

Kinderman, P. (2015). Imagine there's no diagnosis, it's easy if you try. *Psychopathology Review*, 2(1), 154-161. doi:10.5127/pr.00

Kinderman, P., Read, J., Moncrieff, J., & Bentall R.P. (2013). Drop the language of disorder. *Evidence Based Mental Health*, 16, 2-3. doi:10.1136/eb-2012-100987

Lancet. (2012). Living with grief [Editorial]. *Lancet*, 379, 589.

Lebowitz, M.S., & Ahn, W. (2014). Effects of biological explanations for mental disorders on clinicians' empathy. *Proceedings of the National Academy of Sciences*, 111(50), 17786-17790.

McHugh, R. K., Whitton, S. W., Peckham, A. D., Welge, J. A., & Otto, M. W. (2013). Patient preference for psychological vs. pharmacological treatment of psychiatric disorders: A meta-analytic review. *The Journal of Clinical Psychiatry*, 74(6), 595-602. doi:10.4088/JCP.12r07757

Moncrieff, J. (2008). *The Myth of the Chemical Cure: A Critique of Psychiatric Drug Treatment*. Basingstoke, Hampshire: Palgrave Macmillan.

Moncrieff, J. (2013). *The bitterest pills. The troubling story of antipsychotic drugs*. London: Palgrave Macmillan.

Morgan, P. (2015). Depressed pilots on medication for mental illness should not be flying passenger planes. That's not insensitive - it's protecting lives. *MailOnline*. Retrieved June 25, 2015, from www.dailymail.co.uk/news/article-3015033/PIERS-MORGAN-Depressed-pilots-like-Germanwings-Andreas-Lubitz-medication-mental-illness-not-flying-passenger-planes-s-not-insensitive-s-protecting-lives.html

Oxford English Dictionary. (2013). Oxford: Oxford University Press.

Read, J., Bentall, R.P. (2012). Negative childhood experiences and mental health: theoretical, clinical and primary prevention implications. *British Journal of Psychiatry*, 200, 89-91.

World Health Organization. (1948). *Constitution of the World Health Organization*, Geneva. World Health Organization. www.who.int/governance/eb/who_constitution_En.pdf

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The Biomedical Model of Psychological Problems: A Call for Critical Dialogue

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THE CENTRAL TENET OF THE BIOMEDICAL model is that psychological problems are literal diseases of the brain. This model has dominated mental health research, policy, and practice in the United States for more than three decades. During this time, federal agencies like the National Institute of Mental Health (NIMH) and the National Institute on Drug Abuse (NIDA) have focused their grant funding initiatives on biomedical research, medications have replaced psychosocial interventions as the modal treatment for psychological problems, "brain disease" and "chemical imbalance" explanations for mental disorders have been heavily prompted by the pharmaceutical industry and academic psychiatry, and the general public has come to regard mental disorders as diseases of the brain caused by biogenetic abnormalities (Deacon, 2013). There is a consensus among biomedical proponents that we are on the verge of a new era of personalized medicine characterized by biological diagnostic tests and disease-specific curative treatments.

Although the biomedical approach has enjoyed longstanding popular support, recent developments have promoted a reconsideration of its validity and utility. These include: (a) books and media reports by respected scientists and investigative journalists who present evidence disputing key tenets of the biomedical model (e.g., Angell, 2011; Kirsch, 2010; Satel & Lilienfeld, 2013; Stahl; 2012; Whitaker, 2010); (b) public controversy surrounding the DSM-5 (APA, 2013) revision process, which included a concerted effort by DSM-IV (APA, 2000) task force chair Allen Frances (2014) to discredit the new diagnostic manual and the validity of psychiatric diagnoses; and (c) public statements by NIMH director Thomas Insel (2013) and DSM-5 task force chair David Kupfer (APA, 2013) that DSM diagnoses are not valid and that biomarkers for mental disorders (i.e., disorder-specific biological correlates) have not been found. These are important developments. A growing critical analysis of the biomedical model is now under way, and

this special issue of *the Behavior Therapist* is intended to contribute to this analysis.

Although critical analysis of psychological theories and practices has a rich tradition in academic psychology (e.g., Lilienfeld, Lynn, & Lohr, 2015), the biomedical model has rarely been subjected to open critical analysis within the professional community. There are numerous reasons for this, including desire for harmony between various mental health professions (e.g., between psychology and psychiatry), protection of guild interests, and fear of retaliation from biomedically oriented grant funding agencies. However, given the concerns about the validity and utility of the biomedical model described by contributors to this special issue, such a critical analysis is urgently needed. In our view, this analysis is also necessary to combat the current level of arguably uncritical and disingenuous discourse on the biomedical model at the highest level in the United States, which we illustrate below with recent essays written by the directors of the NIDA and NIMH.

"Addiction Is a Disease of Free Will"

On June 12, 2015, NIDA director Nora Volkow published a Huffington Post article titled, "Addiction Is a Disease of Free Will." Volkow tells the story of how she learned her grandfather committed suicide in his distress at not being able to control his urges to drink alcohol. To Volkow, this family tragedy illustrates two lessons. The first is that the biomedical model explains why addicted individuals seem unable to control their drug use. Specifically, "because of drug use, a person's brain is no longer able to produce something needed for our functioning and that healthy people take for granted, free will." Second, "embrac[ing] the concept of addiction as a chronic disease" is necessary to reduce stigma and facilitate access to effective treatments.

Beyond simply describing addiction as a brain disease, Volkow explains the "underlying pathology" that renders

addicts apparently unable to control their behavior. She claims:

We can do much to reduce the shame and stigma of drug addiction, once medical professionals, and we as a society, understand that addiction is not just “a disease of the brain,” but one in which the circuits that enable us to exert free will no longer function as they should. Drugs disrupt these circuits. The person who is addicted does not choose to be addicted; it’s no longer a choice to take the drug. (Volkow, 2015)

Volkow argues that drugs disrupt “the most fundamental brain circuits” that enable us to “make a decision and follow through with it.” To Volkow, the notion that addicted individuals do not have free will is heartening. Addicted individuals who accept this notion will “simply, non-judgmentally receive the help they need” (she cites two medications as examples) “like a child with diabetes or a person with heart disease or cancer.”

Volkow’s blog post describes a remarkable scientific story in which biomedical research has revealed addiction to be a literal disease of the brain with a known pathophysiology in the form of faulty neural circuitry. Neuroscientists have discovered the brain circuit that produces free will and have shown that drug-related disruption in this circuit robs addicts of their ability to make decisions and control their behavior. Disseminating this message will reduce stigma and pave the way for effective treatment.

The scientific narrative described by the NIDA director would indeed be remarkable if it were true. However, it bears little resemblance to the scientific evidence described by contributors to this special issue (Kichuk, Lebowitz, & Adams, 2015, this issue; Lilienfeld, Schwartz, Meca, Sauvigné, & Satel, 2015, this issue; Peele, 2015, this issue). Although drug use (like all rewarding experiences) affects the brain in predictable ways, this observation is insufficient to classify addiction as a “brain disease.” Genomic and neuroimaging studies have not identified abnormalities that distinguish addicted from nonaddicted individuals with a clinically meaningful degree of sensitivity and specificity (Hall, Carter, & Forlini, 2015). In other words, there are no biomarkers for addiction. Addicted individuals are often capable of controlling their behavior in certain contexts, and psychological research using the balanced placebo design demonstrates that their

excessive substance use is more a product of expectancies than physiological dysfunction (George, Gilmore, & Stappenbeck, 2012). Most individuals who develop a substance addiction eventually overcome it without receiving treatment (Hasin, Stinson, Ogburn, & Grant, 2007). Psychological treatments that emphasize self-efficacy in controlling substance use are recommended first-line interventions in clinical guidelines (National Institute for Clinical Excellence, 2011). Acceptance of a neurobiological view of addiction does not improve stigma (Pescosolido et al., 2010) and reduces self-efficacy in controlling substance use (Wiens & Walker, 2014).

The discordance between Volkow’s narrative and the scientific evidence is concerning. Some of her assertions lack evidentiary support (e.g., addiction is a literal brain disease with a known pathophysiology), some are scientifically implausible (e.g., drug use eliminates free will by disrupting the brain circuits that produces it), and some are contradicted by reliable evidence (e.g., endorsement of the brain disease model reduces stigma). Moreover, the claim that drug-addicted individuals lack free will raises a host of troubling questions about personality responsibility, legal culpability, and the credibility of psychological treatments that emphasize the directed application of free will (Peele, 1989; Satel & Lilienfeld, 2013).

Cognitive-behavioral therapy (CBT) is cited as an evidence-based treatment for substance use disorders in the NIDA publication “Principles of Drug Addiction Treatment: A Research-Based Guide” (2012; preface by Nora Volkow). According to the guide, a central element of CBT is “enhancing patients’ self-control by helping them develop effective coping strategies,” including “strategies for coping with cravings” (p. 49). Another evidence-based treatment listed in the guide, motivational interviewing, “helps individuals resolve their ambivalence about engaging in treatment and stopping their drug use” and “aims to evoke rapid and internally motivated change” (p. 55). Our attempt to integrate the information in NIDA’s treatment guide with Volkow’s scientific narrative raises numerous questions, including the following:

- If addicted individuals suffer from a disease-induced lack of free will, how could they possibly benefit from psychosocial treatments that emphasize motivation, self-efficacy, and skills for controlling urges to use? How can the

efficacy of such treatments be explained?

- Does acceptance of the message that “addiction is a disease of free will” rob addicts of the very sense of agency that is a prerequisite for success in evidence-based psychological approaches like CBT?
- Is it fundamentally disempowering to inform addicts they are biologically incapable of making decisions, controlling their behavior, and directing the course of their lives in accordance with their values?

In an interview published in *Newsweek* (Interlandi, 2008), Volkow predicted, “The future is clear. In 10 years we will be treating addiction as a disease, and that means with medicine.” At present, 3 years shy of this predicted future, the biomedical approach has yet to produce clinically meaningful treatment innovations. The few novel addiction treatments that have been developed in recent decades (e.g., naltrexone) are not particularly effective, and the most commonly used pharmacological treatments (e.g., methadone) preceded the modern biomedical era by decades (Hall et al., 2015). We can’t help but wonder, if 2018 arrives without Volkow’s predicted disease-based medicine for addiction having come to fruition, if the media, scientific community, and other stakeholder groups will take notice. We hope this article and special issue of *the Behavior Therapist* will encourage increased accountability, public scrutiny, and rigorous scientific analysis of the biomedical approach.

“Psychiatry Is Reinventing Itself Thanks to Advances in Biology”

On August 19, 2015, NIMH director Thomas Insel authored an editorial in *New Scientist* titled, “Psychiatry Is Reinventing Itself Thanks to Advances in Biology.” Insel stated the following:

The problem is that even though there have been thousands of studies looking for biological markers of mental health problems such as depression or schizophrenia, none has proven clinically actionable. And, in truth, little has been replicable even in a research setting. So some psychiatrists understandably reason that this approach offers no advantage, but large costs. (Insel, 2015)

He also observed: “Objective diagnostic categories that are reliable and biologically valid are long overdue in this field.”

These are extraordinary admissions. In his editorial, the NIMH director acknowledges the following realities: (a) DSM-defined mental disorders are neither adequately reliable nor biologically valid, (b) biomedical research conducted in the modern DSM era (1980-present) has failed to identify a single biological variable that is useful in the diagnosis or treatment of any mental disorder, (c) findings from biomarker studies have not been consistently replicated, and (d) it is understandable to conclude the biomedical approach has not worked, at great cost. We are pleased that Insel has conceded these principal objections to the biomedical model noted by contributors to this special issue (Abramovitch & Schweiger, 2015, this issue; Kinderman, 2015, this issue; Lacasse & Leo, 2015, this issue; Moncrieff, 2015, this issue; Peele, 2015, this issue; Whitaker, 2015, this issue).

Yet surprisingly, Insel views the failure of biomedical research to date as evidence that we need more biomedical research. His editorial tells of a “revolution under way in psychiatry.” Built on genomics and neuroscience, the revolution is founded on the assumption that mental health problems are “brain disorders related to physiological changes rather than simply behavioral ones.” Specifically, the thoughts and behaviors associated with mental disorders are “symptoms of an underlying disorder in a brain circuit.” To Insel, the future lies in biomarkers, which the NIMH’s Research Domain Criteria (RDoC) project aims to identify. He views the success of “precision medicine” in cancer as a model for the diagnosis and treatment of mental health problems. In approximately a decade, Insel predicts a “tectonic shift” in which “genomic, cellular, imaging, social and behavioural information” will be used to “develop tests to identify precise diagnostic groups within what we now call mental disorders.”

In our view, the scientific narrative described by Insel in this editorial is problematic. Like Volkow, Insel claims mental health problems are caused by faulty brain circuitry. However, Insel makes this claim in the same essay in which he acknowledges “thousands of studies” have failed to reveal a clinically useful biomarker for any mental disorder. In other words, Insel simultaneously advances the seemingly incompatible claims that (a) mental health problems are caused by disordered brain

circuitry, and (b) there is no mental health problem-specific brain abnormality known to science. Our critical analysis of Insel’s editorial raises numerous questions, including the following:

- If “thousands of studies looking for biological markers of mental health problems” have not found them, why should we believe problem-specific biomarkers will be discovered and lead to “precision medicine” in approximately 10 years? Given Insel’s previous, highly similar prediction that “biodiagnostics” and “treatment of core pathology” would arrive by 2015 (Insel & Quirion, 2005), why should we trust this new prediction?
- Is there a point in time when the failure of biomedical research to identify disorder-specific biomarkers and personalized biological treatments should dampen enthusiasm for this approach and prompt an honest reconsideration of its validity and utility? If so, when?
- Is it premature to announce a scientific revolution in the absence of revolutionary data? Don’t scientific revolutions follow revolutionary data?
- Is cancer a valid model for psychological problems? On what basis should we believe advances in the clinical management of cancer due to biomedical research are applicable to problems of thinking, feeling, and behaving?
- Why is the NIMH director writing editorials about psychiatry’s image?

A Call for Critical Dialogue

The opinion pieces by Volkow and Insel, both of whom direct a federal mental health agency and its influential grant funding agenda, provide a microcosm for contemporary dialogue surrounding the biomedical model. Proponents describe a scientific revolution of transformative power built upon advances in genomics and neuroscience. According to this narrative, mental health problems are diseases of the brain caused by faulty neural circuitry. Promoting this message reduces stigma and facilitates effective treatment. Advances in biomedical research will soon produce disease-specific diagnostic tests and highly effective personalized treatments, much as they have for diseases like cancer.

As described by contributors to this special issue, there are compelling data-based reasons to question this narrative.

Although the biomedical era has witnessed groundbreaking methods (e.g., neuroimaging), genomics and neuroscience have not produced the findings necessary to deliver the disorder-specific biological tests and treatments whose imminent arrival has been predicted since the 1970’s (Peele, 2015, this issue). Biomedical research has not identified biomarkers for mental disorders, and as Abramovitch and Schweiger (2015, this issue) argue, disorder-specific markers are unlikely to be found in the assessment arsenal of the neuropsychologist. Widespread acceptance of the biomedical model has not reduced public stigma and appears to elicit prognostic pessimism and reduced self-efficacy among individuals with psychological problems (Kichuk et al., 2015, this issue). We now understand that the conventional wisdom about psychotropic medications, such as newer generation “antidepressants” and “antipsychotics,” is mistaken. Much of the clinical trials data on the safety and efficacy of these blockbuster medications have been manipulated or hidden, financial conflicts of interest have compromised the integrity of the published literature and clinical guidelines based on it, and industry-funded drug trials are perhaps better viewed as marketing than science (Spielmann, 2015, this issue). The chemical imbalance theory of depression, and the notion that “antidepressants” work by correcting a chemical imbalance, is not and never has been scientifically credible (Lacasse & Leo, 2015, this issue). Given the lack of evidence that psychotropic medications correct a disease process, a fundamental reconsideration of their nature and effects is warranted (Moncrieff, 2015, this issue). Lastly, a dramatic increase in the use of psychotropic medications during the biomedical era has not improved societal mental health outcomes. Indeed, mental health disability rates have markedly increased in recent decades, and there is troubling evidence to suggest the long-term use of psychotropic medications may be to blame (Whitaker, 2015, this issue).

In addition to evidentiary warrant, the biomedical model may be criticized on conceptual grounds. Insel and Volkow’s biomedical approach is founded on the philosophy of eliminative reductionism (Lilienfeld et al., 2015, this issue), which posits that psychological experiences (e.g., obsessions and compulsions) can be fully reduced to their biological causes (e.g., faulty brain circuitry). From this perspective, the biological level of analysis is inherently fundamental to the psychological

level, and psychology will become superfluous once biomedical researchers have fully mapped the brain bases of behavior. There are three principal objections to this philosophy. First, whether psychology can be successfully reduced to biology is an empirical question; simply assuming such reduction on metaphysical grounds “achieves the goal (in Bertrand Russell’s famous phrase) by theft rather than honest toil” (Gold, 2009; p. 509). Second, psychological experience likely possesses complex emergent properties that cannot be reduced to genes, molecules, cells, circuits, or physiology without losing valuable information (Lilienfeld et al., 2015, this issue). Third, attempts to reduce psychological experience to biology violate established tenets of modern evolution science. A compelling defense of this objection is offered by Hayes, Sanford, and Feeny (2015, this issue), who review contemporary research suggesting that attempts to integrate psychology with neuroscience or genetics lose valuable information by ignoring the influence of context and history. They argue, “any statement that genes or the brain cause psychopathology misses the ongoing evolutionary and systemic complexity of the obtained relationships once even a short time frame is added to the picture” (p. 224).

In the United States, the lively debate about the biomedical approach that occurred during the DSM-5 (APA, 2013) revision process (e.g., *Open Letter to the DSM-5*, n.d.) has gradually faded since the publication of the new diagnostic manual. However, critical analysis of the biomedical model and the development of alternative approaches for understanding and treating mental health problems have gained momentum in the United Kingdom (e.g., Boseley, 2015; British Psychological Society, 2014). In this issue, British Psychological Society president-elect Peter Kinderman outlines a manifesto for reform that disentangles mental health services from the biomedical approach. His manifesto views the origins of distress as a product of life circumstances rather than biological disease, replaces invalid diagnoses with straightforward descriptions of problems, and emphasizes tailoring therapy to each person’s unique circumstances while promoting their agency in behavior change. Although they radically depart from the dominant biomedical approach, Kinderman’s (2015, this issue) recommendations are quite consistent with the standard practice of behavior therapy prior to the modern DSM era.

In closing, this article and special issue of *the Behavior Therapist* are intended to encourage open critical dialogue regarding the validity and utility of the biomedical paradigm that dominates the American mental health system, psychiatry, and increasingly, academic psychology (Schwartz, Lilienfeld, Meca, & Sauvigné, in press). Given their established commitment to scientific principles, members of the Association for Behavioral and Cognitive Therapies (ABCT) are positioned to make important contributions to this dialogue. We hope the articles in this special issue will facilitate an informed, productive, and ongoing discussion in keeping with ABCT’s mission of the “advancement of scientific approaches to the understanding and improving of human functioning” in order to improve the “assessment, prevention, treatment of human problems, and the enhancement of health and well-being.”

References

- Abramovitch, A., & Schweiger, A. (2015). Misuse of cognitive neuropsychology in psychiatry research: The intoxicating appeal of neoreductionism. *the Behavior Therapist*, 38, 187-191.
- American Psychiatric Association. (2013, May 3). *Chair of DSM-5 task force discusses future of mental health research*. Retrieved September 8, 2015, from <http://dxrevisionwatch.com/2013/05/06/kupfer-apa-statement-on-national-institute-of-mental-health-nimh-announcement/>.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.
- Angell, M. (2011, June 23). The epidemic of mental illness: Why? *The New York Times Review of Books*. Retrieved September 8, 2015, from <http://www.nybooks.com/articles/archives/2011/jun/23/epidemic-mental-illness-why/>.
- Boseley, S. (2015, May 13). Psychiatric drugs do more harm than good, experts say. *The Guardian*. Retrieved September 8, 2015, from <http://www.theguardian.com/society/2015/may/12/psychiatric-drugs-more-harm-than-good-expert>.
- British Psychological Society Division of Clinical Psychology. (2014). *Understanding psychosis and schizophrenia*. Retrieved September 8, 2015, from https://www.bps.org.uk/system/files/user-files/Division%20of%20Clinical%20Psychology/public/understanding_psychosis_-_final_19th_nov_2014.pdf.
- Deacon, B. J. (2013). The biomedical model of mental disorder: A critical analysis of its assumptions, consequences, and effects on psychotherapy research. *Clinical Psychology Review*, 33, 846-861.
- Frances, A. (2014). *Saving normal: An insider's revolt against out-of-control psychiatric diagnosis, DSM-5, big pharma, and the medicalization of ordinary life*. New York: William Morrow.
- George, W. H., Gilmore, A. K., & Stappenbeck, C. A. (2012). Balanced placebo design: Revolutionary impact on addictions research and theory. *Addiction Research & Theory*, 20, 186-203.
- Gold, I. (2009). Reduction in psychiatry. *Canadian Journal of Psychiatry*, 54, 506-512.
- Hall, W., Carter, A., & Forlini, C. (2015). The brain disease model of addiction: Is it supported by the evidence and has it delivered on its promises. *The Lancet Psychiatry*, 2, 105-110.
- Hasin, D. S., Stinson, F. S., Ogburn, E., & Grant, B. F. (2007). Prevalence, correlates, disability, and comorbidity of DSM-IV alcohol abuse and dependence in the United States: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Archives of General Psychiatry*, 64, 830-842.
- Hayes, S., C., Sanford, B. T., & Feeny, T. K. (2015). Using the functional and contextual approach of modern evolution science to direct thinking about psychopathology. *the Behavior Therapist*, 38, 222-227.
- Insel, T. R. (2013, April 29). *Director's blog: Transforming diagnosis*. Retrieved September 8, 2015, from <http://www.nimh.nih.gov/about/director/2013/transforming-diagnosis.shtml>.
- Insel, T. R. (2015, August 19). Psychiatry is reinventing itself thanks to advances in biology. *New Scientist*. Retrieved September 8, 2015, from <https://www.newscientist.com/article/mg22730353-000-psychiatry-is-reinventing-itself-thanks-to-advances-in-biology/>.
- Insel, T. R., & Quirion, R. (2005). Psychiatry as a clinical neuroscience discipline. *Journal of the American Medical Association*, 294, 2221-2224.
- Interlandi, J. (2008, February 23). What addicts need. *Newsweek*. Retrieved September 8, 2015, from <http://www.newsweek.com/what-addicts-need-93767>.
- Kichuk, S. A., Lebowitz, M. S., & Adams, T. G. (2015). Can biomedical models of psychopathology interfere with cogni-

- tive-behavioral treatment processes? *the Behavior Therapist*, 38, 181-186.
- Kinderman, P. (2015). A psychological model of mental health and well-being: Rational but radical. *the Behavior Therapist*, 38, 227-231
- Kirsch, I. (2010). *The emperor's new drugs: Exploding the antidepressant myth*. New York: Basic Books.
- Lacasse, J. R., & Leo, J. (2015). Antidepressants and the chemical imbalance theory of depression: A reflection and update on the discourse. *the Behavior Therapist*, 38, 206-213.
- Lilienfeld, S. O., Lynn, S. J., & Lohr, J. M. (Eds.). (2015). *Science and pseudoscience in clinical psychology* (2nd ed.). New York: Guilford Press.
- Lilienfeld, S. O., Schwartz, S. J., Meca, A., Sauvigné, K. C., & Satel, S. (2015). Neurocentrism: Implications for psychotherapy practice and research. *the Behavior Therapist*, 38, 173-181
- Moncrieff, J. (2015). The myths and realities of drug treatment for mental disorders. *the Behavior Therapist*, 38, 214-218.
- National Institute for Clinical Excellence. (2011). *Alcohol-use disorders: Diagnosis, assessment and management of harmful drinking and alcohol dependence* (guideline CG115). Retrieved September 8, 2015, from <https://www.nice.org.uk/guidance/cg115>.
- National Institute on Drug Abuse. (2012). *Principles of drug addiction and treatment: A research-based guide* (NIH Pub No. 12-4180). Retrieved September 8, 2015, from https://www.drugabuse.gov/sites/default/files/podat_1.pdf.
- Open Letter to the DSM-5 (n.d.). Retrieved September 8, 2015, from <http://www.ipetitions.com/petition/dsm5/>.
- Peele, S. (1989). *Diseasing of America: How we allowed recovery zealots and the treatment industry to convince us we are out of control*. San Francisco: Jossey-Bass.
- Peele, S. (2015). Why neurobiological models can't contain mental disorder and addiction. *the Behavior Therapist*, 38, 218-222.
- Pescosolido, B. A., Martin, J. K., Long, J. S., Medina, T. R., Phelan, J. C., & Link, B. G. (2010). A disease like any other? A decade of change in public reactions to schizophrenia, depression, and alcohol dependence. *American Journal of Psychiatry*, 167, 1321-1330.
- Satel, S., & Lilienfeld, S. O. (2013). *Brain-washed: The seductive appeal of mindless neuroscience*. New York: Basic Books.
- Schwartz, S. J., Lilienfeld, S. O., Meca, A., & Sauvigné, K. C. (in press). The role of neuroscience within psychology: A call for inclusiveness over exclusiveness. *American Psychologist*.
- Spielmann, G. (2015). When marketing met science: Evidence regarding modern antidepressants and antipsychotic medications. *the Behavior Therapist*, 38, 199-205.
- Stahl, L. (2012, February 19). Treating depression: Is there a placebo effect? *60 Minutes*. Retrieved September 8, 2015, from http://www.cbsnews.com/8301-18560_162-57380893/treating-depression-is-there-a-placebo-effect/.
- Volkow, N. (2015, June 13). Addiction is a disease of free will. *Huffington Post*. Retrieved September 8, 2015, from http://www.huffingtonpost.com/nora-volkow/addiction-is-a-disease-of_b_7561200.html.
- Whitaker, R. (2010). *Anatomy of an epidemic: Magic bullets, psychiatric drugs, and the astonishing rise of mental illness in America*. New York: Crown.
- Whitaker, R. (2015). Anatomy of an Epidemic: The history and science of a failed paradigm of care. *the Behavior Therapist*, 38, 192-198.
- Wiens, T. K., & Walker, L. J. (2014). The chronic disease concept of addiction: Helpful or harmful? *Addiction Research & Theory*, 23, 1-13.
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