On the Psychology of Pharmaceutical Industry Gifts to Physicians

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This issue of the journal contains an article by Dr. Grande taking a strong stance against pharmaceutical industry gifts to physicians¹. The article is relevant to the current American setting, contains savvy insights, avoids cheap shots, and comes to provocative recommendations. At the core, Grande argues that the pharmaceutical industry is motivated by the single goal of increasing the sales of a company's products. In contrast, some others might argue that the pharmaceutical industry and physicians have the same common interest of improving patient outcomes. At the extreme, a divergence in goals might contribute to clinicians recommending some suboptimal treatments to patients. The purpose of this article is to review three fundamental principles from cognitive psychology science that relate to how people behave in the face of gifts and other modest incentives.

Psychology might be irrelevant if the pharmaceutical industry was bursting out with more effective blockbuster drugs. For example, cimetidine in the 1980s was a remarkable advance in the treatment of patients with peptic ulcer disease as well as a hugely profitable product for GlaxoSmithKline (then named Smith, Kline & French). Aggressive marketing of cimetidine arguably saved thousands of patients from invasive operations and life-long complications (despite being based on a faulty disease theory). The marketing also probably saved US Medicare millions of dollars from decreased needs for hospital care. Unfortunately, recent experiences with clopidogrel, celecoxib, quetiapine, and other drugs have been a bit disappointing since they offer only marginal benefits beyond conventional treatment, yet world revenues exceed \$1 billion annually for each.

Resolving the core argument between demonic profiteering and altruistic collaborating is difficult because identifying motivation is generally a task for speculation rather than for science. On the one hand, a sunshine law for declaring gifts totaling \$100 might create a new level of unwanted bureaucracy, and Grande is relatively silent on how to fund and enforce regulations restricting gifts to physicians. On the other hand, Grande correctly cites two articles that describe how industry practices influence physician prescribing, whereas industry representatives sometimes claim that gifts from pharmaceutical companies are not a problem. Few commentators offer arguments that are perfectly neutral or precise. As it happens, however, a body of evidence is pertinent to the dispute so that both advocates and opponents of greater regulation might benefit from studying it².

A classic demonstration of the effects of minor incentives on personal attitudes involved university students participating in a marketing science experiment (this work is part of a large coherent body of research distinguished by the 2002 Nobel Prize in Economics)³. By random assignment, half the students were given coffee mugs emblazoned with the university logo (and worth about \$6.00 at the university bookstore). All students were then surveyed using sophisticated economic methods to elicit their revealed preferences for the value of such a mug. The main finding was that those given a mug rated it more than twice as valuable as those not given a mug (\$5.25 vs \$2.25, $p < 0.05$). Evidently, small gifts can influence people's judgments and potentially change their decisions.

Psychological influences can sometimes lead to major differences in outcomes. In one experiment, an African consumer credit market corporation sent letters offering large short-term loans to experienced clients⁴. By random assignment, some clients received the letter with a photograph of an attractive female professional loan officer, whereas other clients received the letter with no such photograph. The largest finding was that the photograph caused male clients to accept an interest rate about 200 basis points higher than otherwise (a difference costing about 1% of their total gross income). One paradox in medicine is that the pharmaceutical industry conducts similar experiments with different creative marketing campaigns yet does not publically report their effective results⁵.

The gift of a free drug may be further problematic even though most clinicians and policymakers believe free samples are the single most acceptable marketing gift from the pharmaceutical industry⁶. This is because a small initial supply of an effective drug automatically creates a default where patients will be reluctant to change (under the notion "don't mess with success")⁷. Given the prevalence of chronic medical diseases, this normal human psychology (termed "status quo bias") might sustain years of subsequent prescriptions for the drug (no longer free, of course). Clinicians themselves are also susceptible to status quo bias since it is easier to stay familiar with just one rather than many alternative medications for a common disease⁸. Such status quo bias may be truly compelling during times when no new effective blockbuster medication is being introduced⁹.

Practicing clinicians are not always aware of how they have been influenced¹⁰. In particular, my own fellowship as a Clinical Scholar was funded by the Robert Wood Johnson Foundation. Over subsequent years I have prescribed a lot of acetaminophen for patients with all sorts of pain. My positive inclination prevails to the present since I continue to prescribe acetaminophen despite seeing some patients die from acetaminophen overdoses. On reflection, I sometimes wonder whether some subconscious goodwill towards Johnson & Johnson contributes to my ongoing

recommendations for acetaminophen. It is impossible for me to gauge the degree of my own personal bias and like clinicians who have interacted with the pharmaceutical industry, I am likely guilty of some groupthink.

A classic demonstration of groupthink involved college students who held strong prior opinions about the deterrent effect of capital punishment¹¹. Each student read two detailed studies examining whether regions that adopt capital punishment tend to experience decreases in subsequent murder rates (one positive and one negative). As expected, participants who agreed with the conclusion of a study tended to judge the study as relatively convincing, whereas participants who disagreed with the conclusion tended to judge the study as poorly conducted. Moreover, after reading both studies the two groups became further polarized: both death penalty proponents and opponents became more entrenched in their beliefs ($p < 0.001$). Apparently, identical information when viewed from different prior perspectives may not always lead to any convergence of personal opinions.

Readers with prior opinions about pharmaceutical industry gifts may be unlikely to change their minds based on the arguments put forward by Grande. The main argument for disclosure is to promote public respect and professional independence. The main rebuttal against disclosure is that prior attempts have not been proven to improve clinical outcomes. This article reviews three psychological factors that can influence peoples' decisions: constructed preferences, status quo bias, and groupthink. Given this evidence, I believe we are justified in worrying about how much pharmaceutical industry gifts influence physicians to make decisions based on marketing strategies loaded with psychological factors rather than objective information sources containing scientific evidence.

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