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Jason Dana; George Loewenstein

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A Social Science Perspective on Gifts to Physicians From Industry

Jason Dana, MS

George Loewenstein, PhD

A CONFLICT OF INTEREST EXISTS WHEN A PRIMARY ETHICAL or professional interest clashes with financial self-interest, a situation that arises commonly in medical practice. When physicians are remunerated for performing specific tests and procedures, they face a conflict of interest when they also recommend those same tests and procedures. When they are paid for referrals to clinical trials, physicians are in the conflicted position of deciding whether their patients are appropriate for the studies. Performing industry-supported research, physicians face an implicit demand for a positive finding to obtain further financial support. And, when pharmaceutical companies court high-volume prescribers, writing prescriptions becomes an act not only with financial and health consequences for patients, but also with financial consequences for the physician. This last source of conflict of interest is the central focus of this commentary.

In discussions of gifts from industry, whether in medical journals, the media, or in political debates, it is possible to glimpse a common perspective. The biasing effect of accepting gifts is treated as a matter of deliberate choice. The conventional perspective on accepting gifts implies that physicians who are biased by the prospect of personal gains are deciding to do something unethical. Undoubtedly, this perspective contributes to the indignation with which many physicians respond when it is suggested that gifts create bias. Because the bias is seen as intentional, an allegation of bias is an implicit accusation of impropriety.

Many policies dealing with conflict of interest seem premised on this understanding of bias. For example, consider policies on gift size. The recent guidelines for industry put forth by the Pharmaceutical Research and Manufacturers of America¹ and the recommendations of the Office of Inspector General of Health and Human Services² define gifts of “more than nominal value” as inappropriate, while small gifts may not be. Surveys reveal that physicians also view small gifts as ethically more acceptable than large gifts,^{3,4} and letters to medical journals assert that small gifts do not affect physician judgment toward a product.⁵ These policies, surveys, and letters reveal a belief that small gifts are not tempting enough to influence physicians’ prescrip-

tion choices, as if physicians are making a deliberate trade-off between the cost of bias and the benefit of the reward.

This deliberate choice view is inconsistent with social science research, which shows that even when individuals try to be objective, their judgments are subject to an unconscious and unintentional self-serving bias. When individuals have a stake in reaching a particular conclusion, they weigh arguments in a biased fashion that favors a specific conclusion. Returning to the example of gift size, by subtly affecting the way the receiver evaluates claims made by the gift giver, small gifts may be surprisingly influential. Furthermore, individuals are generally unaware of the bias, so they do not make efforts to correct for it or to avoid conflicts of interest in the first place.

We review basic social science research, which shows how financial motives distort judgment, demonstrate its parallels to medical research on gifts to physicians from industry, and draw out policy implications. A proper policy response to the issue of gifts from pharmaceutical companies critically depends on a realistic understanding of the psychology of conflict of interest. Policies that make sense if bias is interpreted as a matter of deliberate choice (eg, limiting gift size, educational initiatives, and mandatory disclosure of interests) are unlikely to be effective if bias is in fact unintentional and unconscious. We focus on the problem of gift giving from industry because it serves as a convenient example with which to demonstrate our basic points. However, the implications of the social science findings apply more broadly to policies dealing with virtually all conflicts of interest in the medical and health care fields, and to conflicts of interest in areas outside of medicine.

Gifts From Industry: A Problem for Policy Makers

Gifts from the pharmaceutical industry contribute to the rapidly increasing cost of medical care, and more specifically, to the increase in expenditures on prescription drugs. Retail spending on prescriptions has increased rapidly, more than doubling from \$64.7 billion to \$132 billion in the years 1995-2000.⁶ Drug spending increased another 17% to \$154.5 billion in 2001, with an estimated one quarter of this in-

Author Affiliation: Department of Social and Decision Sciences, Carnegie Mellon University, Pittsburgh, Pa.

Corresponding Author: Jason Dana, MS, Department of Social and Decision Sciences, 208 Porter Hall, Carnegie Mellon University, Pittsburgh, PA 15213 (e-mail: jdd@andrew.cmu.edu).

crease resulting from a shift to the prescribing of more expensive drugs. Pharmaceutical companies employ representatives who meet with physicians with apparent success to aggressively promote newer and typically more expensive drugs. A positive correlation has been found between the cost of physicians' treatment choices and their amount of contact with pharmaceutical company representatives.^{7,8} Wazana⁹ concluded on the basis of a review of 29 empirical articles that physician interactions with pharmaceutical companies led to increased prescription costs and nonrational prescribing. This increase is problematic, given the prevalence of new, expensive drugs of questionable incremental value. From 1989 to 2000, the US Food and Drug Administration judged 76% of all approved new drugs to be no more than moderate innovations over existing treatments, with many being a modification to an older product with the same ingredient.¹⁰ In 2000, the average price of these standard-rated new drugs was nearly twice the average price of existing drugs prescribed for the same indications.¹⁰

Social Science Research on Conflict of Interest

A line of research with important implications for financial conflict of interest examines the "self-serving bias"¹¹ in perceptions of fairness: individuals' judgments of what is fair are typically biased in favor of their self-interests. In early experiments by Messick et al,¹² individuals performing a task were given pay for themselves and another individual performing the same task and asked to divide it as they saw fit. They were told that (1) the other individual worked twice as long at the task; (2) completed twice as much work; (3) both; or (4) neither. Individuals kept more than half if they either worked longer or completed more of the task, but felt that an equal division was appropriate when both dimensions were unfavorable to them.

This behavior helps to illuminate the psychological mechanisms underlying financial conflicts of interest. In many situations, there are multiple interpretations of what is considered fair. Actions that do not fall under any of these interpretations are usually considered unfair with little disagreement, but when there are multiple notions of fairness, individuals tend to default to those notions that favor their own interests. In the study by Messick et al,¹² there were 2 competing notions of fairness: equality of payoffs and pay based on effort. When individuals responsible for distributing the pay worked shorter hours and produced less output, they tended to view equality as fair, but when they worked longer or produced more, they viewed pay based on effort as fair and believed that whichever measure of effort favored them was more important.

In a series of experiments that examined the causes and consequences of self-serving bias,¹³⁻¹⁶ bargaining experiments were conducted in which individuals were presented with case materials (depositions, police reports, etc) from an actual lawsuit, were randomly assigned to the role of either plaintiff or defendant, and attempted to negotiate

a settlement in the form of a payment from defendant to plaintiff. At the outset, the defendant was given a monetary endowment to finance the settlement. Both parties were penalized as a function of how long it took them to reach a settlement, and, if they failed to settle, the defendant's payment to plaintiff was determined by a neutral judge who had been given the same case materials.

Before negotiating, individuals were asked to predict the judge's ruling and were paid for their accuracy. Plaintiffs' predictions of the judge's award amount were substantially higher than those of defendants, despite the fact that they had no bearing on the case, and the larger the discrepancy, the lower was the likelihood of settlement and hence the individuals' payoffs. This suggests that individuals are often unable to avoid bias, even when it is in their best interest to do so.

In subsequent experiments using the same paradigm, individuals were asked to rate the importance of 8 arguments favoring the side they had been assigned (plaintiff or defendant) and 8 arguments favoring the other position, as perceived by a neutral third party.¹⁴ The results showed a strong tendency to view arguments supporting an individual's own position as more convincing than those supporting the other position, further illustrating the difficulty that individuals have in taking a neutral, objective perspective when they have a personal interest in arriving at a specific conclusion. Moreover, when individuals were assigned roles only after reading the transcripts, thus removing any motivation to favor one side when the materials were evaluated, bias was reduced and settlement rates increased markedly. All of these findings suggest that self-interest distorts the way that individuals weigh arguments.

In later studies, the same researchers attempted to reduce bias by educating individuals, describing these behavioral regularities in detail, and testing to make sure they were understood.¹⁷ This intervention was successful insofar as individuals became convinced that their negotiating opponent would be biased, but the individuals themselves believed they would not be. Moreover, when individuals did concede that they might be somewhat biased, they tended to drastically underestimate how strong their bias would be.

These studies help to explain specifically how self-interest affects decision making. First, individuals are unable to remain objective, even when they are motivated to be impartial, demonstrating that self-serving bias is unintentional. Second, individuals deny and succumb to bias even when explicitly instructed about it, which suggests that self-serving bias is unconscious. Third, the studies show that self-interest affects choices indirectly, changing the way individuals seek out and weigh the information on which they later base their choices when they have a stake in the outcomes.

Evidence in Medicine

The medical literature dealing with conflict of interest bears similarities to the social science literature reviewed herein. Like the participants in the studies who did not view them-

selves as biased, physicians typically report that they are not biased by financial arrangements with pharmaceutical companies, although a large body of research suggests that they are.¹⁸⁻²³ For instance, one retrospective study²⁴ tracked house staff who attended a grand rounds given by a pharmaceutical company speaker and found them more likely to indicate that company's drug as a treatment than did their colleagues. However, many of the house staff did not recall what company sponsored the grand rounds.

Although most physicians do not perceive themselves as biased, they do admit that conflicts of interest might compromise other physicians' decisions.²⁵ A recent study of medical residents²⁶ found that 61% reported that "promotions don't influence my practice," while only 16% believed the same about other physician's practices. Clearly, it cannot both be true that most physicians are unbiased and that most other physicians are biased. Furthermore, medical students recognize gifts as more problematic for other professions than they are for medicine.²⁷ This finding is analogous to that from the social science research showing that bias is recognizable, but only in others.

Like other self-serving biases, bias in prescription practices appears to be unintentional. Orłowski and Wateska²⁸ tracked the pharmacy inventory usage reports of 2 drugs after 20 physicians at their institution were sponsored to attend continuing medical education seminars sponsored by the companies producing the drugs. Usage of the drugs described at these seminars increased, both in time series at the institution and compared with the national average during the same period. However, all but one physician denied that the seminars would influence their behavior prior to attending. Being asked about bias should make physicians more aware of the potential of bias entering into the seminar, yet this did not prevent the seminar from apparently having an impact on the physicians' decisions.

Patients, while somewhat more concerned about the possible biasing effects of gifts than physicians, seem to be vicariously self-serving in their perceptions, believing that other individuals' physicians are more likely to be biased by gifts than their own physicians.²⁹ An implicit embrace of the model of deliberate choice probably colors patients' views of their physicians. Because most patients cannot imagine that their physicians would intentionally put their own monetary interests above those of their patients, they cannot imagine their physicians being biased.

Policy Implications

A research-informed understanding of conflict of interest has important implications for policy. Specifically, the interventions mentioned earlier—limiting gift size, educational initiatives, and mandatory disclosure—are unlikely to eliminate bias because they rest on a faulty model of human behavior. The finding that individuals are not aware of their bias, even when taught about it, suggests that the problem cannot be dealt with effectively through training.

For example, even if ethical conduct is clearly illustrated through case studies, few conflict of interest situations that the physician will actually encounter are likely to replicate these cases so closely as to preclude potential mitigating circumstances, thus opening the door for a self-serving interpretation of whether one's own behavior is improper.

The finding that the bias is strong, even in studies with small stakes, suggests that a policy of limiting gift size is unlikely to eliminate bias. Because even small gifts can subtly bias how arguments are evaluated, they can be surprisingly influential. The sheer ubiquity of trinkets given by pharmaceutical companies is evidence of their effectiveness; why else would profit-minded companies continue to provide them? Thus, policies against gifts should not be limited to large gifts.

Finally, the general misconceptions about conflict of interest weigh in against the effectiveness of disclosure as an antidote to bias. Disclosure can only be effective if those informed can rationally update their beliefs—discount the advice they receive from physicians who disclose conflicts of interest—in light of the disclosure. However, most patients would have little idea about, for example, how much to discount their physician's recommendation to participate in a clinical trial if they were informed that their physician would benefit financially from their participation.

In fact, recent social science research involving auditing suggests that disclosure may have perverse effects.³⁰ Individuals were randomly assigned to the role of estimator or advisor. Estimators made money by accurately estimating the value of a jar of coins they viewed from a distance. Advisors saw the jars close up, and suggested values to the estimators, but they were paid according to how high, rather than how accurate, the estimator's guess was. Half of the advisors were required to disclose their incentives for the estimator to give high estimates. Advisors who disclosed values to the estimators suggested much higher values. The estimators did not discount the advice they received sufficiently and the estimates made with disclosure information were higher than those made by estimators to whom the conflict of interest was not disclosed. As a result, estimators made less money, and advisors more, when advisors disclosed.

Because bias induced by monetary interests is unconscious and unintentional, there is little hope of controlling it when monetary interests exist. The implication for industry gifts is straightforward: they should be prohibited. The American Medical Student Association has already begun an initiative urging physicians to refuse gifts from industry,³¹ but one wonders whether such idealism will be maintained in the face of the inducements they are likely to encounter in their professional careers.

Pharmaceutical companies know that gifts influence physicians, which is why many restrict their own employees from accepting even small gifts.³² Isn't it time for physicians to adopt similar restrictions on gifts to eliminate their vulnerability to unconscious bias?

Other conflicts of interest for physicians may be more difficult or costly to eliminate. For example, requiring different physicians to recommend and actually perform procedures would help to limit physicians' motivation to recommend unnecessary procedures that they personally benefit from but would limit patient choice and increase costs. Similarly, although many consultancies may serve as a backdoor method of providing incentives for prescribing, barring physicians from serving as paid consultants to pharmaceutical companies would hamper the activities of those who do play essential roles in transmitting important data to drug developers. Perhaps this is why recent guidelines by the Pharmaceutical Research and Manufacturers of America and the Office of Inspector General of Health and Human Services permit pharmaceutical companies to hire physicians as consultants, given the somewhat ambiguous proviso that there is "a legitimate need for the services."³³

It would be costly, if not impossible, to eliminate all conflicts of interest, but some interventions are relatively obvious and straightforward. Such measures are required if physicians want to retain the widespread public trust that they still enjoy.

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