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# Conflicts of Interest and Your Physician: Psychological Processes That Cause Unexpected Changes in Behavior

*Sunita Sah*

The medical profession is under a state of increasing scrutiny. Recent high profile scandals regarding substantial industry payments to physicians, surgeons, and medical researchers have raised serious concerns over conflicts of interest. Amidst this background, the public, physicians, and policymakers alike appear to make the same assumption regarding conflicts of interest; that doctors who succumb to influences from industry are making a deliberate choice of self-interest over professionalism and that these doctors are corrupt.<sup>1</sup> In reality, a myriad of evidence from social science indicates that influence from conflicts of interest often occurs on a subconscious and unintentional level.<sup>2</sup> This poses an important issue, since such conflicts can steer well-intentioned physicians away from their primary professional goal to provide the best medical advice and treatment possible.

I review some of the subtle influences arising from conflicts of interest that predictably change behavior in physicians and patients. Specifically, why do physicians accept gifts and other questionable compensation from industry that many critics think are unethical? What situations or factors systematically influence the presence of bias? And, do policies aimed at managing conflicts of interest, such as disclosure or mandatory second opinions, have the desired effect? I explore the, often unconscious, rationalizations physicians use to satisfy their self-interest and reveal how certain policies intended to mitigate the effects of conflicts of interest can actually backfire.

## Why Do Physicians Accept Industry Gifts?

Many of the scandals concerning physicians' conflicts of interest are centered on professionals accepting gifts, or other incentives, that appear, to others, to be barely disguised bribes. This begets the question, why do physicians accept conflicts of interest that place them under public scrutiny? My published and ongoing research investigates two psychological processes that allow physicians to accept questionable compensation: (1) a sense of entitlement to accept industry gifts, and (2) a sense of invulnerability to the biasing effects of conflicts of interest.

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**Sunita Sah, M.D., M.B.A., Ph.D.,** *is an Assistant Professor of Business Ethics at Georgetown University and a Research Fellow at the Ethics Center at Harvard University. Her research focuses on institutional corruption, business ethics, and advice — in particular, how professionals who give advice alter their behavior as a result of conflicts of interest and the policies designed to manage them.*

### *Because I'm Worth It: A Sense of Entitlement*

Physicians may feel entitled to accept gifts from industry since gifts can often be viewed as one of the perks of the job and part of the cultural norm in interacting with industry. The network of relationships connecting industry and medicine is vast, multi-faceted, and complex. Interactions include the offering of gifts, for example, pens and other stationery, meals, travel expenses, sponsored Continuing Medical Education, and compensation from speakers bureaus, consulting, presentations, educational grants (sometimes unrestricted) and sponsored research. Interactions with industry start early in a medical career, and virtually all (94%) of physicians have some type of relationship with industry.<sup>3</sup>

Physicians use many different rationalizations to accept conflicts of interest,<sup>4</sup> one of which is that they deserve these benefits because of the hard work and sacrifices they have made in order to become physicians.<sup>5</sup> A study of third-year medical students found that over 80% believed they were entitled to gifts from industry due to hardships, described as “considerable debt and minimal income.”<sup>6</sup> Also, Brian Palmer, the former president of the American Association of Medical Students noted that,

The training is difficult...people feel beaten down. They are overworked, they have got hundreds of thousands of dollars of debt. You have an industry that has figured out how to capitalize on that by saying, oh, doctor, can we do that for you, you deserve it. It fuels an entitlement that we all long for that we are worth it...The only way really to rationalize accepting all this is to say, I deserve it...<sup>7</sup>

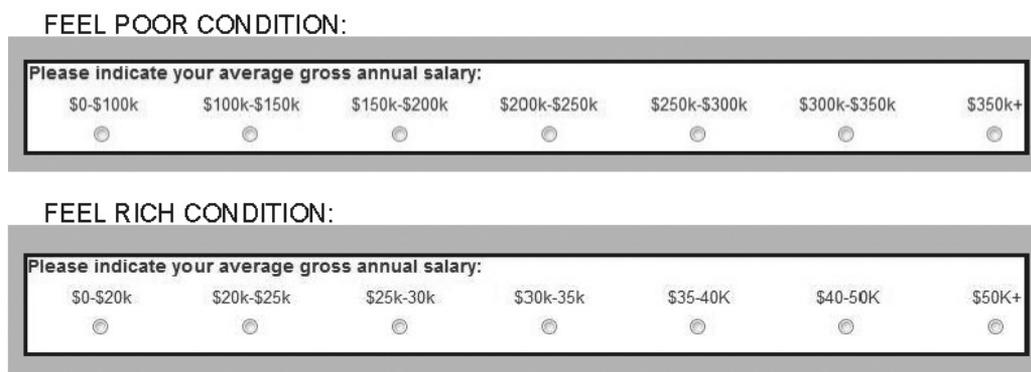
Sah and Loewenstein (2010) set out to test this proposed causal relationship between hardships and accepting industry gifts.<sup>8</sup> We designed an experiment

to examine if subtle reminders to make physicians feel deprived could increase their willingness to accept gifts and other incentives from industry. The study consisted of a total of 301 family practice and pediatric medicine residents who completed questions regarding the acceptability of different types of industry gifts ranging from sponsored continuing medical education and sponsored research to gifts for office and personal use. Some of the other questions in the survey prompted physicians to think about the sacrifices they had made and were currently making for their career, e.g., hours of sleep when on call, quality of their working conditions, their salary, and debt amassed in pursuing their medical education. The physicians who completed these sacrifice-reminder questions first, before answering the acceptability of industry gift questions, doubled their self-stated willingness to accept gifts, from 21.7% to 47.5%. This occurred even though very few physicians explicitly reported their working conditions as poor, demonstrating that this justification may not occur at a conscious level. Another group of physicians received the same sacrifice questions and were also exposed to an explicit rationalization stating that such sacrifices would justify accepting industry gifts. The majority of physicians disagreed with the notion that stagnant salaries and poor working conditions entitles physicians to accept gifts and other forms of compensation from industry, yet, exposure to this rationalization further increased the number of physicians who thought gift-taking was acceptable to 60.3%.

Another subtle manipulation in the study consisted of altering the response scales on which physicians answered the sacrifice-reminder questions to create two different subgroups, a “feel-poor” subgroup and a “feel-rich” subgroup. The two different response scales for the salary question are shown in Figure 1; medical residents in the feel-poor subgroup observed

Figure 1

### Different Response Categories for the Feel-Poor and Feel-Rich Subgroups



much higher salaries in the response categories than those in the feel-rich subgroup. The majority of medical residents participating in the study earned a salary of approximately \$45,000. Therefore, all the residents in the feel-poor subgroup responded in the first category on the left-hand side (since the first category was \$0–\$100,000), while those residents in the feel-rich subgroup responded in the final two categories. This subtle manipulation altered physicians' perceptions of their working conditions (50.0% of those in the feel-poor subgroup reported poor working conditions compared with 37.3% in the feel-rich subgroup), and consequently affected how acceptable physicians found industry gifts, which was significantly greater in the feel-poor subgroup (60.9%) than the feel-rich subgroup (47.6%).

scious element to succumbing to bias but also suggests that educating physicians about bias is unlikely to be successful. In fact, physicians often report that their colleagues could be susceptible to influence by industry but that they themselves are personally invulnerable.<sup>11</sup> In summary, a sense of invulnerability to industry influence increases the likelihood that physicians will accept gifts. Along with the self-serving rationalizations that play out under their awareness, the physicians' ability to self-regulate the influence of such conflicts is severely compromised.

### What Situations Increase Bias?

Physicians are often asked to contribute recommendations to clinical practice guidelines that affect the treatment of many patients. Many of these experts

**Although professionals may state that small gifts will not impact their decision-making, research in influence and reciprocity robustly demonstrates the contrary. People are unable to remain objective, even when motivated to be impartial (which suggests an unintentional element), and people succumb to bias while concurrently denying that they have done so. This latter finding not only demonstrates an unconscious element to succumbing to bias but also suggests that educating physicians about bias is unlikely to be successful.**

Thus, rationalizations that are rejected at a conscious level may still help justify behavior that doctors would usually find unacceptable. Humans have a strong capacity to rationalize whatever benefits them, and as long as gifts remain legal and culturally acceptable, it will be hard to change these unconscious attitudes. Only by prohibiting industry gifts, and establishing strong professional norms of independence, will we create a culture where physicians view gifts as unethical bribes.

#### *A Sense of Invulnerability*

Another, perhaps complementary, reason for accepting gifts and other forms of industry compensation is that physicians may believe that the gifts will not affect their ability to make impartial decisions for their patients. Although professionals may state that small gifts will not impact their decision-making, research in influence and reciprocity robustly demonstrates the contrary.<sup>9</sup> People are unable to remain objective, even when motivated to be impartial (which suggests an unintentional element), and people succumb to bias while concurrently denying that they have done so.<sup>10</sup> This latter finding not only demonstrates an uncon-

are subject to conflicts of interest.<sup>12</sup> Normatively, one would expect advisors to be more diligent in attempts to suppress bias in situations where their advice affects the welfare of many people as opposed to a single recipient. Yet, contrary to what one might expect, Sah and Loewenstein (2012) demonstrated that advisors confronting a financial conflict of interest gave *more* biased advice when there were multiple recipients of advice as opposed to just one recipient, and in the case of just one recipient, the advice was more biased when the advisor did not know the name of the recipient.<sup>13</sup> These results were driven by an "identifiability" effect that was increased for single and named recipients. Identifiability appears to decrease psychological distance and, thus, builds empathy and reduces bias in advisors.

In two experiments, participants, acting as advisors, gave advice to other participants called estimators. Advisors viewed a 30x30 grid of dots, some of which were filled and some of which were clear, and gave advice to estimators on the number of filled dots. Estimators were rewarded on their accuracy in estimating the number of filled dots in the large grid but only had access to a small 3x3 subset of the grid, in

addition to the advice from their advisor. Some of the advisors were subject to a conflict of interest in that they were rewarded if the estimator overestimated the number of filled dots.

In the first experiment, for the “identified” condition, advisors were told the name and age of the single estimator, and in the “unidentified” condition, no information about the estimator was provided. In the second experiment, advisors gave advice to either a single estimator or to a group of estimators (who were sometimes identified and other times unidentified). Advisors gave more biased advice when either there was no identifying information or when advising a group of estimators (identified or not). Increased intensity of feelings and empathy toward single, identified recipients appeared to drive a reduction in bias. In other words, advisors gave more biased advice when they felt psychologically removed from those affected.

This study also sheds some light concerning how conscious these biases are. After advisors had given their advice to the estimator, we asked them to rate their own advice in terms of quality and to also give their “best estimate” on the number of dots in the large grid. We incentivized advisors to be accurate in their best estimate and assured them that this number would not go to the estimator. Only those advisors with single identified estimators were aware of potential bias in their advice (despite giving the least biased advice) and could undo any remaining bias in their advice by giving accurate best estimates. Advisors with unidentified or multiple estimators reported that they gave good advice and had inflated best estimates. This suggests, consistent with prior research on subconscious self-serving biases,<sup>14</sup> that the underlying psychological processes leading to biased advice may be partly unconscious. Identifiability increased advisors’ awareness of the extent of bias in their advice and also their motivation to reduce the bias.

These results demonstrate how advisors may be less concerned in reducing bias in their advice when it is intended for many recipients (for example, a public recommendation) and consequently, medical guidelines may be more compromised than we suspect given their importance. Patients, therefore, should not assume medical guidelines are free of bias or contain better quality recommendations than the advice they receive directly from their own physician. Most importantly, patients should seek un-conflicted advice whenever possible, for example, by giving greater weight to advice that comes from those who disclose an absence of any conflict of interest. For physicians who contribute to clinical guidelines, it appears all the more important to be free from any potential conflicts of interest, and when giving advice to many recipients

or an unidentified patient, perspective taking (i.e., imagining you are the advice-recipient) may help to reduce bias.<sup>15</sup>

### How Can We Manage Conflicts of Interest?

Now that we have identified the various rationalizations and biases regarding conflicts of interest, what can policymakers do to manage these conflicts and ensure good quality advice from the medical profession? In policies intended to mitigate the effects of conflicts of interest, disclosure is the most commonly proposed and implemented solution. The American Medical Association, the Medicare Payment Advisory Committee, and the 2010 Patient Protection and Affordable Care Act all advocate disclosure as an important component in dealing with conflicts of interest. Disclosure is popular because it is perceived to work. For the consumer, information about a physician’s entanglements with industry is intended to provide the ability to make an informed decision. The patient, in theory, should be able to discount the physician’s advice or have the option to seek another opinion. The physician may also want to avoid the conflict in order to disclose the absence of a conflict of interest. Overall, disclosure promises that better decisions are made by the patient and his or her physician.

However, there are a number of problems that arise when disclosure is used to cure tainted advice. In order for patients to discount the advice accurately, they must be able to assess how much the conflict has biased the advice. To seek a valuable second opinion, they must have access to un-conflicted physicians. And, patients also must feel comfortable enough to reject their primary physician’s advice. In reality, this proves nearly impossible to do.

Disclosure can have unintended consequences for both advisors and advisees. Advisors have been shown to sometimes *increase* the bias in their advice with disclosure, either strategically because they anticipate that the recipient will discount their advice, or via a process called moral licensing where they feel less guilt in giving biased advice due to the disclosure.<sup>16</sup> Furthermore, regardless of whether the advice is biased, disclosure can create unintended burdens on the advice-recipient, so that they feel much more uncomfortable in turning down advice that is accompanied with disclosure.<sup>17</sup>

#### *The Burden of Disclosure*

A serious problem with disclosure is that it may unwittingly cause physicians to increase the pressure on their patients to comply with their recommendation.<sup>18</sup> This “burden of disclosure” effect occurs because, although the disclosure has warned the recipient that

there is uncertainty in the quality of the advice that they have been given, knowledge of the conflict also means that rejecting the physician's recommendation may signal distrust to the physician. Even though the patient may (or may not) believe the physician is biased, it is likely that the patient does not want to insinuate to the doctor that they believe the doctor to be biased. Sah, Loewenstein, and Cain (2012) call this mechanism "*insinuation anxiety*"; a tendency to feel discomfort in turning down the advisor's recommendation for fear of signaling distrust. In a series of studies, participants read about a common situation that they might face at a physician's office. In some conditions, the doctor revealed a financial or non-financial conflict of interest. Those participants that experienced the doctor disclosing a conflict of interest understandably trusted the advice less but at the same time worried more about rejecting the doctor's recommendation for fear of insinuating that they believed the doctor was biased. In other words, they felt much more uncomfortable about turning down the advice with disclosure than without.

Thus, instead of being a warning, disclosure can actually become a burden on those it was supposed to protect, increasing the pressure to comply with the doctor's recommendation.<sup>19</sup> Although disclosure may be a necessary step in managing conflicts of interest, it is not sufficient and may make matters worse. Further work is required to determine in what situations disclosure will be beneficial to recipients and in what situations disclosure is ineffective or could even make matters worse.

### *Second Opinions*

Another approach to managing conflicts of interest is for advice-recipients to seek an un-conflicted second advisor. Second opinions have been advocated, particularly in medicine, as an antidote to bias in advice when primary advisors have conflicts of interest. Rationally, it is assumed that the primary advisor, aware of the presence of an un-conflicted second advisor, will decrease the bias in their advice due to reputational concerns about appearing independent and unbiased. However, in two experiments, Sah and Loewenstein (2012) found that primary advisors gave more biased advice when they were aware of a second advisor. This occurred because advisors felt morally liberated and less guilty to give biased advice since the second opinion appeared to undermine the relationship with the primary advisor.<sup>20</sup> In contrast to the studies on physicians' unconscious rationalizations and increased bias with multiple recipients, the tendency to increase bias in this situation was conscious. Primary advisors reported that it was more ethical to

give biased advice when they were aware of an un-conflicted second advisor. These results have obvious policy implications when considering the implementation of mandatory, or optional, second opinions.

### **Conclusion**

I have explored a number of psychological mechanisms that alter the behavior of both physicians and patients in response to conflicts of interest and the policies designed to manage such conflicts. First, rationalizations have a strong predictable influence in permitting physicians to accept industry gifts and in convincing physicians they are immune to the biasing influence of conflicts of interest.<sup>21</sup> I demonstrated how subtle "because I'm worth it" primes or justifications altered physicians' rationale and led to an altered perception of their working conditions.<sup>22</sup> If the perception of the quality of working conditions is so subjective and easily manipulated, it is not difficult to appreciate the important role rationalizations play in conflict of interest related behavior. For example, physicians will usually find a way to convince themselves that the drugs they are getting paid to prescribe, or giving paid talks to promote, really are the best, and their patients really do need those X-rays from the imaging center that they own, and they really do deserve authorship credit for those ghost written academic papers even though they made little contribution to the research.

Second, unconscious and conscious biases can corrupt the doctor-patient relationship and compromise medical advice when (1) the number of advice-recipients increases or (2) the number of advisors to a particular recipient increases. Both of these increases appear to undermine the relationship between advisor and advisee: a lack of empathy results when patients become less identifiable and part of the crowd, leading to advisors becoming less aware of potential bias in their advice and decreasing effort to rein in that bias.<sup>23</sup> Furthermore, increased access to information for advice-recipients seems to lead primary advisors to focus on their own self-interests over the recipients' best interests and feel less guilty in doing so.<sup>24</sup>

Third, a patient's wish to maintain a harmonious relationship with his or her physician can render disclosure of conflicts of interest ineffective.<sup>25</sup> At worse, it damages the doctor-patient relationship and can increase compliance with advice that is trusted less. This "burden of disclosure" places patients in an effective bind between rejecting advice they do not trust and complying with advice to avoid signaling distrust to their physician.

A greater understanding of the psychological processes at play in the presence of conflicts of interest will help physicians and policymakers make better

decisions regarding the impact and influence of such conflicts. In particular, although conscious corruption does occur, the problem of unconscious bias remains a pervasive problem that self-regulation and professionalism cannot solve. Medical conflicts of interest steer physicians away from giving the best advice possible and have contributed to the rocketing costs of health-care in the United States. Turning to disclosure to mitigate these problems is not always beneficial and could potentially make matters worse. The only effective way to manage the problems associated with conflicts of interest is to eliminate the conflict rather than merely disclose it. Creating a strong culture of independence within the medical profession will lead physicians to feel shame, rather than gratification, when accepting conflicts of interest, and will also and encourage unbiased advice.

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