

# **Sunk Costs and Resistance to Change**

**Robert L. Leahy**

*American Institute for Cognitive Therapy, and  
Weill-Cornell University Medical College*

Normative models of decision making imply that individuals will utilize a hedonic calculus about future utility ratios (subjective utilities) in considering current alternatives. In contrast, descriptive models of actual decision making indicate that individuals utilize heuristics, ignore base rates, and consider previous decisions when considering future choices. Sunk costs are reflected in basing future decisions on previous commitments or investments, thereby ignoring subjective utility expectations. The effects of sunk costs on resistance to change are discussed and interventions to overcome these effects are examined.

Normative models of decision making (that is, how rational people should make decisions) propose that individuals consider all relevant alternatives, collect information regarding the costs and benefits of each alternative, weigh these alternatives irrespective of primacy and recency effects, and focus on enacting a decision regardless of past investments and committed actions (Baron, 1994; Plous, 1993). Thus, decision makers examine all the relevant information with the hope of maximizing their search and with the ability to weigh information dispassionately as to its relevance toward a goal. The normative model argues that decision makers should ignore the order of information presented and should give considerable emphasis to "base rate" information in the population at large, rather than choose the first alternative that comes along. The normative model stipulates that decision makers should not place greater emphasis on a personal anecdote rather than on abstract, but objective, data.

Normative models are based on Subjective Expected Utility (SEU), such that individuals are assumed to calculate the probabilities of future utilities of various possible actions, compare these utility ratios, calculate the uncertainty involved, and consistently choose the alternative with the best ratio (Bell, Raiffa, & Tversky, 1988). Normative models assume a decision maker whose

choices are dictated by hedonic calculus, with alternatives compared along an ordinal continuum of transitivity, such that, if A is preferred to B and B is preferred to C, then A is preferred to C. Thus, the normative model, emphasizing subjective expected utility, describes how a coldly rational person ignores past history of behavior and only focuses on future utility (Kahneman & Tversky, 1972, 1979; Tversky & Kahneman, 1972, 1981).

There is now considerable evidence that the normative model does not adequately describe actual decision making. *Descriptive* models of how actual decision making is carried out indicate that individuals utilize “satisficing” rules (Simon, 1956, 1979, 1988, 1992). Individuals consider only a small subset of possible alternatives and often base their decisions on a primacy effect, such that the first alternative that satisfies minimum criteria will be accepted (Simon, 1956, 1979, 1992). Decision makers may violate the law of transitivity, preferring C to A, even when A is preferred to B and B is preferred to C (Kahneman & Tversky, 1979). The violation of transitivity raises questions of the generality of SEU, since utilities appear to be “non-fungible.” Individual decision makers may also ignore the rules of probability, placing considerably greater weight on information that is salient, personal, and accessible (Tversky & Kahneman, 1972).

Furthermore, individuals are seldom neutral about their past decisions and behavior. If they have invested considerable time and energy, they will utilize this past cost, or disutility, in determining their future course of action (Staw, 1976; 1981; Staw & Ross, 1987; Thaler, 1980; 1992). Thus, rather than rely on cold rational calculations of future utility (or disutility) of a course of action—a “forward-looking decision”—they will focus on past costs that have been incurred—a “backward-looking decision.”

## SUNK COSTS

There is substantial evidence that individuals may place greater emphasis on their prior costs and use these costs to determine whether they will continue to pursue action that already has proven to be unrewarding (Arkes & Ayton, 1999; Garland, 1990; Staw, 1976, 1981; Staw, Barsade, & Koput, 1997; Staw & Fox, 1977; Staw & Ross, 1978, 1987; Thaler, 1980). The *sunk cost effect* is defined as the tendency to consider prior costs as facilitative of future commitments to that alternative. Consider the following, unfortunately common, experience. You have purchased a necktie that was on sale at a 70% reduction. You thought you got a good deal. You notice that the tie is not quite up to your demanding standards of taste, but you cannot pass up such a bargain. It does not occur to you that the reason that it is marked down below its cost is that all other potential buyers thought it was not worth the lower price. In fact, up to this point, you may be the first person willing to buy this tie. You take it home, put it in your closet, and never wear it. Although years go by, you still cannot find the right jacket or shirt to wear with this tie. Regardless of your lack of utility in this tie, you refuse to throw it out.

Now consider the following more serious problem. Susan has been involved with Bill for four years. He continues to say that he will leave his wife when the time is “right.” Susan has claimed that she loves Bill, that there is no one like him, but that she knows that the relationship is going nowhere. She agrees with her therapist and friends who point out the lost opportunities, Bill’s manipulative nature and Susan’s ability to attract better prospects. All of this seems to go nowhere with Susan who continues to argue that no one can understand the special relationship that she and Bill share. Moreover, Susan indicates, “I’ve already put in four years. I can’t just walk away from it.”

Sunk cost effects are a major barrier to change. The person looks to the past for the reasons to maintain a course of action that has now proven to be a failure. Rather than claiming that the past costs are reason enough to abandon a losing strategy, the individual may escalate his justification and investment to continue the course of action. Rather than thinking that “I don’t want to throw good money after bad,” the individual may claim, “I’ve invested too much to give up on this now.”

Ideally, in making a decision, we consider the future benefits that may be achieved by a course of action—that is, we consider the expected utility. For example, the woman who had already committed substantial behavior, at high cost, to a relationship that seemed to be going nowhere, might be expected to consider these costs as a “learning experience” and anticipate further trouble ahead. Classical learning theories, guided by a reinforcement or extinction model, would imply that she would abandon the relationship, even if no other rewarding relationship were available. From reinforcement theory, the reinforcements would be seen as diminishing as the costs increased. Longer learning history in the relationship would predict even greater impetus to abandon the relationship. However, she resists abandoning the high-cost, long-history relationship. Individuals are not always guided by reinforcement history, nor are they easily convinced by cost-benefit analysis. Her current decision-point—whether to continue or quit—is determined by her prior investment in the relationship.

## COMMITMENT TO SUNK COSTS

According to normative models of decision making—that is, how a “rational person” would make a decision—individuals should evaluate future utility in making current decisions. Thus, an individual deciding to sell her house, should ignore the money spent on improving her house and should consider the current market for selling the house. If Carol bought the house for \$100,000 and put \$50,000 into the house, she should not demand that she get *at least* \$150,000 in the sale of the house, but she should try to get what the market will pay—say, \$125,000. However, individuals often act as if past investments—sunk costs—demand recovery, thereby leading many people to stick with a losing proposition (Leahy, in press).

Consider the following from one of several studies by Arkes and Blumer (1985). Subjects are told that "As the president of a company you have invested 10 million dollars of the company's money into a research project (a plane that cannot be detected by radar) . . . When the project is 90% completed, another firm begins marketing a plane that cannot be detected by radar. Also, it is apparent that their plane is much faster and far more economical than the plane your company is building. The question is: should you invest the last 10% of the research funds to finish your radar-blind plane?"

The authors found that 85% of the subjects in the study recommended finishing the airplane. However, another group, who was not told about the prior investment, overwhelmingly decided not to invest the money. Consequently, having a prior investment, which was a mistake, became an overwhelming justification for honoring sunk costs.

There have been a number of attempts to explain the sunk-cost effect. Honoring sunk costs can be explained by commitment theory (Kiesler, 1969), cognitive-dissonance theory (Festinger, 1957, 1961), prospect theory and loss frames (Kahneman & Tversky, 1979), fear of wasting (Arkes, 1996; Arkes & Blumer, 1985), attribution processes (for example, Jones & Davis, 1965), and inaction inertia (Gilovich, Medvec, & Chen, 1995). Commitment theory would predict that individuals will persist with a commitment to past actions, sometimes ignoring future utility ratios. Cognitive dissonance theory argues that prior losses for a somewhat unrewarding commitment results in a cognitive conflict which may be resolved either by overvaluing the previous behavior or by increased hope that the sunk cost will be redeemed, thereby justifying the past behavior. Prospect theory suggests that individuals suffer losses more than they enjoy their gains and that changing from a sunk cost may be experienced as a loss. Thus, by delaying the acceptance of the loss, there is an attempt to deny that the loss really exists. Fear of wasting would imply that as long as the individual remains committed to the sunk cost, and the hope of redeeming the prior investment, there is no finality to the recognition that it has been wasted. Thus, if the individual continues with the sunk cost, he may conclude that the prior investment was not wasted. This, of course, implies that he does not view future commitments to the sunk cost as increased wasting. While continuing a commitment to the sunk cost he delays the recognition of "wasting" and takes an option on hope. Hope springs eternal as long as the sunk cost is not finalized as a loss.

Attribution processes may be involved in sunk cost effects in that the individual may observe his own behavior and conclude that a high investment must be due to a worthwhile cause. This might be true for justifying sunk costs incurred by the self and by others: People only invest a lot if there is a good reason to do so. Finally, inaction inertia is based on the fact that there is asymmetrical regret for inaction and action: thus, in the short run, individuals regret more new actions taken than continuing in a course of inaction (Gilovich & Medvec, 1994). By continuing on in the sunk cost the individual avoids an increase of regret in the short run.

A number of factors affect the magnitude of the sunk cost effect. Increasing the individual's sense of personal responsibility for the original action increases the sunk cost effect (Staw, 1976; Whyte, 1993), but making the individual accountable to others for a decision decreases the sunk cost effect (Simonson & Nye, 1992). If the individual is able to attribute part of the responsibility to someone else, then he is less likely to honor the sunk cost. Thus, accountability and disattribution may be helpful in reversing the sunk cost effect. Staw and Ross (1987) found that bifurcating (or separating) the initial and subsequent decision making decreased sunk cost effects, presumably because the individual considered the utility functions of each decision independently of the other. Staw and Ross (1987) also suggest providing the individual with corrective negative feedback for his decisions in an attempt to establish clearer contingencies for decision making.

Research and theory on the sunk cost effect indicates that individuals are more likely to continue in a course of behavior the *greater* the prior cost has been (Arkes & Blumer, 1985; Garland, 1990). Furthermore, if a woman views a change as having a high cost relative to her existing "assets," she will continue longer in the behavior (Garland & Newport, 1991; Kahneman & Tversky, 1979). This may imply that the longer she is in a costly relationship, the *fewer* her remaining assets may be, since the relationship undermines her self-esteem and decreases her opportunities to pursue alternatives. This may be one reason why people stay in abusive relationships longer than objective observers can comprehend.

## MODIFYING SUNK COST EFFECTS

Many therapists can identify with the experience of patients who are locked into repeated patterns of self-defeat, who argue vigorously that they cannot give up on their behavior. No-win relationships, dead-end jobs, training or education that leads nowhere, or investments in property with declining value all elicit sunk cost effects. The patient claims, "I can't walk away from four years of a relationship," "I've already put seven years into this company—I can't give up on it now," "I'm so close to getting my degree—and even though I don't want to do that kind of work—it's too close to give up," or "I've invested so much in this property, I won't sell it for less than I paid for it." Each of these positions reflects a sunk cost effect and each is irrational and impedes change. We will now examine how the therapist can assist the patient in overcoming commitment to sunk costs.

### 1. Educate the Patient About Sunk Costs

Although the idea of sunk costs is derived from decision theory and investment models, it is far from arcane and abstract. Everyone has a tie or blouse or computer or relationship that reflects a sunk cost effect. Mundane, non-threatening examples such as a tie or blouse can be helpful for patients to understand that they may hold onto something that they would never buy again. Paying exorbitant costs to fix an old car or computer that would best be left at a junkyard are familiar sunk costs that

people can readily see. The therapist can ask, "Have you ever had the experience of throwing good money after bad? Of putting more effort or investment into something that you know is not worth much? And feeling compelled to do so?" The therapist can explain that people often find themselves committing more effort to choices that have become very costly. The previous losses and costs that are experienced are known as "sunk costs" and the decision to continue in that course of action may be called "commitment to a sunk cost."

## **2. Examine the Costs and Benefits of Continuing in the Sunk Cost**

Few courses of action are without some benefit. The individual who has difficulty leaving a job may still derive some significant benefits from the job—he knows what is required of him, he receives a paycheck, and he may derive some sense of competence from the work. Similarly, the woman who was described as being in a "no win" relationship, may point to the romance, companionship, and fun that she derives. Costs and benefits should be examined in terms of "ultimate goals"—for example, "To have a job that I can feel proud of" or "To feel that my relationship makes me feel better about myself" or "To have more stability in my life."

The costs and benefits should be examined in terms of their intensity, value, duration, and trend—that is, what is the strength or the magnitude of the reward, how important is it relative to your ultimate goals, for how much time do you get the reward, and are the rewards following an upward or downward trend? Many times the individual may recall a benefit that lasts one hour ("I saw him at lunch"), but where the costs last considerably longer ("I missed him all week"). A reward may be enjoyable, "I had a good time goofing off at work," but may conflict with ultimate goals—"I'd like to have a job that challenges me."

## **3. What Are the Costs and Benefits of Pursuing Different Alternatives?**

The first problem posed here is developing alternatives. Every commitment involves an opportunity cost—that is, a loss of a chance to pursue alternative behaviors. The man who is in an unrewarding relationship can consider the loss of opportunities to pursue other relationships. The woman who is unhappy with her job may consider the lost opportunities to pursue other training or other work. Since behavior is engaged in "real time," there is the accompanying cost of lost time which can never be recovered.

The investment trap of sunk costs implies that the individual is retrospective (about costs) rather than prospective. Expected utility theory proposes that individuals (should) consider the costs and benefits for the future for a current decision. The patient can examine the costs and benefits of basing current decisions on past sunk costs versus the costs and benefits of basing these decisions on future utility ratios. Furthermore, the therapist can ask the patient, "Would you feel comfortable if the current situation continued for one year? Where would you like to be a year

from now?" By extricating the individual from the experience of a recent sunk cost, the decision can be more prospective than retrospective. Future backward looking is more effective than current backward ties.

As with the costs and benefits outlined above, the patient may be asked to consider a range of alternatives in terms of trade-offs for their intensity, value, duration, and trend. Often, individuals trapped in a sunk cost commitment are myopic, or nearsighted, in considering alternatives. For example, the woman who is considering making a job change may overvalue the inconvenience in pursuing new training or new challenges on a different job, not recognizing that these options may become easier the longer she pursues them.

Developing alternatives to a sunk cost is not always a simple matter. The sunk cost may contribute to pessimism, thereby undermining the ability to escape from the prior commitment. The therapist may inquire as to whether other friends or family members believe that there are alternatives that the patient does not see. In addition, the therapist may articulate some possibilities. The therapist may inquire as to whether the patient saw more options to leave earlier, suggesting that continuing in the sunk cost may contribute to a decline in alternative construction and an increase in hopelessness. This is especially apparent in abusive relationships.

#### **4. Bifurcate the Current Decision From the Past Decision to Commit to an Action**

People seldom make a decision ignoring their prior decisions and behavior. Decisions are sequential rather than unitary events calculated at a single point in time. The difficulty in escaping from a sunk cost is that you are focused on justifying your past sequence of decisions and behavior—thereby leading to an escalation in commitment. The therapist can separate, or bifurcate, the present decision from prior decisions by asking the following: "If you had never gotten into this behavior, would you make a decision to get into it now?" For example, the woman who is living with a man who is neglectful and abusive can be asked, "If you had never met John before today, but you knew how things would end up, would you make the decision to get involved with him now?" Separating the current decision from prior decisions and commitments helps the patient realize that a negative answer to the foregoing question illustrates that the patient is no longer looking at rational self-interest in the future, but is now attempting to justify a past series of mistakes.

The therapist may indicate that bifurcation of decisions may imply that the higher cost ironically leads to a tendency to justify a prior commitment. The therapist may inquire why there is a difference between the first decision to get into the relationship (or behavior) and a different decision if the individual had known beforehand what the costs would be. This may lead the patient to articulate assumptions such as, "I have too much invested to walk away," "I now have a responsibility to make it work out," or "I'm not frivolous—I don't walk away from

my commitments.” These assumptions may be examined utilizing cognitive therapy techniques: “What if you looked at your prior investments as lost costs that you can never recover? How would putting more of yourself into this help you achieve your ultimate goals? Don’t you have a responsibility to yourself that is greater than your responsibility to this behavior or relationship? Wouldn’t it mean that you take yourself and your future seriously if you admitted that something was not working out for you?”

## **5. Put the Decision in the Hands of Other Decision Makers**

Most therapists can attest to the fact that they may be better at giving advice than at taking their own advice. Similarly, the patient, committed to his or her past actions and decisions, has too much at “stake” to make the decision for the future. The woman who is living with the neglectful and abusive man can be asked, “If we asked three enlightened strangers what would be the best decision for you, what advice would they give?” “Why would their advice differ from your inclination to continue in this course of action?”

Often the patient may respond with the truism that casts little light by saying, “It’s always easier to see someone else’s problems more clearly.” But the more enlightening question is, “Why?” The patient’s attention can be drawn toward the cognitive dynamics of the sunk cost effect: strangers have not incurred a cost that they need to justify. They can focus exclusively on self-interest as defined by future utilities and costs. Their decisions are forward looking, not backward justifying.

## **6. Utilize the Double-Standard Technique**

We are often quite reasonable and objective when giving other people advice but fail to utilize objectivity when it comes to our own decisions. The patient’s sunk cost dynamic may be illustrated and challenged by asking him, “What advice would you give a friend who had to make this decision?” Alternatively, to elicit even greater protectiveness of self-interest, the patient may be asked, “What advice would you give your child if he or she were in this position?” The therapist may role-play all of the patient’s self-justifications and ask the patient to pretend that he is arguing with his son or daughter who is justifying the sunk cost decision. Again, the patient’s attention may be drawn to the conflict between justifying his own sunk cost and vigorously challenging the friend’s or child’s sunk cost arguments.

## **7. What Are the Automatic Thoughts Associated With Honoring a Sunk Cost?**

Some of these automatic thoughts may be elicited by examining the costs and benefits of continuing in a sunk cost. The therapist should carefully follow up with the use of the “vertical descent” technique (Burns, 1990):

“What would it mean to give up on this relationship?”

Patient: I had wasted four years.

Therapist: What would that make you think?

Patient: That I failed→that I can’t make any decisions→that nothing will ever work out→that I’m doomed to be unhappy.

Another patient might respond with a different sequence of thoughts, such as “All my friends will think that they were right about what a lousy relationship I had→everyone will think I was an idiot→no one could ever respect me again.”

Or, the overly conscientious patient may think: “I should have been able to make it work→I was irresponsible→I can’t be trusted to do the right thing→I’m reprehensible.”

## 8. What Are Some Rational Responses to the Automatic Thoughts?

The automatic thoughts illustrated above may be examined in terms of rational or positive alternatives. (See Table 1 for detailed examples.)

## 9. Examine the Overvaluation of What Is Known or Possessed Versus What Is Not Known or What Is to Come

Decision theory research indicates that people often overvalue what they already have or possess, requiring a higher price to give up something for which they paid a lower price. Whether we call this “loss aversion” (Tversky & Kahneman, 1988) or the “endowment effect” (Thaler, 1992), individuals will find themselves preferring what they have to what they could obtain. This may be one of the reasons why investors will ride a “loser” and sell off “winners,” perhaps hoping to redeem a losing investment by watching it rise from the ashes of their portfolios (see Thaler, 1992).

Abandoning a sunk cost may activate “loss aversion,” since the individual is giving up something that he or she possesses. This immediate sense of loss, resulting in grief and deprivation, may be exaggerated by the individual confronting a choice. The therapist may examine the patient’s beliefs about the sense of loss—“How bad do you think you will feel and for how long will you feel this badly?” “How bad do you think you will feel six months from now? A year from now?” Loss aversion may be contrasted with the experience of gaining—“What can you gain?”

Tversky and Kahneman (1981) have proposed a model of choice—*prospect theory*—that suggests that individuals may ignore expected utility because of how decisions are framed. Thus, the sunk cost decision may be framed by the individual as a loss, “I will lose this relationship,” rather than as a potential gain, “I will gain opportunities to have freedom and other relationships. Framing effects may be large, but they can be overcome by proposing changes

**TABLE 1. Rational Challenges to Sunk Cost Justifications**

Automatic Thoughts	Rational Responses
I've wasted four years	This is all-or-nothing thinking. There were many positive as well as negative things in the relationship. Giving up on something that is not working for you now does not mean that it was an entire waste. If it was a waste, then better get out of it now.
I failed	You didn't fail. You had some positives and negatives. The job or relationship may have failed to live up to your expectations. You can make a successful decision now to make a change.
Nothing will ever work out	First, many other things have been rewarding for you in the past and many things are currently rewarding for you. Second, "working out" is an all-or-nothing expression—it's really about trade-offs, costs, and benefits. Third, you can examine the relative trade-offs of other options that you have.
I can't make any decisions	You have made many decisions in the past—some have been better than others, some worse than others. Making a decision to make a change implies that you are looking at future trade-offs. Making a decision to stay where you are indicates that you may think that the trade-offs are better in the current situation. Are they?
I'm doomed to be unhappy	You have had happiness before and you have times when you are happy now. Again, this is all-or-nothing fortune telling. No one is doomed to anything. The real question to ask yourself is, "Are the trade-offs better in staying or in leaving?"

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All my friends will think that they were right about what a lousy relationship I had

Everyone will think I was an idiot

I should have been able to make it

I was irresponsible

I should have known it wasn't going work

If they are right about your making them a change—that it is a good idea for you—then it may be wise to admit that someone else has good advice.

Your friends probably want what is best for you, so they may be happy if you make a change. If they are critical of you, you might want to be assertive with them.

When things don't work out it usually means that both people have contributed to the problem. What was the contribution of the other person? It also may mean that you were not in a position to make it work—perhaps the two of you are different people.

When decisions don't work out and you make a change at a later time, it implies that you are willing to recognize and accept reality for what it is. That is being responsible to yourself. You are not responsible for outcomes—you are not all-knowing and all-powerful. There are many examples of your acting responsibly. Perhaps you now have a greater responsibility to your legitimate self-interest.

You can't know everything. You can only know the information that is available at the time. When you initially made the decision you went with the information that you had. Perhaps the information changed over time—and perhaps you changed.

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as positive opportunities, with various degrees of probability: “What is the probability that you will be happy if you stay in the current relationship? What is the probability that you will be happy if you pursue something different?”

Another way of looking at this is that individuals may prefer the hell they know to the hell they do not yet know. Although, logically speaking, “uncertainty” is neutral in regard to outcome or valence, pessimistic individuals often infer that uncertainty implies a large negative. Thus, the statement “The outcome is uncertain for tomorrow,” does not have any definite valence—it could be positive, negative, or neutral—but the pessimistic individual will conclude, “It sounds like something bad will happen.” The sunk cost decision may be to avoid change because the uncertainty implies a negative outcome, whereas the current costs are discounted—“I know I can handle these costs. I may not be happy, but I could be worse off.”

The therapist may indicate to the patient the illogical assumption that uncertainty is negative and ask the patient to predict the most positive, most negative, most likely and a neutral possible outcome of making a change. The patient can assign subjective probabilities and be asked to write out a narrative of how each of these possible outcomes may unfold.

## **10. What Would It Mean to Accept Sunk Costs as Lost Investments?**

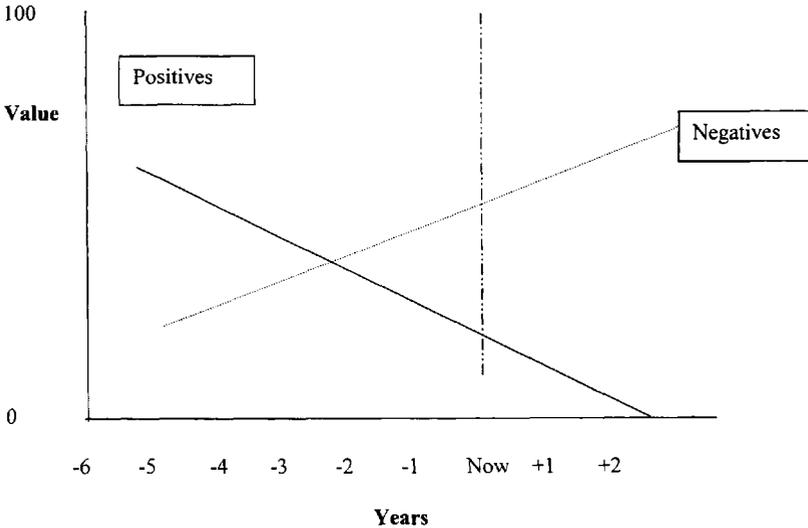
Riding a loser is a way of preserving the future option that it might become a winner. As long as the individual holds onto the decision of the sunk cost, he can hope to either redeem the sunk cost or delude himself into believing that there is still substantial “potential.” A common self-delusion in financial commitments is the illusion “it’s only a paper loss.” Certainly, if your stock drops 30% it is a real loss—just try to sell the stock and you will find out. The therapist may utilize the vertical descent procedure to evaluate the meaning of accepting a sunk cost. For example, a woman who was attached to a man who was an alcoholic and with whom she shared a six-year relationship had difficulty ending the relationship:

Therapist: What would it mean to accept that the relationship is not worth continuing?

Patient: It would mean that I’ve wasted all that time, all those years.

Here, like many people committed to a sunk cost, the perception is about dichotomized gains and losses: “If I accept it’s not working, then it was a total waste.” Regret often entails all-or-nothing thinking about a past behavior—as if there were no rewards in the relationship.

Therapist: So, if you decided now that the relationship was not worth pursuing, then it means that it was entirely a waste of time. That sounds like all-or-nothing thinking. I wonder if you can think of a shifting balance of positives eventually outweighed by negatives? [The therapist then drew a graph for the patient, see figure 1.]



**Figure 1.** Cost-Benefit Trends and Sunk Cost.

### 11. Examine the Need to Be Right

Cognitive therapy is based on the “rational principle” such that the assumption is that patients will be motivated by logic and evidence to modify their opinions. There are notable exceptions to this principle, such as the patient’s emphasis on validation, moral responsibility, or cognitive consistency (Leahy, in press). Many individuals who are suffering in their current situation may demand validation for their suffering rather than solutions to their problems (Leahy, in press). If the therapist is overly confrontational and points out how the patient may be better off making a change, the patient’s validation concerns may be activated, leading the patient to conclude, “You don’t understand how bad I feel.” The patient may believe that he has to prove to the therapist that the pain is unbearable, while viewing exhortations to change as minimization of the patient’s difficulties in the current situation or problems in making a change.

The therapist may address these concerns directly by indicating that examining the possibility to change is often experienced as uncaring and as minimizing the patient’s difficulties: “I can see how bad you feel and how difficult it is to even consider making a change. When I ask you to examine other options, I do not mean to imply that making a change is easy for you or that the problems you are having are not important.” The therapist may indicate that “therapy is often a dilemma—no matter what you say or do, at times it is painful. To think of making a change is painful because it may mean you are thinking of leaving something that is meaningful or it may mean that you feel that your feelings are

being ignored. But not to consider change might mean that you are stuck. We can try to deal with this dilemma by reminding ourselves that your experience and feelings are important and that your options are also important.”

## **12. Examine How Sunk Costs Are Related to Personal Schemas**

Many people who get stuck in one sunk cost are able to abandon other sunk cost decisions without regret or hesitation. The relevant factor appears to be how the sunk cost is related to the individual's personal schemas. The woman who is stuck in the abusive relationship may find it difficult to extricate herself from the sunk cost because it may activate her personal schemas of abandonment (“Everyone will leave me”), biological helplessness (“I can't take care of myself”), or demanding standards (“I should make everything work out”). In contrast, another person may get stuck in a relationship because of the need to appear “special”—divorce might imply failure, mediocrity or ridicule from others. For other people, abandoning a sunk cost in a relationship may be less of a problem, because the personal schema may be positive (“desirable,” “special”), thereby implying that future benefits may be especially appealing.

The variability of sunk cost effects for the same person may be illustrated by asking the patient, “Are there other decisions—in other areas of your life—that are easier for you to make?” For example, a man who had a difficult time abandoning the sunk cost in an intimate relationship found it much easier to cut his losses in business decisions. The sunk cost in the relationship implied a sense of being a success as a husband—and divorce implied failure to him. Although he was quite successful in business and in investments, he had considerable doubts about whether he was lovable. Thus, his personal schema of being unlovable was activated when he considered making a change in a relationship, but he was flexible in decision making in business, since his personal schema in that domain was quite positive.

The therapist may help the patient examine the origins and validity of the negative personal schema, considering how the schema may have been learned from dysfunctional parents and maintained by avoidance and compensation (Beck & Freeman, 1990; Leahy, 1990, in press; Young, 1990). Indeed, the sunk cost effect may be considered as a “schema-maintaining” process and the patient may be asked what changes in his schema might have occurred had he not been trapped by sunk costs. Traditional cognitive therapy techniques, such as examining the evidence, considering costs and benefits, acting against the schema, utilizing the semantic technique, and utilizing role-plays in therapy can be helpful in modifying the schema. Of course, abandoning the sunk cost may be considered as an experiment in acting against the schema, with the patient's predictions elicited and tested.

The advantage of recognizing variability in being trapped by sunk costs allows the patient to recognize the potential for change. If change is possible in one domain in life, it can be achieved in other domains. Being trapped in the sunk cost in the domain specific to one's negative schemas may further reinforce the negative schema. The woman who is trapped in a no-win relationship may point to that relationship as proof that she is unlovable, but the fear of making a change may be impeded by her belief that her "unloveability" will prevent her from finding better alternatives. This self-fulfilling prophecy of sunk cost effects further strengthens her negative schema.

## CONCLUSION

An irony of the sunk cost effect is that everyone knows what it is but few clinicians have considered it as a factor in change. Almost all of us know what it means to "throw good money after bad" and many people recognize the folly of becoming overcommitted to past decisions—such as during the Vietnam War. The fact that humans, and not animals, are susceptible to sunk costs (Arkes & Ayton, 1999) is evidence of the importance of cognitive factors and sophistication in developing impediments to change. We may be too smart for our own good.

We have examined the fact that normative models of decision making may not apply for important everyday decisions in which patients get blocked from considering expected utilities in a rational way. It may be that individual decision makers considering mundane decisions are less concerned with being rational and more with making sense of their past behavior. As Festinger (1957) noted many years ago, the emphasis on self-justification and self-consistency may result in apparently counterintuitive decisions, some of which may be self-defeating.

We have examined a number of possible interventions that the clinician may utilize in reversing the sunk cost effect. The development of a rationale for the patient, based on a decision-theory model of sunk costs, is an example of how the cognitive approach is particularly effective in involving the patient in therapeutic collaboration—that is, once the patient understands the process of sunk costs, change may be facilitated. The goal of therapy is to help the individual overcome impediments to following subjective expected utility and to make decisions that are forward-focused rather than backward-justifying.

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*Offprints.* Requests for offprints should be directed to Robert L. Leahy, PhD, American Institute for Cognitive Therapy, NYC, 136 East 57th Street, Suite 1101, New York, NY 10022.

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