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Finding Solutions to Institutional Corruption:

Lessons from Cognitive Dissonance Theory

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Institutional corruption: the consequence of an influence within an economy of influence that illegitimately weakens the effectiveness of an institution especially by weakening the public trust of the institution.

Finding Solutions to Institutional Corruption: Lessons from Cognitive Dissonance Theory

by Lisa Cosgrove and Robert Whitaker

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Abstract

The American Psychiatric Association and academic psychiatry in the United States have two conflicts of interest that may affect their assessment of psychiatric drugs and their development of diagnostic and clinical care guidelines: payments from pharmaceutical companies and guild interests. Until recently, the proposed solution to industry-academic relationships has been transparency. However, cognitive dissonance research reveals that disclosure is not a solution because cognitive biases are commonplace and difficult to eradicate. Indeed, bias is most often manifest in subtle ways unbeknownst to the researcher or clinician, and thus is usually implicit and unintentional. Also, recent studies suggest that disclosure of financial conflicts of interest may actually worsen bias. In this paper we discuss the implications of cognitive dissonance theory for understanding why disclosure or even "management" of financial conflicts of interest are not robust enough solutions to guarantee objectivity and prevent bias. We suggest that as a gold standard commercial ties should be eliminated in settings where new drugs are being tested and assessed, or clinical guidelines are being developed. This solution will require the use of multidisciplinary teams to do these tasks, including methodologists in addition to psychiatrists.

Keywords: Institutional corruption, psychiatry, cognitive dissonance, conflict of interest, guild interest, bias, disclosure

Electronic copy available at: http://ssrn.com/abstract=2261375

Introduction

Cognitive dissonance theory provides a framework for understanding why financial and intellectual conflicts of interest can result in biased clinical decision-making and why transparency—the disclosure of such conflicts—does not provide an adequate remedy to the conflict. In short, cognitive dissonance studies reveal that individuals who have a financial conflict of interest, or are working within an institution that has come under the economic influence of an outside group, often cannot consciously see how the conflict may be compromising their behavior.

Seventy five years ago, Upton Sinclair summed up this ethical blind spot well: "It's difficult to get a man to understand something if his salary depends upon his not understanding it."[1]

The Hidden Mind

Cognitive dissonance theory grew out of research intent on understanding what people do when they are confronted with information that creates conflicted psychological states. Although Leon Festinger's original cognitive dissonance theory from 1957 has been revised multiple times, the basic premise remains that individuals experience cognitive dissonance when their behavior is at odds with their ethical beliefs, or when they are trying to hold incompatible thoughts.[2] Individuals experiencing cognitive dissonance have a desire to reduce their feelings of discomfort by attempting to reconcile their conflicting beliefs and behaviors, or their incompatible thoughts, especially if the dissonance is esteem-related (e.g., is related to how one sees oneself professionally). For instance, if a physician is a paid by a drug company to act as a consultant or speaker, that physician may need to remain convinced that he or she is still objective about the merits of the company's drugs, in spite of the financial payment.

As Harvard psychologist Mazahrin Banaji and colleagues have empirically demonstrated, a person is able to hold this self-protecting thought because implicit

[1] Sinclair Lewis, *I, Candidate for Governor: And How I Got Licked,* (1935, reprint University of California Press, 1994); as cited by Wikiquotes, http://en.wikiquote.org/wiki/Upton_Sinclair.

[2] Eddie Harmon-Jones, Judson Mills, eds., *Cognitive Dissonance: Perspectives on a Pivotal Theory in Social Psychology* (American Psychological Association, 1999), 3-21.

biases, which can arise from financial conflicts, operate largely on the unconscious mind.[3] Thus, in the case described above, the physician is able to consciously maintain a steadfast belief in his or her objectivity even while behaving in ways that, to the outside observer, reveal that he or she has been affected by the financial incentives. Individuals may consciously recognize their *potential* conflict of interest while remaining unaware of how their behavior has been affected by it.

This is why even radical transparency of financial ties (e.g., receiving honoraria, speaking fees, grant funding) cannot solve the pernicious problem of how such conflicts of interest can influence decision-making at every stage in the research process, and in the development of diagnostic and clinical care guidelines.[4] Individuals with commercial ties and guild interests do not perceive that they are acting in a compromised manner, and thus disclosure is not likely to change their behavior, since they see themselves as unaffected by those financial conflicts. Indeed, implicit biases, such as "pro-industry habits of thought," are extremely difficult to correct even when individuals are aware of them.[5] [6]

As a result, financial conflicts, whether arising from payments by a third party (such as a pharmaceutical company), or from guild interests, can lead researchers to engage in distorted science (making methodological, statistical, or design choices that may favor the company's drug over placebo) and to develop

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[3] Mahzarin R. Banaji, Max H. Bazerman, and Dolly Chugh, "How (Un)ethical Are You?" *Harvard Business Review* 81.1 (2003): 56-65. Also, for more information on how fCOI primed a principal to unethical behavior, see Maryam Kouchaki, Kristin Smith-Crowe, Arthur P. Brief, Carlos Sousa, "Seeing Green: Mere Exposure to Money Triggers a Business Decision Frame and Unethical Outcomes," *Organizational Behavior and Human Decision Processes* 212.1 (2013): 53-61, http://www.sciencedirect.com/science/article/pii/S0749597812001380

[4] Clinical practice guidelines (CPGs) exert an enormous influence on prescription practices. They are seen by the medical profession as more trustworthy than expert opinion, because they are an unbiased, empirically derived set of recommendation statements. They are also seen as useful because they typically contain a decision tree or algorithm to guide the busy clinician inundated with too much—and sometimes contradictory—information. Thus, CPGs are intended to enhance the practice of evidence-based medicine by streamlining healthcare delivery and improving the process and outcomes of patient care. Additionally, insurance companies rely heavily on guidelines when deciding which treatments they will pay for, and although there is no rule that CPGs must be used, they are seen as an integral part of evidence-based medicine.

[5] Joel Lexchin and Orla O'Donovan, "Prohibiting or 'Managing' Conflict of Interest?" *Social Science and Medicine* 70.5 (2010): 643-647.

[6] Curtis Hardin and Mazarin Banaji, "The Nature of Implicit Prejudice: Implications for Personal and Public Policy," in Eldar Shafir, ed., *The Behavioral Foundations of Policy* (Princeton University Press, 2012).

imbalanced conclusions about the risk/benefit ratio of a class of medications, without recognizing that they are doing so. Social psychologists refer to this phenomenon as "confirmatory bias'—the tendency to look for evidence that supports one's prior beliefs or hypotheses. Furthermore, since the researchers see themselves as objective, they are not conscious of this "confirmatory bias" affecting their conclusions. The bias is both unintentional and unrecognized by the researcher.

For example, although there was no research misconduct or fraud, re-evaluations of liver tissue of rats exposed to the drug dioxin resulted in different conclusions about the liver cancer in those rats. Compared to the original investigation, an industry-sponsored re-evaluation identified fewer tissue slides as cancerous, and this finding affected policy recommendations (water quality standards were weakened.)[7] This example is just one of many that point to a generic risk that a financial conflict of interest may compromise research or undermine public trust.

Research by social psychologists and neuroscientists provide insight into the brain processes that underlie cognitive dissonance. Decision-making involves not just cognitive areas of the brain but emotional areas too. Imaging studies have shown that there is an integration of cognitive processes with emotion-processing areas of the brain such as the hippocampus and amygdala. The emotion-processing areas influence this decision-making based on memories of previous experiences. As a result, such emotional processing, which often occurs outside conscious awareness, may be influenced by self-interest.[8] This interplay of the conscious and emotional areas of the brain allows conflicts of interest to affect decision-making in a way that is hidden from the person making the decision.

Simon Young, co-editor in chief of *Journal of Psychiatry and Neuroscience*, summed up this problem in this way: "The idea that scientists are objective seekers of truth

[7] http://uwaterloo.academia.edu/HeatherDouglas/Papers/1029159/Rejecting_the_Ideal_of_Value-Free_Science.

[8] Paul Thagard, "The Moral Psychology of Conflicts of Interest: Insights from Affective Neuroscience," *Journal of Applied Philosophy,* 24.4 (2007): 367-380.

is a pleasing fiction, but counterproductive in so far as it can lessen vigilance against bias."[9]

Pharma's Influence on Psychiatry

In recent years, there has been considerable societal attention paid to the fact that financial conflicts of interest in psychiatry are pervasive. Indeed, they reach into every corner of this medical discipline.

In 1980, when the American Psychiatric Association published the third edition of its diagnostic and statistical manual (DSM III), it adopted a "medical model" for classifying mental disorders, which was a change that, as Robert Spitzer, architect of the manual later admitted, "delighted" the pharmaceutical industry.[10] That same year, the APA voted to allow pharmaceutical companies to sponsor scientific symposiums at its annual conference, a decision that increased the flow of pharmaceutical money into the organization. The APA's annual revenues rose from $10.5 million in 1980 to $65 million in 2008; in that last year, a minimum of $14 million came from pharmaceutical companies.[11] This flow of industry money came from pharmaceutical ads in the APA's journals (*American Journal of Psychiatry*, *Psychiatric Times*, and *Psychiatric Services*), sponsorship of scientific symposiums at its annual conferences, advertising booths at those conferences, and various "educational" grants.

The fact that the APA voted in 1980 to allow pharmaceutical companies to sponsor scientific symposiums also opened the door for pharmaceutical companies to pay academic psychiatrists to serve as expert speakers at such events. As a result, academic psychiatrists came under the influence of pharmaceutical interests, much as the APA did. By the mid 1990s, academic psychiatrists were receiving industry payments to serve as speakers, consultants and advisors. Industry

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[9] Simon N. Young, "Bias in the Research Literature and Conflict of Interest: An Issue for Publishers, Editors, Reviewers and Authors, And it is Not Just About the Money," *Journal of Psychiatry and Neuroscience* 2009; 34.6 (2009): 412-417.

[10] Jon Ronson, "Bipolar Kids: Victims of the 'Madness Industry'?" *New Scientist*, June 8, 2011.

[11] American Psychiatric Association, reports of the Treasurer, 1980 to 2004; Annual Reports of the American Psychiatric Association, 2005-2011; American Psychiatric Association reports on pharmaceutical revenues, 2006-2011.

insiders refer to these physicians as "thought leaders," or "key opinion leaders" (KOLs). This type of conflict of interest among academic psychiatrists became so common that in 1998, when the *New England Journal of Medicine* sought to find an "expert" to write a review of treatments for depression, it found it difficult to identify one who didn't have such ties.[12]

More recently, Propublica, an investigative journalism group that tracks payments from 15 pharmaceutical firms to doctors for public speaking, found that from 2009 to 2012, at least 10 psychiatrists earned more than $500,000 giving such talks (and for consulting services.) The top earner in the Propublica database was Nashville psychiatrist Jon Draud, medical director of psychiatric medicine at two Tennessee hospitals, who received more than $1 million from the firms that have publicly disclosed such payments.[13]

Several states have passed laws (referred to as "sunshine laws") that provide insight into the extent of such financial ties at the local level. For instance, from 2002 to 2006, pharmaceutical firms gave $7.4 million to Minnesota psychiatrists. The recipients included seven past presidents of the Minnesota Psychiatric Society and 17 faculty psychiatrists at the University of Minnesota. All told, 187 of 571 psychiatrists in Minnesota received pharmaceutical money for some reason during that five-year period.[14]

In addition, community psychiatrists may be given free samples, small gifts, and paid trips to conferences from pharmaceutical companies. Until recently, residents in medical schools regularly attended "educational" lunches sponsored by pharmaceutical companies. "This 'food, flattery, and friendship,' as it has been called, creates a sense of reciprocity in young doctors with long prescribing lives ahead of them," observed Marcia Angell, former editor of the *New England Journal of Medicine*. "They naturally feel indebted to congenial people who keep giving them gifts."[15]

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[12] Marcia Angell, "Is Academic Medicine for Sale?" *New England Journal of Medicine* 342 (2000): 1516-1518.

[13] Tracy Weber and Charles Ornstein "Dollars for Docs Mints a Millionaire," *ProPublica*, March 11, 2013, http://www.propublica.org/article/dollars-for-docs-mints-a-millionaire.

[14] Jeremy Olson, "Drug Makers Step up Giving to Minnesota Psychiatrists," *Pioneer Press,* August 27, 2007.

[15] Marcia Angell, *The Truth About the Drug Companies: How they Deceive Us and What to Do About It,* (Random House, 2004): 127.

Finally, editors of psychiatric journals may also be in conflicted situations insofar as a majority of the advertisements in their journals typically come from pharmaceutical companies. Publication of articles or studies that raise questions about the efficacy or safety of psychotropic medications could threaten that revenue stream. The peer-review process may be compromised if reviewers have industry ties and are not aware of the ways in which those commercial ties can subtly, but powerfully, result in "pro-industry habits of thought."

In summary, conflicts of interest permeate the field. They appear when medical students are in their residencies; they are present in the office of the community psychiatrist; they help fund the operations of the American Psychiatric Association; they help pay for medical journals; and there are close ties between academic psychiatrists and pharmaceutical companies. As such, these conflicts may affect the training of residents; the prescribing practices of community psychiatrists; the writing of psychiatric textbooks (by the APA and their experts); the conduct of research (e.g., study design, choice of outcome measure, statistical method used for intent-to-treat designs, data analysis and interpretation, dissemination of the research results, etc.); the setting of diagnostic boundaries for mental disorders; and the formulation of clinical care guidelines.

This is a setting ripe for cognitive dissonance to settle deeply into the field: the conflicts of interest almost certainly will impact the decision making of the APA, academic psychiatrists, and prescribing psychiatrists, while these professionals, in their conscious minds, tell themselves they are free from such bias.

Studies of Cognitive Dissonance in Physicians

Physicians have a desire to see themselves as altruistic, guided in their actions by a desire to serve their patients' best interests. A number of investigators have studied how doctors, when they are receiving a payment or a gift from a pharmaceutical company, resolve the cognitive dissonance that may arise.

In a survey of obstetricians and gynecologists, Morgan and colleagues found that the majority thought it was ethical to accept free drug samples (92%), a free informational lunch (77%), or a well-paid consultancy (53%). They reasoned that the free sample would be helpful to patients in financial need (or provide added convenience), and only a third thought that their prescribing habits would be

influenced by the free samples. However, they did worry about their peers; they were more likely to conclude that the "average doctor's prescribing would be influenced by acceptance of the items than their own."[16]

Similarly, in a survey of residents at a university-based program, Steinman found that 61% thought that their prescribing patterns would not be influenced by the free gifts, yet thought only 16% of "other physicians" would be immune to such freebies. Moreover, with this self-image in mind, a majority of the residents found it "appropriate" to accept free lunches, dinner lectures, reprinted articles, pens, textbooks, and even to go on a free "social outing." The residents, Steinman concluded, "believe they are not influenced" by gifts from industry.[17]

The experts in a field, including key opinion leaders, may be even more certain of their "objectivity" while they have financial ties to industry. Choudhry surveyed 192 authors of 44 clinical practice guidelines endorsed by North American and European societies on common adult diseases, and found that 87% had ties to a drug company. On average, they had financial associations (e.g., honoraria, consulting, research funding), with more than 10 companies. Nearly two-thirds of the authors (64%) served as speakers for drug companies, and 59% had relationships with the companies whose drugs were considered in the guideline they wrote. Yet, only 7% of the authors thought that their financial ties to pharmaceutical companies "influenced" their recommendations, and only a slightly higher number—19%—thought their co-authors were so influenced. In other words, more than 80% of the experts were confident that the very involved financial relationships of the members of their group with pharmaceutical companies did not influence the clinical practice guidelines they produced.[18]

Chimonas and colleagues, in a study of the thought processes that physicians employ to manage such "cognitive inconsistencies," found that they regularly involved various forms of denial and rationalization. "They avoided thinking about

[16] M. Morgan, J. Dana, G. Loewenstein, et al. "Interactions of Doctors with the Pharmaceutical Industry," *Journal of Medical Ethics* 32.10 (2006): 559-562.

[17] M. Steinman, M. Shlipak, and S. McPhee, "Of Principles and Pens: Attitudes and Practices of Medicine Housestaff toward Pharmaceutical Industry Promotions," *American Journal of Medicine* 110.7 (2001): 551-557.

[18] Niteesh Choudhry, Henry Thomas Stelfox, Allan S. Detsky , "Relationships Between Authors of Clinical Practice Guidelines and the Pharmaceutical Industry," *Journal of the American Medical Association* 287.5 (2002): 612-617.

the conflict of interest, they disagreed that industry relationships affected physician behavior, they denied responsibility for the problem, they enumerated techniques for remaining impartial, and they reasoned that meetings with detailers were educational and benefited patients" Chimonas wrote.[19] The physicians' methods for resolving the conflict may have varied, but typically the end thought was the same: It was okay to accept free gifts because they would remain objective, even though others might be biased by such conflicts.

This self-image of physicians, noted former APA President Paul Appelbaum, is so strong that for many doctors even "the suggestion that they may be influenced by contact with the pharmaceutical or device industries is infuriating." As physicians receive money and gifts from pharmaceutical companies, they need to see themselves as remaining objective, acting in the best interests of their patients, and it is an affront to suggest otherwise.[20] "For social psychologists who study the difficulties that people have recognizing how other parties influence their behavior, physicians' failure to appreciate the impact of relationships with industry merely makes physicians like everyone else," Appelbaum wrote.[21]

Finally, as Cain observed, researchers have found that "it is difficult to overcome the influence of early information on beliefs." Thus, it may be that once physicians have concluded that they are not influenced by financial payments or gifts from pharmaceutical companies, they may then be reluctant to accept any information—such as evidence that the conflicts led to biased behavior—that would diminish their confidence in their objectivity. This hardening of beliefs is also true when other types of conflicts of interest are present, Cain said. "Physicians may have many relationships that result in bias other than those involving pharmaceutical

[19] Susan Chimonas, Troyen A. Brennan, David J. Rothman, "Physicians and Drug Representatives: Exploring the Dynamics of the Relationship," *Journal of General Internal Medicine* 22.2 (2007): 184-190.

[20] Belonging to a professional organization has licensing and rationalization effects of this nature. See Maryam Kouchaki, "Professionalism and Moral Behavior: Does a Professional Self-Conception Make One More Unethical?" Edmond J. Safra Research Lab Working Papers, No. 4 (2013), http://ssrn.com/abstract=2243811.

[21] Paul S. Appelbaum and Azgad Gold, "Psychiatrists' Relationships with Industry: The Principal-Agent Problem," *Harvard Review of Psychiatry* 18.5 (2010): 255-265.

companies, including nonfinancial conflicts of interest. Such bias may be difficult to undo."[22]

Under the Influence of Guild Interests

Scholars studying conflicts of interest within medicine usually focus on the influence of pharmaceutical money on academic physicians and the rest of the profession. Less attention is paid to guild interests, even though this influence may be more profound than financial payments from pharmaceutical companies.

In 1980, after the APA adopted a "medical model" for classifying mental disorders, the field was left with three main "products": research, the classification of mental disorders, and the prescribing of psychiatric drugs. Thus, the APA, as an organization, was taken off course by a growing dependency on drug firms and by internal interests (e.g., guild interests) and external influences (e.g., third party reimbursement practices incentivizing psychiatrists to act as psychopharmacologists rather than talk therapists). These factors led psychiatrists in the U.S. to effectively cede psychotherapy to to other mental health professionals, such as psychologists and social workers. All medical disciplines have an interest in maintaining a belief in their therapies, and this is certainly true in psychiatry. However, there are no biological markers for any mental disorders—there are no scanning techniques or blood tests to determine if someone has Schizophrenia or Bipolar Disorder. The absence of biological markers renders psychiatry more vulnerable than other medical subspecialties to implicit bias and industry influence. In turn, this reliance on subjective interpretations can result in an overestimation of the benefits of drugs and an underestimate of harm. Indeed, the prescribing of drugs has become central to what a psychiatrist does. As Detsky noted, such guild interests can lead to a "form of bias [that] comes from the way you make your living."[23]

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[22] Daylian Cain andAllan Detsky, "Everyone's a Little Bit Biased (Even Physicians)," *Journal of the American Medical Association* 299.24 (2008): 2893-95.

[23] Allan S. Detsky, "Sources of Bias for Authors of Clinical Practice Guidelines," Canadian Medical Association Journal 175.9 (2006): 1033.

Given these guild interests and external pressures (e.g. market pressures, insurance and managed care practices), it is easy to understand the tendency to dismiss certain research results. Research results that raise questions about the efficacy or safety of a class of drugs or findings from naturalistic studies that unmedicated patients did better over the long term, would provoke cognitive dissonance within the field. The APA as an organization, as well as leaders within the field, would be motivated to dismiss those results, or critique them in a way that would protect their own as well as a societal belief in the medications.

Moreover, this guild influence is likely going to be more hidden to the conscious mind than the influence due to a payment from a drug company. In the latter instance, there is a general societal understanding that such a situation does present a conflict of interest, which can lead to bias, and thus there is some conscious awareness that such payments may be a problem. But society is less aware that a guild interest may lead to biased judgment, and that is true of physicians too. Physicians' professional identity is predicated on the assumption that their treatment choices are evidence-based, and thus psychiatrists are not going to think that they may be motivated by a guild interest to protect societal belief in psychiatric medications.

Cognitive Dissonance Within Psychiatry

It is easy to see instances of cognitive dissonance at work in the public responses by the APA and academic psychiatrists to criticisms of psychiatric medications, or to studies revealing that leading psychiatrists have conflicts of interests. Their responses regularly tell of an endorsement for pharmacotherapy and assertions that researchers are unaffected by commercial ties, rather than a willingness to engage with the findings that question the risk benefit ratio of psychotropic medications.

For instance, in 2008, Irving Kirsch and colleagues conducted a meta-analysis of the clinical trial data submitted to the Food and Drug Administration for four antidepressants, and he grouped drug versus placebo results according to how severely ill the patients were at the beginning of the study. He found that the drugs did not provide a clinically meaningful benefit to most patients with depression. It

was only in the very severely ill that the drugs provided this benefit, according to the clinical trial results.[24]

Two years later, Fournier came to a similar conclusion. In many clinical trials, the drug companies use a washout period (i.e., the elimination of initial placebo responders), a trial design that is expected to suppress the placebo response. Fournier et al. conducted a meta-analysis of clinical trials that randomized patients either to placebo or drug (regardless of whether they initially responded to the placebo), and they also included information about the severity of the patients' symptoms in the trial. Fournier and colleagues were able to find only six such studies in the literature, and in those six studies, "true drug effects—an advantage of antidepressant over placebo—were nonexistent to negligible among depressed patients with mild, moderate and even severe baseline symptoms, whereas they were large for patients with very severe symptoms."[25]

In response to Kirsch's and Fournier's findings, psychiatrist Peter Kramer, author of *Listening to Prozac*, wrote an op-ed in the *New York Times* titled "In Defense of Antidepressants."[26] These drugs, Kramer wrote, "work—ordinarily well, on a par with other medications [that] doctors prescribe."[24] He interpreted the dispiriting results that Kirsch's analysis found on several factors, stating, for instance, that pharmaceutical companies "run quick, sloppy trials." Often, he added, "subjects who don't have really have depression are included – and (no surprise) weeks down the road they are not depressed." However, 34 of the 35 industry-funded trials reviewed by Kirsch enrolled *only severely depressed* patients—but Kramer's op-ed told the public a different "truth": the studies were poorly run, they enrolled the wrong patients, and that is why the drugs often failed to beat placebo. As for Fournier et al's research, Kramer stated that critics questioned "aspects of [Fournier's] math,"[24] which subtly implied—without any substantiating evidence—that the results from their meta-analysis may not have been correct.

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[24] Irving Kirsch, Brett J. Deacon, Tania B. Huedo-Medina, et al., "Initial Severity and Antidepressant Benefits: A Meta-Analysis of Data Submitted to the Food and Drug Administration," *PLoS Medicine* 5 (2008): 260-268.

[25] Jay C. Fournier, Robert J. DeRubeis, Steven D. Hollon, et al., "Antidepressant Drug Effects and Depression Severity," *Journal of the American Medical Association* 303.1 (2010):47-53.

[26] Peter D. Kramer, "In Defense of Antidepressants," *New York Times,* July 9, 2011.

What was missing from Kramer's defense of antidepressants was any substantive engagement with the findings by Kirsch and Fournier. Instead, in his op-ed piece one sees the arguments of someone who knows that antidepressants "work" for all subsets of depressed patients, and thus discounts evidence to the contrary. It appears that Kirsch's and Fournier's results provoked a moment of cognitive dissonance, but by the finish of his op-ed piece, Kramer may have resolved that dissonance. "In the end, the much heralded overview analyses look to be editorials with numbers attached,"[24]

Another example of such cognitive dissonance can be seen in the response of the APA to a two-part essay that Marcia Angell, former editor of the *New England Journal of Medicine,* wrote in the *New York Review of Books.*[27] In her 2011 review, Angell discussed Kirsch's study of antidepressants, and she also wrote about the troubling long-term effects of psychiatric drugs. Rather than discuss the science, the APA responded by attacking the messenger (Angell.) "We regret that a more balanced approach was not taken," the APA wrote in a letter to the *New York Review of Books*.) "The bottom line is that these medications often relieve the patient's suffering, and this is why doctors prescribe them."[28] In an article in *Psychiatric News*, APA president John Oldham added, "there is a lot of very bad distortion (in Angell's review) for someone with her stature to be promoting."[29]

The APA responded in a similar vein when Lisa Cosgrove and Sheldon Krimsky reported that a high percentage of the members of the panels that developed clinical practice guidelines for schizophrenia, bipolar, and depression had financial ties to pharmaceutical companies. Rather than engage in the possibility that this conflict might influence their recommendations, the APA said there was no reason to worry that this would be so. "There is this assumption that a tie with a company is evidence of bias," said Darrel Regier, research director for the APA, in an interview with *USA Today*. "But these people can be objective."[30]

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[27] Marcia Angell, "The Epidemic of Mental Illness: Why?," *The New York Review of Books*, June 23, 2011, and Marcia Angell, "The Illusions of Psychiatry," *The New York Review of Books*, July 14, 2011.

[28] J. Oldham, "Letter to the Editor," *New York Review of Books*, August 18, 2011.

[29] Mark Moran, "Prominent M.D.'s Book Reviews Give Negative Views of Psychiatry," *Psychiatric News* 46.15 (2011).

[30] M. Elias, "Conflicts of Interest Bedevil Psychiatric Drug Research," *USA Today*, June 3, 2009.

In short, the response by the APA and other leading psychiatrists to criticism that challenged guild interests has been this: psychiatric drugs work quite well, better than suggested by the clinical data, and the leaders in the field are expert scientists, unaffected by their financial ties to industry. Studies of cognitive dissonance reveal is that the APA and its leaders are quite certain that that all classes of psychotropic medications are effective and safe. Furthermore, emerging evidence that suggests otherwise must be of poor quality or simply wrong.

Medical Consequences

Conflicts of interest can affect all aspects of psychiatry's medical practices. In research, it can lead researchers to make design and methodological choices that may overemphasize the effectiveness of the drugs and minimize the adverse events. In the delineation of diagnostic categories, it can lead to an expansion of the boundaries of disorders—or to the creation of new disorders—in ways that promote industry interests. Finally, it can lead the field to believe that it is practicing "evidence based medicine," with the clinical care guidelines thought to reflect the findings of honest science, when, in fact, the evidence base is "tainted" in multiple ways.

The first problem is that the published literature—which the experts rely on to develop the guidelines—may be compromised by financial conflicts of interest. If so, the guidelines will be compromised as a matter of course: bad input leads to bad output. The second problem is that the experts developing the guidelines may have a financial conflict of interest (if they have received payments from drug companies), and they will also have a "guild" interest to see the drugs in a positive light. Thus, as they review the literature, they will have a natural "confirmatory bias" to perceive study results in a manner that reflects their belief that the medications are quite helpful. Indeed, researchers have found that expert opinion on medical subjects is very unreliable and often contradicts scientific data.[31]

The end result may be clinical care guidelines that lead to the overuse, or inappropriate use, of psychiatric medications. It is easy to argue that is the case

[31] Elliott M. Antman, Joseph Lau, Bruce Kupelnick, et al., "A Comparison of Results of Meta-analyses of Randomized Control Trials and Recommendations of Clinical Experts: Treatments for Myocardial Infarction," Journal of the American Medical Association 268.2 (1992): 240-248.

with antidepressants. Kirsch's and Fournier's work reveal that SSRIs do not provide a clinically meaningful benefit to patients with mild to moderate depression. Indeed, the National Institute of Clinical Excellence (NICE) in Britain, which acts as an advisory group to the National Health Service, came to that very conclusion, precisely because of the documented risk/benefit ratio. NICE thus explicitly states that antidepressants should *not* be a first line therapy for patients with mild to moderate depression.[32] In contrast to guidelines produced by NICE as well as recent Dutch guidelines for Major Depressive Disorder, the APA's most recent guideline for Major Depressive Disorder recommended antidepressants as a front-line intervention for mild to moderate depression.[33] All of the APA's guideline development group had ties to pharmaceutical companies, and a majority served on speakers bureaus (sometimes referred to as "key opinion leaders") for manufacturers of the antidepressant medications.

The concept of "evidence-based medicine" provides a medical discipline with the sense that its treatment protocols are grounded in unbiased, objective science. However, the reality may be very different. Bias may be at work at every step of this process, from the generating of the evidence to the analysis of the literature, and that can lead to treatment guidelines that are profoundly compromised. Gupta, (2003), sums up this point well: "The practice of EBM could then lead to worse rather than better patient care. Furthermore, EBM may have unwanted effects... and may deepen the influence of private interests, at the expense of patient interests, in determining what services are made available."[34]

Solutions

What, then, are possible solutions to the pervasive conflicts of interest present in psychiatry today? What this brief review of cognitive dissonance theory shows us is that today's preferred solution—disclosure of ties to pharmaceutical companies—is

[32] National Institute for Health and Clinical Excellence (NICE), *Depression: The Treatment and Management of Depression in Adults*, NICE Clinical Guideline No. 90. (2009), http://www.nice.org.uk/nicemedia/pdf/CG90NICEguideline.pdf (accessed July 1, 2012).

[33] American Psychiatric Association (APA), *Practice Guideline for the Treatment of Patients with Major Depressive Disorder* 3rd ed. (2010),http://psychiatryonline.org/content.aspx?bookid=28&sectionid=1667485.

[34] M. Gupta, "A Critical Appraisal of Evidence-Based Medicine: Some Ethical Considerations," *Journal of Evaluation in Clinical Practice,* 9.2 (2003): 111-121.

no solution at all. The conflict is still there, and there is research that suggests that disclosure, rather than serve as a remedy against bias, may worsen it.[35] Having "come clean," researchers may become more convinced than ever that they are not biased or influenced by such ties.

Therefore, as our society searches for solutions, it will likely need to look for ways to *eliminate* the conflicts of interest when research is conducted and clinical guidelines are developed. Indeed, transparency simply "shifts the problem from one of 'secrecy of bias' to 'openness of bias.'"[36] As a gold standard, financial conflicts of interest need to be prohibited, not "managed." There should be a rebuttable presumption of prohibiting financial conflicts of interest among individuals responsible for developing diagnostic or clinical care guidelines in psychiatry. Additionally, and in keeping with the Institute of Medicine's most recent recommendations, those guideline development groups and research teams who are responsible for designing and analyzing randomized clinical trials should be multidisciplinary and include methodologists as well as content experts. A multidisciplinary team would not be vulnerable to guild interests, and this would hopefully mitigate the potential for confirmatory and implicit biases to negatively affect the process of testing new drugs or the development of psychiatric guidelines.

Finally, the entire medical profession should strive to become more aware of cognitive dissonance at work within medicine, and how it can lead to biased data and imbalanced conclusions about the efficacy and safety of medications. All medical subspecialties, including psychiatry, need to understand that because conflicts of interest may lead to implicit or unconscious bias, it is necessary to try to eliminate the conflicts altogether, rather than simply disclose that such conflicts exist.

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[35] George Loewenstein, Sunita Sah, and Daylian Cain, "The Unintended Consequences of Conflict of Interest Disclosure," *Journal of the American Medical Association* 307.7 (2012): 669-670.

[36] Sheldon Krimsky, "Combating the Funding Effect in Science: What's Beyond Transparency?" *Stanford Law Policy Review,*, 21 (2010): 101–123.

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