

Feeling Duped: Emotional, Motivational, and Cognitive Aspects of Being Exploited by Others

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Feeling duped is an aversive emotional response to the perception of having been taken advantage of in a interpersonal transaction (primarily those involving economic exchange), partly as a result of one's own decisions. The actual likelihood of being duped, as well as the heightened vigilance for it, should increase as a function of opportunity (e.g., information asymmetry that gives one side a big advantage in knowledge) and motivation (e.g., an exceptionally huge payoff may make it worth defrauding a long-term business partner). Being duped produces an aversive self-conscious emotion with a threat of self-blame. There appears to be stable individual differences in the motivation (called sugrophobia) to avoid being a sucker. High sugrophobes will be vigilant and skeptical of potential deals. Low sugrophobes may not even realize in some instances that they were duped. The aversive reaction to feeling duped stimulates counterfactual ruminations that may intensify sugrophobia but also aids in extracting useful lessons.

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A woman went into a Best Buy store to buy a new computer chip. When she went to the cashier to pay for her purchase, the store cashier offered the woman a free 8-week subscription to a popular magazine. The woman was suspicious about the offer, so she asked for more details. The cashier told her that there were no obligations whatsoever and no other details to reveal. After a few more questions, the woman agreed to accept the free offer, and she chose to have eight weeks of *Time* magazine. When she got home, the woman looked at the bottom of her

receipt, only to find in tiny print that her credit card was going to be charged for 24 issues (8 free + 16 paid) of the magazine at a price of \$24.98. The only way to get “free” issues, in fact, was to cancel the subscription charge during the 8-week trial period; else, the whole amount would be charged to the woman's credit card. The woman felt cheated and taken for a sucker. She felt worse when she looked at the magazine's website, which showed that not only was she taken advantage of in terms of entering into a contract she did not want, but also that Best Buy did not even give her a good deal—the same payment of \$24.98 would have yielded her 84 issues of the magazine as purchased off its own website (Lazarus, 2006). The newspaper report of this incident elicited over 100 angry letters from readers who said they too had been duped by this same phony bargain.

The purpose of this manuscript is to pull together the scattered bits of theory and data about the phenomenon of being duped by others. Being duped or suckered (we use the terms interchangeably) is an important dimension of human social life and a possibility that can

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subvert many economic interactions. We shall focus on the reactions of the person who is duped rather than the cheater. Because of the recurrent danger of being duped, we propose, people have developed cognitive, emotional, motivational, and personality structures that are designed to prevent it from happening at all and especially from happening repeatedly. Being duped ties in with this special issue's theme of emotion and decision insofar as it centers on an emotional reaction to past decisions and their outcomes—and that can thereby have a lasting effect on future decision patterns.

Our review is intended to stimulate more research on this phenomenon. There is not a wealth of already existing findings to cover. We shall therefore organize our article around the theoretical structure and cover relevant findings along the way.

Definitions

Feeling duped is a reaction to an interpersonal event and presupposes some shared understanding of fair exchange. To feel duped means to feel that one has given more than one has gotten or that one has gained less than one thinks one deserves. There is a perceived unfairness as the result of a transaction, with oneself as loser and the loss is sufficient enough to be regretted. When one feels duped, the interaction partner is seen as coming out the winner and as having gained from the self's loss.

Not all bad interpersonal outcomes involve feeling duped, of course. There are several factors that set duping apart. First, as noted, it involves some kind of exchange that can refer to standards of fairness. Second, the sucker made some decisions that in principle might have prevented the duping if the decisions had been made differently. Third, we assume that the other person is seen as intending to produce the outcome and thus was to some extent dealing in bad faith. (In some cases this may be only the sucker's false perception of what the other person intended.) To feel duped means that one believes that the injustice was the result of deliberate, intentional acts by the other person. In feeling duped, one believes that the transaction partner and the self shared a concept of fairness and that both would agree that the duping violated it.

Although feeling duped may arise from the cognitive construal of an interpersonal event, at its core it is a feeling, which is to say an emotional state. In essence it is a highly aversive feeling; consequently, people are motivated both to avoid that feeling and, when it does occur, to analyze what may have caused it so as to learn how to avoid repetitions. As we shall explain, it should fit in the category of self-conscious emotions alongside shame, guilt, pride, and embarrassment.

A second key construct in this theory involves the chronic and possibly exaggerated fear of being duped. We use the term *sugrophobia*, from the Latin *sugro*, which means *to suck*. Sugrophobia translates literally as fear of sucking, that is, of being a sucker. Although the term *phobia* has taken on medical and clinical connotations linking it to pathology, we do not intend to invoke those connotations, although (like many fears) the difference between normal, safety-conscious aversion and pathological dread may be a matter of degree.

Sugrophobia is thus essentially a motivation. As with most motivations, it will vary between individuals, both as state and trait. Some people go through life maintaining chronic vigilance against being duped, whereas other, more trusting souls probably worry only occasionally and lightly about the possibility. We shall suggest that there are costs and benefits to both ends of the continuum, so we do not intend this to be a normative or prescriptive theory because there is no clear value judgment as to whether being highly sugrophobic is uniformly good or bad. Other social scientists echo this idea. In particular, Cialdini (2001) concluded from his study of illegitimate influence techniques that it can be as costly to be cynical and untrusting as it is to be naïve and gullible.

Basis, Context, and Origins

Anticipating or feeling duped goes beyond detection of deceptive behavior; patterns of deceptive behavior have been documented in many other species, but the concept of being duped is specific, we think, to humans. The idea of exchange, in combination with what makes a fair deal, seems particular with humans. Adam Smith (1776/1937, p. 17) commented similarly: "Nobody ever saw a dog make a fair and deliberate exchange of one bone for another with

another dog. Nobody ever saw one animal by its gestures and natural cries signify to another, this is mine, that yours; I am willing to give this for that." No creature other than human beings has been shown to develop market-based economies that even begin to approach the scale, flexibility, or subjective impact of the human economies (Horan, Bulte, & Shogren, 2005). Human life all over the globe depends on role specialization and exchanging goods and services with others (Baumeister, 2005). Therefore the possibility of duping and the corresponding need to watch out for it are much greater among humans than among other social animals. Recent work (Brosnan & de Waal, 2003) demonstrated that monkeys understand fairness—as demonstrated by their negative reactions to getting less than another monkey for performing the same task—but they do not appear to experience the self-recrimination that is the central point of the current duped theory.

Some of the greatest advances that a cultural life affords its people are substantially aided by the fact that people become specialized in certain skills. Adam Smith (1776/1937) emphasized the benefits of role specialization, but the downside of specialization is that people cannot possess all the skills they need in order to get what they need to live, and therefore people must depend on others via trade. The inherent problem with exchange is that there is often no impeccable, objective way of establishing how much of X is a fair trade for a given amount of Y. One illustration of this is the purchase of Manhattan from the Algonquins by Dutch settlers in 1626: the value of the goods traded in exchange for "Fort Amsterdam" was 60 florins. Hence people who depend on trading X for Y may be chronically unsure whether they are getting a good or fair deal. The problem is greatly complicated by the ineluctable fact that both parties have some motivation to get as much of the other's good for as little of their own as possible, and so your trading partner is likely to be willing, even eager, to profit at your expense.

In short, the paradox of economic relations is that they are both antagonistic and mutually beneficial. When a family sells their house, they benefit by getting money that enables them to purchase a new home where they now want to live, and meanwhile the buyers benefit as well by gaining a new home. In that sense the sale is

mutually beneficial. But the negotiation of the actual sales price is somewhat antagonistic, insofar as a higher price benefits the sellers to the same extent as the price is a cost to the buyers. Humans evolved to be willing to participate in such interactions in a degree unprecedented in other species, and much to their general benefit (e.g., Seabright, 2004). But to engage in these transactions is to expose oneself to the risk of being exploited by others. Vigilance about the possibility of such exploitation is thus normal and adaptive. Even so, some people will be more vigilant than others.

We seem to be, as a species, especially sensitive to the possibility of being taken advantage of in social contexts. Cosmides and Tooby (1989) showed that students were generally unable to solve a classic logic problem, called the Wason selection problem, when presented in a variety of formats—except when the problem was presented in terms of taking benefits without paying the cost, whereupon people solved it consistently and correctly. Cosmides and Tooby concluded that human evolution involved the development of "cheater detectors," which is to say mental modules that are specifically designed to spot others who violate trust and exploit a group system for unfair personal advantage. By spotting cheaters early on, one can protect oneself from them. In an analogous fashion, sugrophobia leads people to avoid future interactions with those they deem likely to dupe them. Hence, sugrophobia's neuroscientific roots may exist in the cheater detection module (see Stone, Cosmides, Rooby, & Knight, 2002), but its occurrence in exchange-based relations and its high degree of self-consciousness suggests that the duped feeling itself appeared much later in human history, in step with advances in human culture (Baumeister, 2005). Friestad and Wright (1994) posit that persuasion knowledge is even more important for people to possess than domain-specific knowledge about goods and services because detecting persuasion attempts will bring benefits regardless of whether one is getting the oil changed in the car or buying a diamond ring.

Although economic exchange is the main sphere in which duping is likely to be studied, we hasten to add that economic exchanges are not confined to money. For example, we have argued elsewhere that sex operates like a female resource that is exchanged for other resources

from men, insofar as men generally give women resources including love, attention, respect, commitment, support, and sometimes money in exchange for sex (Baumeister & Vohs, 2004). Hence people can feel duped when it comes to sex exchanges. Buss's (1989) survey of men's and women's complaints about each other indicated that the most common gripes reflected precisely such duping. That is, men complained about women who took their resources, such as by having the men spend money on gifts and entertainment for them, without giving sex in return. Women, meanwhile, complained about men who seemingly promised lasting love or commitment but then buggered off as soon as they had obtained sexual gratification. In this way, duping can occur in an interpersonal realm as well as a monetary one, and we predict that the processes and outcomes are highly similar.

Situation Structure

Feeling duped is essentially a response to an inequitable and disadvantageous exchange outcome that in advance one hoped would turn out fairly but, on the other hand, one could have foreseen being taken advantage of. Several features of this situation deserve emphasis. It is essentially an interpersonal event, although the feeling might occasionally emerge in interactions between person and a human artifact (such as a vending machine or computer), or even a pet to whom human qualities are ascribed. Although we may emphasize the cognitions and emotions of the duped person, the basic situation structure involves two people.

Exchange transactions have several relevant features. These interactions must contain some idea of how to split a set of finite resources that so that one person's gain is the other's loss. Nonzero-sum encounters have correspondingly less chance of yielding the feeling of being duped. Note that actual loss is not required, however. In most economic exchanges, both parties gain (e.g., one gets money, the other gets food). The duped feeling arises when one believes that the other gained unfairly more than oneself did, and so it can arise even though one did gain (e.g., you got what you wanted but think you were overcharged). Kelley and Thibaut (1978) brought the analysis of situation structure into social psychology and made salient the costs of being interdependent. In their

terms, being duped is threatening when the other person has "fate control" over one's outcomes. Being duped therefore depends on the existence of some shared notion of fairness and equity, as well as the idea that one's gain is another's loss. Being duped, then, has a core component that the individual appraises the transaction as unfair.

In addition to perceiving that another got more—and the self—than what was deserved, duping involves having trusted the other party to trade fairly. As economists long have noted, some degree of trust is required for nearly all exchange and economic transactions (Arrow, 1972). Even a generally trusting person must recognize that under some circumstances, there are substantial risks in making a transaction when the basis for trust is weak, such as when one is trying to make a cash purchase from a street vendor in a foreign country whose ethnic group is hostile to yours, where the rule of law is unreliable, and when you cannot read the markings on the currency. Illegal transactions such as drug deals likewise dramatize the importance of trust (McVay, 2004): although the huge potential profits make them attractive, they are difficult to carry off insofar as trust is minimal, in part because either party's profits can be even larger if one swindles the other, and in part because the cheated party lacks the usual recourse such as complaining to the police to enforce fair trade. (Hence the involvement of organized crime groups in such illegal industries: they replace the role of police as enforcer of trust and fair trade, thereby making the transactions possible; Gambetta, 1993.)

Again, feeling duped involves a sense that one's trust was violated. It is not possible to live in a culture and participate in an economic marketplace with zero trust, but trust creates the vulnerability to being duped. This vulnerability is likely increased as a result of several situational aspects, especially uncertainty and lack of third-party enforcement.

Distrust of others should rationally increase in proportion to two main perceptions, namely the other's incentive to dupe and the other's opportunity to dupe. Perceived incentive would be a combination of the benefits at stake, balanced against the relationship background (insofar as people will dupe or cheat strangers more readily than close relationship partners). People have a tendency to think that others are

more self-interested than they themselves are (Ratner & Miller, 2001); hence, on the whole, people will be aware of others' incentive to dupe. Unusual factors, such as an exceptionally high value on the unresolved exchange, might increase the incentive to dupe. For example, a drug dealer and supplier may have dealt honestly with each other through a series of four-figure transactions, but when a six-figure deal is in process, either party may decide that it is the right time to betray the partner and abscond with a huge take. It would therefore be rational to feel more suspicious as the stakes rise, even despite a reassuring history of fair dealing.

As for opportunity to dupe, it may be affected by information asymmetry. Role specialization entails that the two parties have different knowledge, and these differences increase the possibility of duping. Information asymmetry can threaten to destroy entire markets, as in Akerlof's (1970) analysis of the problem of used-car dealers: the dealer knows which cars are lemons, whereas the buyer does not, and the standard average price is a bit cheap for a good car but unreasonably excessive for a lemon.

Evidence suggests that duping increases with information asymmetry. There is a special class of services and goods called *credence goods* whose quality cannot be known even after experience with the product (Darby & Karni, 1973). These products include all varieties of repair services (medical, home, automotive, etc.), legal services, transportation, and consultants. To illustrate, think of going to a car mechanic and having your (working) brake pads removed and new brake pads installed. The condition of the car will seem, to you as the driver, much the same as before the new pads were installed because you had no indication that the brake pads needed changing. The buyer must simply trust the provider to sell the credence goods only in response to need.

That trust is often misplaced, as recent evidence indicates (e.g., Domenighetti, Casabianca, Gutzwiller, & Martinoli, 1993; Emons, 2003). Medical services are an important class of credence goods because the information asymmetry is high, and the consumer may never know whether the procedure actually helped the problem. Physicians who take a fee for each service have been shown to overprescribe procedures, whereas those who are paid on a salary tend to underprescribe (Gaynor, 1994). Detailed analy-

ses of Swiss data showed that Swiss physicians and their immediate families have far fewer (25% fewer) operations than the average (non-medically connected) person in the same region (Domenighetti et al., 1993). Their children are far less likely to have their tonsils taken out compared to the average citizen (see Emons, 2003). A person with a low IQ in Switzerland (note that this is only where the research took place; which is not to suggest that the results were specific to that country) has 1.5 times the chance of having a hip-joint operation as compared to a physician's child, who presumably has a wealth of crystallized knowledge on his or her side via the parent (Emons, 2003).

One could argue that superior medical knowledge enables physicians and their families to live exceptionally healthy lives. The test case would therefore be people who lack medical expertise but are nonetheless feared by physicians. Domenighetti et al. (1993) found that lawyers' families have the same low rate of operations as physicians' families.

Tests of the honesty of car mechanics show evidence of duping as well: research in Germany indicates that similar quality service is done at pricy car repair shops as compared to less expensive repair garages, whereas work done at the former costs twice as much (Emons, 2003). The United States does not escape from car mechanic duping either, as a case against Sears Automotive showed. In the early 1990s, Sears automotive departments were offered incentives (e.g., sales commissions, five-figure cash bonuses, and Caribbean vacations) for reaching sales targets, which seems to have promoted the giving of unnecessary services. One test that used undercover cars revealed that in 90% of the time these repair shops performed unnecessary service. Initially when these claims were aired, Sears tried to claim that the practice of replacing parts before they were bad was "a common practice in the industry" and that these actions counted as preventive maintenance. Later, though, when it was pressed, Sears finally recognized that "goal setting process for service advisers created an environment where mistakes did occur" after which they paid \$8 million to settle these accusations.

Although duping happens to someone, the victim's role is not a fully passive one, and in fact an important part of being duped is making decisions. The victim chose to trust and presum-

ably made other avoidable decisions that contributed to the outcome. These are crucial underpinnings to some of the cognitive reactions, such as counterfactual thinking and self-blame.

Studies on the so-called “sucker effect” have confirmed important aspects of the situation structure. The sucker effect (Kerr, 1983; Jackson & Harkins, 1985) is based on a perception that oneself (the sucker) is working hard while others free-ride and get the benefits of one’s efforts. The sucker effect is one explanation for the social loafing phenomenon (Latane, Williams, & Harkins, 1979), which is that people will at times decrease effort on a joint task. When one perceives that others are doing less than their fair share of the effort in a joint task, one slacks off in order to avoid being a sucker. The sucker effect and the duped feeling thus share the common feature of feeling that one is suspicious that others are not being honest in playing their role.

In Kerr’s (1983) original study, participants were paired with a confederate for a joint physical task. The confederate’s behavior changed in each condition to indicate her motivation and ability to perform the boring task. In the crucial conditions, the confederate was motivated to perform well but physically unable to do so, or motivated to do well and physically able, or physical able but apparently unmotivated because she failed to perform the task successfully. Participants’ own behavior on the same physical task was the dependent measure. As would be expected if people avoid being suckered, participants withdrew effort in the condition in which the confederate was fully capable of performing the task but seemingly chose not to do so. This condition suggested the confederate was free-riding, and so the participant decreased effort as well, apparently in an attempt to avoid being a sucker. Participants did not reduce effort when the confederate was incapable of doing the work, even though the net result was seemingly the same (i.e., that the participant had to do the work for someone else). Being duped is not just inequity, nor just another person benefiting at one’s expense, but rather it involves the perception that the other person took advantage of you unnecessarily.

Cognitions

What makes a person feel duped? The emotional reaction of feeling duped rests on a fairly

complex cognitive appraisal. One will only feel duped insofar as the cognitive construal of the situation fits the following model. First, oneself and the other person shared some assumption of fairness and one trusted the other to adhere to it. Second, one’s outcome was unfair in a disadvantageous way. We assume that when people agree to a contract, the parties have found it to be fair-enough to consent to it, even if each person sees some minor aspects of the contract as unfair. Third, the other person knowingly and intentionally brought this about, thus deliberately violating one’s trust. Fourth, the victim made decisions that contributed to that outcome, and had one chosen differently, the bad outcome could have been prevented.

Being duped carries the possibility of self-blame, though some people may manage to construct an interpretation that minimizes or eliminates self-blame. Insofar as the victim made decisions that could have prevented the outcome, the victim bears potential responsibility. The self-blame aspect carries the threatening implication that the self is stupid or gullible or otherwise socially incompetent at exchange interactions. Because people are reluctant to embrace such negative views of self, they will react to being duped by wanting to avoid letting it happen again. Hence it is important to learn the lesson.

Thus, people are reluctant to admit having been duped (because they blame themselves)—but such admissions are often useful in enabling the person to learn the lesson and avoid being duped again. Both of these aspects were demonstrated by Sagarin, Cialdini, Rice, and Serna (2002) in their research on how to help people resist deceptive and illegitimate advertising. They showed that most people have a “can’t happen to me” sense of invulnerability, which is to say they recognize both the existence of duping and the fact that other people will sometimes fall for it, but they believe themselves sophisticated and vigilant enough to resist it. However, in one study, participants were led to rate deceptive ads as at least somewhat convincing, and the researchers then used those ratings (after revealing the ad to be deceptive: the ostensible expert was in fact an actor with no expertise on the product) to show participants that they were in fact vulnerable. Recognizing that they themselves had been duped did appear to help participants learn the lesson, and on

subsequent tasks they were able to resist being duped by illegitimate ads. In fact, the lesson appeared to be quite helpful because they were not simply skeptical of all ads—rather, they showed significant improvements in the ability to discriminate between legitimate and deceptive advertising claims.

The multifaceted importance of learning to avoid being duped again would likely fuel cognitive rumination after the fact. Helpful rumination would presumably be dominated by counterfactual analyses by which the person can imagine how he or she might have prevented being duped. In principle, these reflections would enable the person to know how to act differently in future situations so as not to be duped again.

To be sure, there are both upward and downward comparisons, and the desire to make oneself feel better after being duped might foster a preference for downward comparisons, by which the person thinks how it could have been worse and is comforted by the relatively moderate losses. (Minimizing the loss via downward counterfactuals may also help reduce the impact of self-blame.) However, research on counterfactual thinking has found that upward counterfactuals become increasingly likely when people believe that a situation could be repeated, as opposed to being one-shot occurrence (Markman, Gavanski, Sherman, & McMullen, 1993). The downward ones may therefore predominate mainly when there is no likelihood of a similar future situation and so no need to learn a lesson.

As a result of such painful experiences, or perhaps just because of socialization to be wary in general, people may approach new situations with a heightened vigilance. It would be natural for humans to seek auspicious, advantageous deals, but any cues that suggest they are not as advantageous as they seem could elicit skepticism. The Too Good To Be True effect (TGTBT; Srivastava & Lurie, 2001) describes situations in which consumers perceive that an offer is so appealing that they suspect fraud because consumers cannot be wholly convinced that the offer is as great as the seller claims. The use of price-quality heuristic knowledge leads to doubt that the quality of an inexpensive product can be very high. Research shows that despite the low price, consumer spending actually drops when people are presented a TGTBT offer (Srivastava & Lurie, 2001). This effect most

likely occurs out of consumers' fear that they will be duped (i.e., that they will buy a product that is much lower in quality than is promised), and the low price signals that they should have seen it coming.

Perhaps the most dramatic demonstration of a TGTBT effect involved researchers attempting to give away money (D. Ariely, personal communication, April 20, 2006). They set up tables in shopping malls and other public locations that advertised and gave away cash for the asking with no obligation or return. The main surprise from that investigation was that the majority of people simply walked right past an offer of free money (ranging from \$1 to \$50) without stopping to collect. At \$1, 90% of people walked by. At \$50, 78% of passersby walked right by the opportunity for free money. The most likely explanation, and that favored by Ariely, is *sugrophobia*. Modern citizens are accustomed to being offered free benefits that turn out on closer inspection to have long and costly strings attached. (We opened this article with one such anecdote about the Best Buy subscription offer.) If people had really understood and believed that they could get extra cash with no obligation, no cost, no effort, and no risk to themselves, they would presumably have all accepted it. But apart from social science experiments, such freebies are few and far between, and indeed the reality of economic life is that money is almost always exchanged for something else. The more *sugrophobic* an individual is, the less likely he or she is to believe that free money is really free.

Even more broadly, research has shown that the presence of advertising itself arouses suspicion in consumers. One investigation manipulated the number of (honest) advertising claims participants viewed and found that skepticism increased in proportion to number of ads viewed (Koslow, 2000). It seems that the more advertisements that were shown, the more sensitive viewers became to the idea that they were trying to be persuaded, and this heightened their suspicion of the truthfulness of advertisers' claims. This study thus suggests that when people feel their attitudes are trying to be influenced, they become aware of the fact that the influencer has something to gain and consequently the potential consumers may retreat from the deal. Advertisements, most of which ultimately aim to increase demand for a product, may backfire

insofar as they make people aware that they may be duped and, ironically, ads may have the effect of somewhat decreasing purchasing.

Emotions

An emotional reaction is likely to be central to being suckered. Our view is that the function of the emotional reaction is less to initiate behavior, as many traditional theories have assumed, than to shape and guide cognitive processing, and recent reviews have indeed concluded that emotion has much more common and reliable effects on cognitions than on behavior (e.g., Schwarz & Clore, 1996, *in press*). Of particular relevance is Roese's (1997) conclusion from an extensive literature review that aversive emotional states are among the most powerful stimulants for counterfactual thinking. Thus, the adaptive process would be that being duped causes an aversive state, which in turn seizes attention and drives counterfactual analysis, so that the person learns a useful lesson and is able to avoid repeating the experience. The aversiveness helps motivate the process because the person wants to avoid having that same feeling again.

A full description of the emotional reaction to feeling duped must await further study, but several features seem likely. As noted already, it would have to be aversive to be maximally effective. It would be similar to regret, insofar as both rest on a negative reaction to a recent event and a wish that things had turned out differently. Frustration would also be related, insofar as the other person blocked the sucker's goal for the transaction. We have suggested that feeling duped is likely to be among the self-conscious emotions, alongside shame, guilt, embarrassment, and pride (Tangney & Fischer, 1995).

Anger would also likely be part of the emotional reaction to feeling duped, although individuals may be able to distinguish the duped feeling from their simultaneous anger. Anger might be directed primarily at the person who violated norms and took advantage of one (Dunn & Schweitzer, 2005), but there may also be anger at the self for letting it happen. Depending on the extent of self-blame, the anger toward self could even evoke some degree of shame. Empirically, shame motivates a tendency either to lash out at others or to hide

(Tangney, Wagner, Hill-Barlow, Marshall, & Gramzow, 1996), and either reaction could be manifest among duped persons—either to be reluctant to admit that they were duped (which might benefit the exploiter) or to attack the person responsible (which would endanger the exploiter).

The evolutionary versus cultural roots of feeling duped pose an interesting set of research questions. Exchange relationships in other species are not nearly as sophisticated as in humans, and so there would be little reason for human evolutionary forebears to have much capacity for feeling duped. On the other hand, if the crucial aspects of human evolution involved retrofitting the primate psyche to enable it to sustain a culture, including economic relations (e.g., Baumeister, 2005; Seabright, 2004), then the duped emotion might well be innately prepared in humans. Cultures differ in their degree to which duping occurs, and so the duped emotion should be more common in some (especially those with extensive exchange networks that include nonrelatives and strangers) than in others. If cultures could be found in which the people are utterly incapable of feeling duped, then we might conclude that there is no innate basis and the emotion is entirely a cultural construct, but we would not bet on that outcome.

Sugrophobic Motivation

A motivation to avoid being duped (sugrophobia, in our term) would be adaptive to humans and to any other creatures that live amid economic markets in which duping is possible. Duping, after all, deprives the victim of resources and thereby potentially jeopardizes survival and reproduction. The proximal cause by which the motivation operates is likely to be the aversiveness of the emotional reaction: people learn to watch for and avoid being duped because they do not want to repeat the unpleasant emotional feeling.

Obviously, rational calculations would likewise predispose people to want to avoid being duped, but our view, and indeed one theme of this special issue, is that emotions can be powerful aids to decision-making. Our assumption is that rationality combined with emotion is generally a more powerful influence on behavior than rationality alone. Anticipated emotion, in particular, appears to be a more reliable and

more adaptive influence on behavior than currently felt emotion (Baumeister, Vohs, DeWall, & Zhang, 2006). Hence it seems safe to predict that the anticipation of possibly feeling duped will be a powerful stimulant to watch out for and avoid such situations. If people could be found who utterly lack the emotion of feeling duped, but who are fully capable of rational calculations, they would be victimized more often than ones with the emotional capacity, because the emotion is the salient and proximal factor (cf. Fehr & Gächter, 2000; Goette & Huffman, 2007).

We noted earlier that sugrophobia appears to be an important cause of social loafing: people withhold their effort when they expect others to do the same because they do not want to feel like a sucker for doing other people's work (Kerr, 1983). By the same token, sugrophobia appears to be an important contributor to the commons dilemma. This dilemma arises when individuals are motivated to act in a manner beneficial to themselves, but such behavior is damaging to the group as whole. The term comes from commonly shared grazing areas for individually owned herds. If a single herdsman adds an animal to his flock, he can increase his revenue, but the decreased amount of grass for all of the sheep to eat reduces the revenue made by the village as a whole (Hardin, 1968). Over time, such resources tend to be overused, to the extent that they fail to sustain and reproduce themselves (e.g., the overgrazed field does not recover to feed next year's sheep; more recently, overfishing creates shortages of fish populations that ought to have been able to sustain themselves).

Economists have argued over whether the destructive outcomes of the commons dilemma are caused by greed, in that a herdsman buys more sheep in order to increase his individual revenue, or by fear of being suckered, in that he recognizes that others may behave noncooperatively and does not want to be the only sucker not taking from the common pool. Researchers originally downplayed the contribution of sugrophobic motivation, thinking that greed was sufficient to explain the phenomena, until more recent research indicated that the fear of being suckered may indeed play a role in a variety of social dilemmas. The commons dilemma is similar to social goods dilemmas, in which people may choose to contribute any

amount to the common good, whereupon the total contribution is multiplied and divided equally among participants. Rapoport and Eshed-Levy (1989) used a simulated social dilemma to test the effects of greed versus the fear of being suckered on the amount participants would contribute. Through manipulation of the payoff structures, researchers were able to create a condition that would only be affected by greed, a condition only affected by fear of being suckered, and a condition affected by both (the standard social dilemma). The condition only affected by anticipation of being suckered involved the participant losing money if he contributed while no one else did but no reward if he didn't contribute and others did (to rule out the effect of greed). Rapoport and Eshed-Levy found that both fear of being suckered (sugrophobia) and greed significantly reduced the amount that participants contributed to the common good. Greed is not a sufficient explanation.

When people share or divide costs or benefits with each other for group gain, such as in social dilemma situations, it is important to ask whether there is a greater pull to gain more (or give fewer resources) than other group members or not to fall behind and get fewer rewards (or give more resources). Empirical separations of the two drives conclusively show that people dislike losing more than they dislike not winning (Messick & Thorngate, 1967; Van Lange, 2006; cf. Kahneman & Tversky, 1979). Being duped is the signal that activates this motivation (called aversive competition), in that it means that one feels bested by another (as opposed to besting others). Ambiguous or new circumstances heighten this aversive competition motivation supposedly because when under uncertainty people want to ensure that others do not get the better of them (Poppe & Valkenberg, 2003).

Recent analyses of person perceptions highlight the fear of being duped as a core explanation for attributions about honesty. Miller, Visser, and Staub (2005) note that perceptions of people's honesty follow a robust but asymmetrical pattern. Only one dishonest behavior is considered evidence enough to label someone as a cheat, whereas one honest behavior is not nearly enough evidence to conclude that someone is honest (Reeder & Brewer, 1979; for review, see Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). Sugrophobic con-

cerns may contribute to the asymmetry. If observers incorrectly label someone as graceful when in fact he or she is clumsy, that error is unlikely to cost them much, unless perhaps they entrust him to carry their thousand-dollar wedding cake or install their antique chandelier. In contrast, if they mistakenly label a dishonest person as honest and on that basis trust the person with resources or intimacies, they may suffer considerable losses. Essentially the mistake of overattributing honesty exposes one to be duped. Miller et al. (2005) state, "Of the various errors that observers can commit, being duped may be the one they fear most" (p. 127). It seems that people are chronically looking out for information about whether others are dishonest (Fein, Hilton, & Miller, 1990), presumably because they do not want to be shown to be a fool. In short, people fear being taken for a fool so much so that being wary for others' dishonesty is a chronically activated goal.

Trait and State Differences

This work began with the informal impression that some people go through life constantly on guard against being duped, whereas others seem rarely to worry about the possibility. If this is correct, it should be possible to construct a valid measure of individual differences in sugrophobia, which could then be of considerable use for researchers who study social dilemmas, prosocial behavior, decision making, behavioral economics, and similar topics.

In other words, some people constantly worry that others are trying to cheat or exploit them, whereas others are trusting and assume that people are generally good. The former think that taxi drivers take the long way around to run up the fare, car mechanics fix more than they must, romantic partners misrepresent their intentions and past behavior, the roommate's forgetting to pay the phone bill was not entirely accidental, some vendors doctor credit card receipts after the customer has left so as to increase the amount, neighbors ask to borrow tools they already know they do not intend to return, and so forth. The latter do not.

When the former are cheated, they feel their cynical views of human nature have been vindicated and resolve to be even more vigilant henceforth. When the latter are cheated, they may not even notice, and if they do, they are

genuinely surprised. Moreover, these nonsugrophobics may not even change their behavior because they cannot believe it would happen more than once.

Both approaches have costs. The sugrophobics, who suspect cheaters everywhere, go through life worried about being taken advantage and may believe themselves victimized when they were not. They expend a fair amount of effort in protecting themselves against what must often be nonexistent dangers, and these efforts include cognitive work and strategies, emotional signaling, and interpersonal behaviors. When they do find themselves on the losing end of a transaction, they may be likely to retaliate (cf. Finkel, 2007). The latter are easy marks for life's true scam artists. Hence one prediction is that high sugrophobics may feel cheated more often than low sugrophobics, whereas lows will actually be cheated more often. Kelley and Stahelski (1970) found that people understand that there two kinds of players in social dilemma situations: those who compete and those who cooperate. Both groups have an idea that the other group exists and this belief affects how they play. A person believing that they are playing against a competitor will defect more often than if they think they are playing against a cooperator.

Measures of dispositional trust may be useful until a trait measure of sugrophobia becomes available. Rotter's (1967) Interpersonal Trust Scale (ITS) has proven useful in predicting whether people choose to cheat as well as their vigilance in attempting to detect whether they may be cheated. In prisoner's dilemma games, people low in trust are more suspicious of peers (Schlenker, Helm, & Tedeschi, 1973) and are perceived as less trustworthy themselves (Rotter, 1967) relative to people high in trust. Originally, the scale was designed to be a unidimensional measure of generalized trust, but empirical data have consistently revealed several factors. Several studies report a distinct factor representing the "expectation that people will behave exploitatively or selfishly," suggesting that apprehension about being cheated is a distinct dimension (Chun & Cambell, 1974; Kaplan, 1973; Wright & Tedeschi, 1975), and a priori this sounds like a close approximation to sugrophobia. A representative item for this factor is "In these competitive times one has to be alert or someone is likely to cheat you." Use of

the ITS among elderly persons also found evidence of this separable factor, which appears to be the cognitive component of sugrophobia (Rotenberg, 1990).

Why would some people be more sugrophobic than others? One cannot rule out some contribution of differences in genetic predisposition. Given that new evidence indicates that the cheater detection system is biologically based (Stone et al., 2002), it is likely to have individual differences, and some people will be more avid cheater-detectives than others. Despite any biological contribution, however, we suspect that the main sources of individual differences will be painful experience and socialization. Some parents (themselves perhaps sugrophobic) may take pains to lecture their children on the untrustworthiness of others and the dangers of strangers. Parents may also model sugrophobic versus trusting behavior in their own economic dealings. People apparently draw their persuasion knowledge from many sources. Work on the persuasion knowledge theory (Friestad & Wright, 1994) suggested that major sources of persuasion knowledge are socialization with parents and peers, folk knowledge, and personal experience. Mangleburg and Bristol (1998) found support for Friestad and Wright's theory in their work on the development of advertising skepticism in adolescents. Mangleburg and Bristol's survey indicated that much of adolescents' negative attitudes toward advertising develop through interaction with family, peers, and the mass media.

Behavioral Consequences

Prisoner's dilemma games have been used for many years as a method of studying behavior in a social dilemma. Two players make either antagonistic or cooperative choices, and the reward structure is laid out such that mutual cooperation produces the best results overall for both players, but one can win big at the other's expense by playing antagonistically while the other tries to cooperate. Each player is thus tempted to seek individual gain at the other's expense. Antagonistic moves protect the self from being exploited but remove the best chance for mutual advantage via cooperation. For present purposes, the key fact is the danger of being duped into cooperating while the other plays antagonistically. When one player makes

a cooperative choice while the other player chooses antagonistically (and earns more rewards), then the cooperative player may see him or herself as having been played for a sucker and may feel duped. In support of the idea that people who feel duped would be highly likely to engage in a tit-for-tat strategy and thus "take before one is taken (again)," multiple studies report that after one player selects the antagonistic option, both players become stuck a negative spiral of choosing the competitive option again and again—and therefore minimizing gains (Colman, 1995). Research on this behavior, although often explained from an economic standpoint, may also be the result of retaliatory reactions resulting from feeling duped.

Reactions to being duped were studied experimentally by Haley and Strickland (1986). Their participants were given an initial explanation of a potentially lucrative prisoner's dilemma game. During the experimenter's brief absence, the confederate initiated a hurried conversation featuring a promise to cooperate on all trials so that both players could profit. (In a control condition, participants worked on a puzzle and received unsolicited help from the confederate.) When the game began, however, the confederate did not cooperate and therefore profited at the expense of the (cooperating) participant. One measure was how participants played on subsequent trials after the betrayal on the first round. Not surprisingly, most participants quickly switched to a more antagonistic and self-protective style of play, and depressed participants in particular never made another cooperative move after the first (unlike nondepressed participants, who often gave cooperation a second or third try). Thus, being duped produced a quick change toward more vigilant behavior, and there were significant individual differences (depression) as to how severely sugrophobic people became after being duped for the first time.

We proposed that being duped would lead to various degrees of self-blame, and some additional findings of Haley and Strickland (1986) supported that conclusion. Participants could reward or punish themselves during the prisoner's dilemma game as an ostensible index of self-evaluation. Depressed participants who were duped evaluated themselves the most negatively, in fact ending up with a net negative self-reward, unlike participants in all other con-

ditions whose self-reward was positive. Thus, the most sugrophobic behavioral reaction was linked to the most negative treatment of the self. The implication is that blaming oneself for being duped is part of the most severe and sugrophobic responses to being duped.

The urge to retaliate for being duped may be adaptive—or fatal. Each year, several people die as the result of hostile physical encounters with vending machines (Cosio & Taylor, 1992). The usual scenario is that the person inserts coinage, the machine yields no product, and the person angrily tries to shake it, ultimately toppling it onto himself (or, quite rarely, herself), thereby causing death. Many people feel angry when a vending machine fails to give the desired product, but for some people the anger apparently becomes intense enough that it leads them to shake the vending machine so fiercely to make it topple over onto them. This unfortunate outcome has happened often enough to prompt soda pop vending machine manufacturers to create a warning label to make consumers aware that death and/or injury can occur if vending machines are shaken.

Does it pay to be sugrophobic? One could imagine that it would: to the extent that people enter into a transaction with a vigilance or wariness about the other's motives, then it may be to their benefit in their dealing. One could also imagine that it would backfire: to the extent that people enter into a transaction with an obvious suspicion about whether the other will play fairly, the transaction partner may well detect such suspicion and react negatively. If a sugrophobe's transaction partner senses that he or she has been prematurely deemed untrustworthy, then the transaction partner may in fact not want to give the sugrophobe the benefit of the doubt and instead seek to get as much out of the dealing as he or she can. Some evidence from car purchases supports this latter view. In a recent study of factors that increased or decreased car purchase price, Zettermeyer, Scott Morton, and Silva-Risso (2006) found that stronger endorsements of the statement, "I am afraid I will be taken advantage of by a dealer when negotiating for the price of a new car" were associated with an increased car purchase price of almost .5%, which would be \$1,800 on a \$30,000 car. At least in the domain of new car purchases, being sugrophobic would lead to worse outcomes in terms of price paid.

Demonstration Study

With the aim of confirming some of the consequences of feeling duped, we conducted a demonstration study. Fifty-five participants (33 female) played a prisoner's dilemma game for real money with a confederate posing as another participant. The participants and confederate played the prisoner's dilemma game through use of a website that allows users to play real-time economic games (Holt, 2007). Prior to the game, the experimenter explained the game to them. The confederate then proposed to the participant that they collude and cooperate so as to secure maximum mutual profit, which is in fact what the computer program for the game would yield. By random assignment, the confederate then played the game in one of three ways: cooperating on all four trials, cooperating on the first three, or cooperating only on the first two. Thus, in the first condition he kept his word, and in the second he betrayed the participant on the final round, thus having duped him into cooperating. In the third condition, after betraying on the third round, he said, "Oh sorry, I'll choose (the cooperative option) next time." But then he chose the noncooperative option again, thus attempting to double-dupe the participant.

There followed a thought-listing task in which participants commented on the game. These were coded by judges blind to condition with good interrater agreement (average $\kappa = .82$). Participants in the never-duped condition were less likely to say they felt betrayed than participants in the other conditions, $t(49) = 3.19$, $p < .01$, which validates the manipulation.

More important, the thought-listing data confirmed that being duped leads to counterfactual thinking. The majority (11 of 19) of once-duped participants said they wished they had played differently, as compared to only 3 of 14 in the never-duped control, $p < .04$ by Fisher's exact test.

Consistent with the hypothesis that being duped raises the possibility of self-blame, the never-duped participants were much less likely to express any self-blame for their style of play than participants in the other groups, $t(49) = 2.70$, $p = .01$. We sorted the twice-duped participants according to whether they had continued to cooperate after the first be-

trayal. Participants in the twice-duped condition who continued to cooperate (thereby allowing themselves to be duped the second time) reported more self-blame than participants in the other groups, $t(49) = 2.34, p < .05$. We also computed a comparison just within the double-duped condition, despite the relatively small n from splitting the cell. The result was a trend toward greater self-blame among the twice-duped (the biggest suckers, as it were) than among the retaliators, but a larger sample and more sensitive measures will be needed to establish whether that is a reliable finding.

We coded for emotional states. Nobody in any condition mentioned positive emotions. Negative emotions were most frequently reported by the twice-duped participants who continued to cooperate, and their negative emotions were significantly higher than in the combined rest of the sample, $t(49) = 2.46, p < .02$.

Last, we have said that personality differences are relevant to sugrophobia. We had administered the Advertising Skepticism Scale (Obermiller & Spangenberg, 1988), modified to assess skepticism more generally across several domains (e.g., car repair services) rather than specifically to advertising. In the twice-duped condition, higher skepticism scores correlated with a somewhat higher tendency for participants to choose the competitive option in response to the confederate's choice of the competitive option, $r(16) = .42, p = .10$. Thus, it does seem possible to predict specific reactions to being duped from responses to a general trait measure.

Conclusions, Implications, and Research Priorities

The goal of this article was to stimulate research on a potentially important pattern of emotion and decision-making. We have proposed that when decisions lead to being taken advantage of by others, the person has a specific (and aversive) emotional response that can influence cognition and motivation. Conversely, the anticipation of that emotion can in turn influence decisions—for better or worse—insofar as sugrophobic concerns can cause people to choose on the basis of minimizing the likelihood of being duped rather than pursuing what may seem or even actually be a highly advantageous opportunity.

Our literature review indicates that much is left to be done. There is now sufficient evidence to conclude that fear of being duped is a genuine motivation, and one that can be distinguished from greed, rational self-interested calculations, distrust, and hostility. Further work is needed to establish the content and parameters of the emotional reaction to being duped (thus, does it really resemble the self-conscious emotions, as we proposed?), to confirm the cognitive processes before and after duping, and to investigate the causes and consequences of self-blame as a powerful but not inevitable component. The development of a trait scale to identify sugrophobes and distinguish them from others would be a useful tool. The hypothesized effects on decision-making of sugrophobia, including distrust and vigilance, should be studied with an eye toward confirming both the costs and the benefits.

Recent theories of human nature have increasingly proposed that it evolved in part to handle economic relations (e.g., Baumeister, 2005; Seabright, 2004). If so, then trade is an ineluctable aspect of the human condition—and hence so is the possibility of being duped. An improved recognition of the cognitive, emotional, motivational, and behavioral aspects of being duped therefore promises to shed light not only on decision-making processes but on a vital aspect of human nature.

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