do something when that something is not near at hand than it does when the time to do it is right now. Several lines of research and theorizing are relevant.

The Planning Fallacy

Buehler, Griffin, and Ross (1994) investigated people's predictions of the time that it would take to complete various tasks. It comes as no surprise to any one of us who has ever committed to write a chapter (including the present one) that people greatly underestimate their completion times. Buehler et al. (1994) demonstrated that this effect occurs because people tend to focus on future plan-based scenarios rather than on relevant past experiences. In fact, instructions to connect relevant past experiences with their predictions eliminated the overly optimistic predictions about how long tasks would take. Thus, without specific instructions to focus on the past, the act of predicting the time or ease of completion for a task evokes a future orientation about how a task may be done rather than a past orientation where valuable information from similar past procrastination experiences might be gained. In addition, motivations in the form of rewards for getting things done early in the future only exacerbate the planning fallacy—that is, the time predicted to complete a task is reduced more by motivation than are actual completion times (Buehler, Griffin, & MacDonald, 1997).

Importantly, from our point of view, these overly optimistic completion estimates about the time it will take and the ease of doing things greatly increase the likelihood that we will agree to requests of all types—provided that these requests do not require immediate action. A similar effect of temporal perspective on judgments has been investigated by Gilovich, Kerr, and Medvec (1993). They measured the degree of confidence that people have in their prospects for future success. They found that confidence decreases dramatically as the "moment of truth" approaches. For example, students think that they will do much better on midterm exams when asked on the first day of class than when asked on the day of the exam. Gilovich et al. (1993) interpret this effect as due to the fact that people tend to feel more accountable for their assessments as the time to perform approaches, and thus they focus more and more on possible causes of failure. In addition, when a task is to be done far in the future, one might well make unrealistic and overly optimistic assessments of future preparatory effects. Things seem easier in the future because there is so much time available to prepare and to get things accomplished.

Although neither Buehler et al. (1994) nor Gilovich et al. (1993) investigated the implications of their findings for the degree to which people will be influenceable or compliant, we feel that there is a clear connection. To the extent that people perceive that future tasks will be done more quickly and easily than is actually the case (Buehler et al., 1994), and to the extent that they feel confident that they can complete a task successfully (Gilovich et al., 1993), they ought to be more likely to be persuaded to do something if it is not required until a future date than if it is a request for compliance at the present time. Both perceptions of ease of completion and confidence in the success of completion should help overcome resistance to persuasive attempts, and these perceptions are likely for requests about the future.

The findings of Gilovich et al. (1993) have an additional implication for compliance requests that are for some time in the future. They suggest that confidence in successful completion increases monotonically as time before the "due date" increases. This finding implies that compliance rates will generally increase as the amount of time until the requested behavior is due increases. We shall now turn to a point of view that addresses this very issue.

Temporal Construal

Liberman and Trope (1998) have considered how people think about the future as a function of how far in the distance that future extends. According to their temporal construal theory, distant future situations are construed at a higher level than are near future situations. That is, people focus on the general, abstract, and central features of events that are in the far future, but on specific, concrete, and low-level features for events in the near future. For example, consider whether you might agree to a request to take part in a symposium sometime in the future. According to Liberman and Trope (1998), if the symposium is one year from now, you are likely to focus on abstract aspects of the symposium, such as its interest value and what you might learn. On the other hand, if the symposium is two weeks from now, you will be more likely to focus on specific and concrete aspects such as the ease of getting to the symposium site or the cost of travel.

In support of temporal construal theory, Liberman and Trope (1998) have shown that the value of an event is more positive in the distant future than the near future when the value associated with the high-level construal (i.e., the abstract features) is more positive than the value associated with the low-level construal (i.e., the specific features); and the value of an event is less positive in the distant future than in the near future when the value associated with the high-level construal of an event is less than the value associated with the low-level construal. These findings were replicated and extended in a series of experiments by Trope and Liberman (2000). They found that feasibility (a low-level feature) carries more weight for judgments of an event in the near future, whereas desirability (a high-level feature) carries more weight for events in the distant future. More specifically, participants are more likely to choose a difficult but interesting course assignment when the temporal distance is long, but they are more likely to choose an easy but uninteresting assignment when the temporal distance is short.

The implications of temporal construal theory are extremely interesting. The theory suggests, for example, that moral principles are more likely to guide decisions for the distant future than for the immediate future, whereas difficulty, cost, and situational pressures are more likely to be important for decisions about the near future. What is the relevance of temporal construal theory for our current interest in the role of thinking about the future on rates of compliance? For one thing, Liberman and Trope (1998) suggested that time constraints are a low-level of construal of an activity. Thus, people give little weight to time

constraints in planning for the distant future, and they are thus more likely to plan to do and agree to do more things for the distant future, even incompatible activities. This suggests that it will be easier to secure greater compliance for requests about the distant future, in line with the ideas of Buehler et al. (1994) and Gilovich et al. (1993). In addition, because there is less resistance to compliance for the distant future than for the near future, one might propose that in order to increase compliance rates, strategies that aim at resistance reduction would be more effective for near-time decisions than for distant decisions, whereas strategies that increase the attraction forces that promote persuasion would be more effective for distant decisions than for near decisions. This would be compatible with the view of distant decisions as focusing on promotion considerations and near decisions focusing on prevention decisions (Higgins, 1998).

Although such a difference in promotion versus prevention focus is feasible, things may not be so simple. Both low-level (near future) and abstract (distant future) considerations can involve both promotion and prevention aspects. For example, low-level considerations of the reasonable cost of a trip can be framed as a way to promote savings or to prevent costly expenses. It might make more sense to consider that both low-level, concrete and high-level, abstract considerations of compliance can involve forces that promote persuasion as well as forces that weaken resistance. What is important is that both kinds of attempts to increase persuasion (promoting persuasion and weakening resistance) in the near future will be most effective if they involve concrete features, whereas both kinds of attempts to increase persuasion in the distant future will be most effective if they involve abstract features. Thus, temporal construal theory suggests that the framing of the compliance request will very much affect the rates of compliance differentially for the near and the distant future. For requests in the distant future, one should focus on promoting the positive, abstract features of the object of the request, such as its desirability, or on weakening resistance based on high-level features, such as moral considerations. However, to secure compliance for requests in the near future, one should focus on the positive, low-level, concrete features, such as ease and feasibility, or on weakening resistance based on low-level features, such as high cost.

CONCLUSION: TAKING STOCK OF RESISTANCE

We began this chapter by noting that compliant behavior becomes more likely either when the attractiveness of persuasion is enhanced or when the resistance to persuasion is diminished. In particular, we emphasized that focusing people on the future can greatly erode resistance to influencing agents' demands in the present. Whereas many in the persuasion literature have emphasized making persuasive appeals more attractive (e.g., Briñol, Rucker, Tormala, & Petty, this volume; Cialdini, 1993, 1994; Tormala & Petty, this volume; Wegener, Petty,

Smoak, & Fabrigar, this volume), our approach has been to consider the other half of the persuasion equation: reducing resistance (Fuegen & Brehm, this volume; Knowles & Linn, chapter 1, this volume; Quinn & Wood, this volume; Jacks & O'Brien, this volume). It seems appropriate at this point to take some stock in what our findings and theorizing say about resistance and its importance.

In general, we view resistance as a response by an individual that attempts to eliminate or reduce the impact of another's influence attempt. Resistance is often based on motivational factors (Jacks & O'Brien, this volume), although cognitive, information-processing factors may be involved as well. Moreover, although resistance may involve conscious and controlled decisions and behaviors, we have focused more on resistance as a spontaneous response to social influence situations. Whether it is because people instinctively wish to maintain perceptions of choice and control (e.g., Brehm, 1966; Worchel & Brehm, 1971), because they do not automatically consider future regret (Crawford et al., 2002), or because they are driven by situational heuristics such as scarcity (e.g., Cialdini, 1993, 1994), it seems that thinking less is often linked to resisting more. Indeed, our proposed dual-process account of reactance and compliance is based on this reasoning. There are, undoubtedly, many ways to shift people away from this more spontaneous response, and we have argued that getting them to think more about the future is especially beneficial in reducing resistance. In particular, predicting the future, imagining and explaining hypothetical future events, avoiding the consideration of an ominous future too painful to consider, capitalizing on the planning fallacy, and considering the abstract, long-term positives of the situation focus people away from the immediate unattractiveness of compliance to a new decision set where compliance seems more reasonable, less costly, and easy to accept. What is true but not apparent to decision makers focused on the future is that there are many pitfalls on the road to these futures that may have been crafted by the influencing agent, which, if known to the decision maker, would make compliance far less attractive. However, like a good magician or politician, an influencing agent who focuses people away from "the action" makes acceptance more compelling and resistance less imperative.

We began this chapter by focusing on cognitive reactance as one important manifestation of resistance. We saw how the anticipation of future regret can diminish the tendency toward reactance. As we considered other compliance techniques, such as scarcity and fear appeals, and as we considered the effects on compliance of focusing on future behavior and events, it became clear that the reduction of resistance by considering the future was more general than the overcoming of cognitive reactance.

There are many different causes or bases of resistance to social influence: resistance based on restriction of freedom or threatened loss of control; resistance based on the regret anticipated for compliance followed by a bad outcome; resistance based on defensive avoidance; resistance based on aversion to change, such as the status quo bias; resistance based on a perceived potential loss of power or status as an outcome of becoming the target of a successful influence attempt. All these bases and manifestations of resistance that can be elicited by

a persuasion attempt can be weakened to increase persuasion. We believe that an increase in future as opposed to present focus can weaken all these various forms of resistance, thus increasing compliance.

As this chapter has indicated, time and its consideration is a critically important aspect of many diverse social psychological phenomena. Where one is psychologically on the rubber band of time very much affects decision making, construal of events, confidence, emotions, and biases in memory and judgment (Johnson & Sherman, 1990). Now we see the possibility that, in addition, thinking across time has importance for overcoming resistance to social influence. Those who are savvy to these effects will find that subtle suggestions to reflect on the future or to think more deeply about down-the-road consequences will influence choices in the present. And to those readers who still remain unconvinced, we suggest that you consider how much regret you might feel if you later conclude that we were right all along.

AUTHOR NOTE

Preparation of this chapter was supported by Research Scientist Award K05 DA00492 from the National Institute on Drug Abuse to the first author and grant MH60645 from the National Institute of Mental Health to the third author.

REFERENCES

Anderson, C. A. (1982). Inoculation and counter-explanation: Debiasing techniques in the perseverance of social theories. *Social Cognition, 1,* 126–139.

Anderson, C. A., & Sechler, E. S. (1986). Effects of explanation and counterexplanation on the development and use of social theories. *Journal of Personality and Social Psychology, 50,* 24–34.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: W. H. Freeman & Co., Publishers.

Bar-Hillel, M., & Neter, E. (1996). Why are people reluctant to exchange lottery tickets? *Journal of Personality and Social Psychology, 27,* 2001–2014.

Bell, D. E. (1982). Regret in decision making under uncertainty. *Operations Research, 30,* 961–981.

Boninger, D. S., Gleicher, F., & Strathman, A. (1994). Counterfactual thinking: From what might have been to what may be. *Journal of Personality and Social Psychology, 67,* 297–307.

Brannon, L. A., & Brock, T. C. (2001a). Scarcity claims elicit extreme responding to persuasive messages: Role of cognitive elaboration. *Personality and Social Psychology Bulletin, 27,* 365–375.

Brannon, L. A., & Brock, T. C. (2001b). Limiting time for responding enhances behavior corresponding to the merits of compliance appeals: Refutations of heuristic-cue theory in service and consumer settings. *Journal of Consumer Psychology, 10,* 135–146.

Brehm, J. W. (1996). *A theory of psychological reactance.* New York: Academic Press.

Brehm, J. W., & Sensenig, J. (1966). Social influence as a function of attempted and implied usurpation of choice. *Journal of Personality and Social Psychology, 4,* 703–707.

Buehler, R., Griffin, D., & MacDonald, H. (1997). The role of motivated reasoning in optimistic time predictions. *Personality and Social Psychology Bulletin, 23,* 238–247.

Buehler, R., Griffin, D., & Ross, M. (1994). Exploring the "planning fallacy": Why people underestimate their task completion times. *Journal of Personality and Social Psychology, 67,* 366–381.

Cacioppo, J. T., & Petty, R. E. (1982). The need for cognition. *Journal of Personality and Social Psychology, 42,* 116–131.

Cann, A., Sherman, S. J., & Elkes, R. (1975). Effects of initial request size and timing of a second request on compliance: The foot in the door and the door in the face. *Journal of Personality and Social Psychology, 32,* 774–782.

Carroll, J. S. (1978). The effect of imagining an event on expectations for the event: An interpretation in terms of the availability heuristic. *Journal of Experimental Social Psychology, 14,* 88–96.

Chaiken, S., Liberman, A., & Eagly, A. H. (1989). Heuristic and systematic information processing within and beyond the persuasion context. In J. S. Uleman & J. A. Bargh (Eds.), *Unintended thought* (pp. 212–252). New York: Guilford.

Chaiken, S., & Trope, Y. (1999). *Dual-process theories in social psychology.* New York: Guilford.

Cialdini, R. B. (1993). *Influence: Science and practice* (3rd ed.). New York: HarperCollins.

Cialdini, R. B. (1994). Interpersonal influence. In S. Shavitt & T. C. Brock (Eds.), *Persuasion: Psychological insights and perspectives* (pp. 195–217). Needham Heights, MA: Allyn & Bacon.

Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focused theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology, 58,* 1015–1026.

Crawford, M. T., Lewis, A. C., McConnell, A. R., & Sherman, S. J. (1998). Anticipated regret, choice, and retrospective counterfactual regret. Paper presented at the eighth biennial meeting of the Social Psychologists of Indiana, South Bend, Indiana.

Crawford, M. T., McConnell, A. R., Lewis, A. C., & Sherman, S. J. (2002). Reactance, compliance, and anticipated regret. *Journal of Experimental Social Psychology, 38,* 56–63.

Ditto, P. H., & Jemmott, J. B., III (1989). From rarity to evaluative extremity: Effects of prevalence information on evaluations of positive and negative characteristics. *Journal of Personality and Social Psychology, 57,* 16–26.

Festinger, L. (1957). *A theory of cognitive dissonance.* Evanston, IL: Row, Peterson.

Fiske, A. P., Kitayama, S., Markus, H. R., & Nisbett, R. E. (1998). The cultural matrix of social psychology. In D. T. Gilbert, S. T., Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., Vol. 2, pp. 915–981). New York: McGraw-Hill.

Freedman, J. L., & Fraser, L. C. (1966). Compliance without pressure: The foot-in-the-door technique. *Journal of Personality and Social Psychology, 4,* 195–202.

Gilbert, D. T., Krull, D. S., & Malone, P. S. (1990). Unbelieving the unbelievable: Some problems in the rejection of false information. *Journal of Personality and Social Psychology, 59,* 601–613.

Gilbert, D. T., Pinel, E. C., Wilson, T. D., Blumberg, S. J., & Wheatley, T. P. (1998). Immune neglect: A source of durability bias in affective forecasting. *Journal of Personality and Social Psychology, 75,* 617–638.

Gilovich, T., Kerr, M., & Medvec V. H. (1993). Effect of temporal perspective on subjective confidence. *Journal of Personality and Social Psychology, 64,* 552–580.

Gilovich, T., & Medvec, V. H. (1995). The experience of regret: What, when and why. *Psychological Review, 102,* 379–395.

Gleicher, F., Boninger, D. S., Strathman, A., Armor, D., Hetts, J., & Ahn, M. (1995). With an eye toward the future: The impact of counterfactual thinking on affect, attitudes, and behavior. In N. J. Roese & J. M. Olson (Eds.), *What might have been: The social psychology of counterfactual thinking* (pp. 283–304). Mahwah, NJ: Erlbaum.

Greenwald, A. G., Carnot, C., Beach, R., & Young, B. (1987). Increasing voting behavior by asking people if they expect to vote. *Journal of Applied Psychology, 72,* 315–318.

Gregory, W. L., Cialdini, R. B., & Carpenter, K. M. (1982). Self-relevant scenarios as mediators of likelihood estimates and compliance: Does imagining make it so? *Journal of Personality and Social Psychology, 43,* 89–99.

Heilman, M. E., & Toffler, B. L. (1976). Reacting to reactance: An interpersonal interpretation of the need for freedom. *Journal of Experimental Social Psychology, 12,* 519–529.

Heller, J. F., Pallak, M. S., & Picek, J. M. (1973). The interactive effects of intent and threat on boomerang attitude change. *Journal of Personality and Social Psychology, 26,* 273–279.

Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. *Advances in Experimental Social Psychology, 30,* 1–46.

Higgins, E. T., King, G. A., & Mavin, G. H. (1982). Individual construct accessibility and subjective impressions and recall. *Journal of Personality and Social Psychology, 43,* 35–47.

Hull, C. L. (1951). *Essentials of behavior.* New Haven, CT: Yale University Press.

Johnson, M. K., & Sherman, S. J. (1990). Constructing and reconstructing the past and the future in the present. In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (Vol. 2, pp. 482–526). New York: Guilford.

Kahneman, D., & Miller, D. T. (1986). Norm theory: Comparing reality to its alternatives. *Psychological Review, 93,* 136–153.

Klayman, J., & Ha, Y. W. (1987). Confirmation, disconfirmation, and information in hypothesis testing. *Psychological Review, 94,* 211–228.

Koehler, D. J. (1991). Explanation, imagination, and confidence in judgment. *Psychological Bulletin, 110,* 499–519.

Kruglanski, A. W. (1996). Motivated social cognition: Principles of the interface. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 493–520). New York: Guilford.

Larrick, R. P., & Boles, T. L. (1995). Avoiding regret in decisions with feedback: A negotiation example. *Organizational Behavior and Human Decision Processes, 63,* 87–97.

Leventhal, H. (1970). Findings and theory in the study of fear communications. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 5, pp. 119–186). New York: Academic Press.

Leventhal, H., Watts, J. C., & Pagano, F. (1967). Effects of fear and instructions on how to cope with danger. *Journal of Personality and Social Psychology, 6,* 313–321.

Liberman, N., & Trope, Y. (1998). The role of feasibility and desirability considerations in near and distant future decisions: A test of temporal construal theory. *Journal of Personality and Social Psychology, 75,* 5–18.

Linder, D. E., Cooper, J., & Jones, E. E. (1967). Decision freedom as a determinant of the role of incentive magnitude in attitude change. *Journal of Personality and Social Psychology, 6,* 245–254.

Loomes, G., & Sugden, R. (1982). Regret theory: An alternative theory of rational choice under uncertainty. *The Economic Journal, 92,* 805–824.

Markman, K. D., Gavanski, I., Sherman, S. J., & McMullen, M. N. (1993). The mental simulation of better and worse possible worlds. *Journal of Experimental Social Psychology, 29,* 87–109.

Markman, K. D., Gavanski, I., Sherman, S. J., & McMullen, M. N. (1995). The impact of perceived control on the imagination of better and worse possible worlds. *Personality and Social Psychology Bulletin, 21,* 588–595.

McConnell, A. R., Niedermeier, K. E., Leibold, J. M., El-Alayi, A. G., Chin, P. P., & Kuiper, N. M. (2000). "What if I find it cheaper someplace else?": Role of prefactual thinking and anticipated regret in consumer behavior. *Psychology and Marketing, 17,* 281–298.

Miller, D. T., & Taylor, B. R. (1995). Counterfactual thought, regret, and superstition: How to avoid kicking yourself. In N. J. Roese & J. M. Olson (Eds.), *What might have been: The social psychology of counterfactual thinking* (pp. 305–331). Mahwah, NJ: Erlbaum.

Petty, R. E., & Cacioppo, J. T. (1981). *Attitudes and persuasion: Classic and contemporary approaches.* New York: Springer-Verlag.

Petty, R. E., & Wegener, D. T. (1998). Attitude change: Multiple roles for persuasion variables. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th, ed., Vol. 1, pp. 323–390). New York: McGraw-Hill.

Petty, R. E., Wells, G. L., & Brock, T. C. (1976). Distraction can enhance or reduce yielding to propaganda: Thought disruption versus effort justification. *Journal of Personality and Social Psychology, 34,* 874–884.

Ritov, I. (1996). Probability of regret: Anticipation of uncertainty resolution in choice. *Organizational Behavior and Human Decision Processes, 66,* 228–236.

Roese, N. J. (1994). The functional basis of counterfactual thinking. *Journal of Personality and Social Psychology, 66,* 805–818.

Roese, N. J., & Olson, J. M. (1995). *What might have been: The social psychology of counterfactual thinking.* Hillsdale, NJ: Erlbaum.

Rogers, R. (1983). Cognitive and physiological processes in fear appeals and attitude change: A revised theory of protection motivation. In J. T. Cacioppo & R. E. Petty (Eds.), *Social psychophysiology: A sourcebook* (pp. 153–176). New York: Guilford.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55,* 68–78.

Schwarz, N., & Clore, G. L. (1996). Feelings and phenomenal experiences. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 433–465). New York: Guilford.

Sherman, S. J. (1980). On the self-erasing nature of errors of prediction. *Journal of Personality and Social Psychology, 39,* 211–221.

Sherman, S. J., Skov, R. B., Hervitz, E. F., & Stock, C. B. (1981). The effects of explaining hypothetical future events: From possibility to probability to actuality and beyond. *Journal of Experimental Social Psychology, 17,* 142–158.

Sherman, S. J., Zehner, K. S., Johnson, J., & Hirt, E. R. (1983). Social explanation: The role of timing, set and recall on subjective likelihood estimates. *Journal of Personality and Social Psychology, 44,* 1127–1143.

Simonson, I. (1992). The influence of anticipating regret and responsibility on purchase decisions. *Journal of Consumer Research, 19,* 105–118.

Snyder, M. L., & Wicklund, R. A. (1976). Prior exercise of freedom and reactance. *Journal of Experimental Social Psychology, 12,* 120–130.

Spangenberg, E. R., Sprott, D. E., Obermiller, C., & Greenwald, A. G. (2002). *Self-prophecy as dissonance reduction.* Unpublished manuscript. Washington State University.

Sprott, D. E., Fisher, R., & Spangenberg, E. R. (2001). Using the self-prophecy effect to promote socially desirable consumption: The role of normative beliefs. Unpublished manuscript. Washington State University.

Sprott, D. E., Spangenberg, E. R., & Perkins, A. W. (1999). Two more self-prophecy experiments. In L. Scott & E. Arnould (Eds.), *Advances in consumer research* (Vol. 25, pp. 621–626). Provo, UT: Association for Consumer Research.

Taylor, B. (1989). *Mental stimulation and the anticipation of regret.* Unpublished master's thesis. Princeton University, Princeton, NJ.

Tedeschi, J. T., Schlenker, B. R., & Bonoma, T. V. (1971). Cognitive dissonance: Private ratiocination or public spectacle? *American Psychologist, 26,* 685–695.

Triandis, H. C. (1995). The self and social behavior in differing cultural contexts. In N. R. Goldberger & J. B. Verloff (Eds.), *The culture and psychology reader.* New York: New York University Press.

Trope, Y., & Liberman, N. (2000). Temporal construal and time-dependent changes in preference. *Journal of Personality and Social Psychology, 79,* 876–889.

Tversky, A., & Kahneman, D. (1974). Availability: A heuristic for judging frequency and probability. *Cognitive Psychology, 5,* 207–232.

Tykocinski, O. E., & Pittman, T. S. (1998). The consequences of doing nothing: Inaction inertia as avoidance of anticipated counterfactual regret. *Journal of Personality and Social Psychology, 75,* 607–616.

Wells, G. L., & Gavanski, I. (1989). Mental simulation of causality. *Journal of Personality and Social Psychology, 56,* 161–169.

Witte, K., & Allen, M. (2000). A meta-analysis of fear appeals: Implications for effective public health campaigns. *Health Education and Behavior, 27,* 591–615.

Worchel, S., & Brehm, J. W. (1971). Direct and implied social restoration of freedom. *Journal of Personality and Social Psychology, 18,* 294–304.

Wright, R. A., & Brehm, S. S. (1982). Reactance as impression management: A critical review. *Journal of Personality and Social Psychology, 42,* 608–618.

Zeelenberg, M., Beattie, J., Van der Pligt, J., & de Vries, N. (1996). Consequence of risk aversion: Effects of expected feedback on risky decision making. *Organizational Behavior and Human Decision Processes, 65,* 148–158.