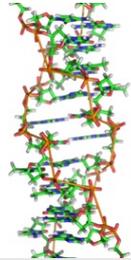
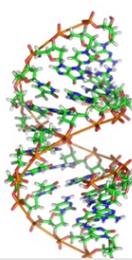


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Are psychological problems (e.g., depression & anxiety) genetic?



by [Michael Etts, LCSW-C](#)



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Why write this article?

Many people have an anxiety that, because a parent or relative had psychological issues, they will develop the same. Many people also recite the wholly unproven statement that psychological problems stem from a "chemical imbalance" and thus believe that psychotropic medication is their only solution.

The ["chemical imbalance" myth is debunked here](#). The balance of this article is meant to provide information (often marginalized or ignored) that will help you make your own decision as to whether "it's biological or genetic."

For the [tl;dr crowd](#), [go here for a summary](#).

Managing public perceptions and creating a narrative

“ the intentional deflection of attention for the purpose of disguise

That is how Sam Sharpe described misdirection, one of the main techniques used by magicians (1988, p. 47). But as we shall see, misdirection is a technique used by others as well.

Tobacco Industry

Starting in the 1950's, large tobacco companies attempted to define the parameters of public discourse (or narrative) over the ill effects of cigarette smoking. They sought to undermine confidence in the emerging peer-reviewed science linking lung cancer to smoking by a careful campaign of public relations and by financing their own research. The American Journal of Public Health describes the effort:

“ Confronted by compelling peer-reviewed scientific evidence of the harms of smoking, the tobacco industry, beginning in the 1950s, used sophisticated public relations approaches to undermine and distort the emerging science.

The industry campaign worked to create a scientific controversy

through a program that depended on the creation of industry–academic conflicts of interest. This strategy of producing scientific uncertainty undercut public health efforts and regulatory interventions designed to reduce the harms of smoking.

A number of industries have subsequently followed this approach to disrupting normative science. (Brandt, 2012)

Sugar Industry

The sugar industry did the same in 1967, getting a literature review published in the New England Journal of Medicine "which singled out fat and cholesterol as the dietary causes of CHD [coronary heart disease] and downplayed evidence that sucrose consumption was also a risk factor [...] The SRF's [Sugar Research Foundation] funding and role was not disclosed." (Kearns, Schmidt, Glantz, 2014)

Is it happening again?

This article will present a review of the literature that suggests a similar management of public perception is occurring now, this time financed by large pharmaceutical companies. That the data on trauma, abuse and neglect is being marginalized, while research emphasizing a disease model and using the misnomer "mental illness" to denote syndromes of psychological problems is being promoted in a systematic manner.

Reviewing research on the effects of trauma, abuse & neglect

The ACE study (the role of trauma, abuse and neglect)

A landmark study conducted by Kaiser Permanente in the late 1990's show a strong relationship between trauma/abuse/neglect and later emotional and physical health issues. From the study:

“Both the prevalence and risk (adjusted odds ratio) increased for smoking, severe obesity, physical inactivity, depressed mood, and suicide attempts as the number of childhood exposures increased (Felitti, et al., p. 248)

Attachment studies

From World Psychiatry:

“Attachment insecurities are associated with a wide variety of mental disorders, ranging from mild negative affectivity to severe, disorganizing, and paralyzing personality disorders. The evidence suggests that insecure attachment orientations (whether anxious or avoidant) are fairly general pathogenic states. (Mikulincer M, Shaver P, 2012)

From the Child and Adolescent Psychiatric Clinics of North America:

“ In humans, studies have demonstrated the key role of the responsive, predictable caregiver in the development of a healthy stress response neurobiology

[...]

the child exposed to chaotic or threatening caregiving develops a 'sensitized' stress response system that impacts arousal, emotional regulation, behavioral reactivity, and even cardiovascular regulation (74;76). These sensitized children are at risk for stress induced neuropsychiatric problems later in life (77). (Perry, Pollard, 1998)

From the book "Attachment in psychotherapy":

“ Children with a history of secure attachment show substantially greater self-esteem, emotional health and ego resilience, positive affect, initiative, social competence, and concentration in play than do their insecure peers.

[...]

As for later development, secure attachment seems to confer a measure of resilience on those so favored early in life. In contrast, disorganized attachment in infancy has been shown to be a very significant risk factor for psychopathology from childhood onward (Wallin, 2007, pp. 23-24).

Trauma and abuse studies

Alan Schore from the Dept of Psychiatry at UCLA Medical School writes:

“ Instead of modulating, she induces extreme levels of stimulation and arousal, either too high in abuse or too low in neglect, and because she provides no interactive repair, the infant's intense negative emotional states last for long periods of time. Such states are accompanied by severe alterations in the biochemistry of the immature brain, especially in areas associated with the development of the child's coping capacities (Schore, 1996, 1997a).

There is now agreement that repetitive, sustained emotional abuse is at the core of childhood trauma (O'Hagan, 1995), and that parental maltreatment or neglect comprises cognitive development (Trickett & McBride-Chang, 1995). In line with the established general principle that childhood abuse is a major threat to children's

mental health (Hart & Brassard, 1987), a context of very early relational trauma serves as a matrix for maladaptive infant (and later adult) mental health. (Schoore, 2001, p. 205)

From the Infant Mental Health Journal:

“A traumatized child may, over time, exhibit motor hyperactivity, anxiety, behavioral impulsivity, sleep problems, tachycardia, hypertension, and a variety of neuroendocrine abnormalities (DeBellis et al., 1994; DeBellis, Letter Trickett, & Putnam, 1994; Hoffman, DiPiro, Tackett, Arrendale, & Hahn, 1989; Ito et al., 1993; Perry, 1994a; Perry & Pate, 1994).

This also means, of course, that these components of the fear response, themselves, become sensitized. [...] This is due to the fact that, simply stated, the child is in a persisting fear state (which is now a "trait"). Furthermore, this means that the child will very easily be moved from being mildly anxious to feeling threatened to being terrorized. In the long run, what is observed in these children is a set of maladaptive emotional, behavioral, and cognitive problems, which are rooted in the original adaptive response to a traumatic event. (Perry, Pollard, Blakley, Baker & Vigilante, 1995, p. 278)

These are some articles and books detailing the deleterious effects of trauma, abuse and neglect. It would be easy to produce many, many more (those so inclined can read the references of the above sources, though I would recommend [this study](#) to start).

A summary by Dr. John Briere, author of many books on trauma and recovery

“If we could somehow end child abuse and neglect, the eight hundred pages of DSM (and the need for the easier explanations such as DSM-IV Made Easy: The Clinician's Guide to Diagnosis) would be shrunk to a pamphlet in two generations.

The research on genetic basis of psychological problems

Dramatic headline: "Common Genetic Factors Found in 5 Mental Disorders"

A commonly referenced research article by the NIMH (a 2013 study of 33,000 looking for genetic causes of autism spectrum disorder, attention deficit-hyperactivity disorder, bipolar disorder, major depressive disorder, and schizophrenia) found that:

“Although statistically significant, each of these genetic associations individually can account for only a small amount of risk for mental illness," says study co-author Dr. Jordan Smoller of Massachusetts

General Hospital. Because of this, the variations couldn't yet be used to predict or diagnose specific conditions. (National Institute of Health, 2013)

Dr Bruce Cuthbert explains "they found disruptions in calcium channels that are very important parts of neurotransmission." (Cuthbert, 2013). But the lack of a causal relationship is acknowledged by the NIH:

“ Although there are common genetic variants associated with rare disorders like Fragile X or Rett syndrome, *no gene variants can predict with certainty that a person will develop a mental disorder* (NIMH, 2017).

Looking deeper into the NIMH study

Let's look a little deeper into this study. It noted variations in the CACNA1C gene. These variations would become the part of the basis for the dramatic headline "Common Genetic Factors Found in 5 Mental Disorders," even though in the text of the article NIMH acknowledges "causal factors haven't yet been pinpointed" (NIH, 2013). By using the phrase "haven't yet been pinpointed," they reveal a bias or assumption, that causal factors will be pinpointed (aka confirmation bias).

This assumption is contradicted by a study (funded by German sources and significantly, not by the NIMH). The study titled "ANK3 and CACNA1C - Missing genetic link for bipolar disorder and major depressive disorder in two German case-control samples" concludes:

“ Regarding ANK3 and CACNA1C, *our findings do not support a strong genetic link between BPD and MDD for these two genes.*

[...]

From these findings and cross-disorder genetic studies listed above distinctions regarding *the relevance of genes or mechanisms in different psychiatric disorders or affective disorder subentities would be premature.* (Kloiber, et al., 2012).

Statistical correlation is not causation

As we will discuss later, statistical correlation is not causation, thus even the statement that "account for only a small amount of risk for mental illness" is speculative, implicitly acknowledged with the statement that "the variations couldn't yet be used to predict or diagnose specific conditions."

There is only direct, causal evidence for the genetic origins of psychological issues related to Fragile X syndrome, Rett syndrome and Down syndrome. Other than those 3, there is no direct, causal evidence of a genetic basis for psychological problems.

Here is another dramatic claim, this time from ScienceAlert.com "Schizophrenia Is 80% Genetic, According to This Massive New Study on Twins" (Macrae, 2017). [See problems with twin studies here.](#)

As we will explore later, repetition of "genetic" causes (with no causal link and ambiguous research findings) will lead to the illusory truth effect (people will believe it to be true).

A note about epigenetic modifications

There are theories of epigenetic modifications facilitating the intergenerational transfer of psychological problems. The article "Biological memory of childhood maltreatment – current knowledge and recommendations for future research" writes:.

“ First, stress during pregnancy might directly alter the epigenome of the child [...] Secondly, postnatal mother-infant interactions and low maternal care, which can be altered as a consequence of maltreatment experiences of the mother, can change the infant's epigenome. (Schury, Kolassa, 2012)

Animal studies (using rats and monkeys) showed:

“ [...] pups of stressed [rat] mothers [...] were more fearful and irritable and produced more stress hormones. [...] prenatally stressed monkeys [...] result[ed] in a wide range of impairments including neuromotor difficulties, diminished cognitive abilities, and attention problems. (Stien, Kendall, 2004, pp. 21-22).

A human based study showed that "higher maternal cortisol levels in early gestation was associated with more affective problems in girls [...] The results underscore the importance of the intrauterine environment and suggest the origins of neuropsychiatric disorders may have their foundations early in life" (Buss, et al., 2012). The Yale School of Medicine writes "Abuse can change the ways in which genes are expressed, leading to alterations throughout the genome." (Delude, 2014).

Studies detailing the flaws of "genetic" studies

Twin studies have major flaws

From researchers at the Albert Einstein School of Medicine:

“ The comparison of MZ-DZ twins in behavioral genetics has produced what seems like irrefutable evidence for the heritability of many psychiatric disorders. But such research depends on the validity of the EEA - the "equal environments assumption" - as an underlying premise [...] studies investigating the EEA appear to be largely inadequate in terms of technique, as well as biased in the inferences drawn. Further, the "heritability" estimate - [...] is merely a statistical abstraction derived from a matrix of correlations; [...]

"heritability" does not correspond to any underlying DNA structure. *In conclusion, many MZ-DZ pedigree studies have dubious scientific value, given the non-viable premise of the EEA, as well as the misleading operational definition of what has been called "heritability"* (Pam A, Kemker S, Ross C, Golden R, 1996).

From Psychiatric Quarterly:

“ It is argued that the main theoretical assumption of the twin method —known as the "equal environment assumption"—is not tenable. [...] It is concluded that there is little reason to believe that twin studies provide evidence in favor of genetic influences on psychiatric disorders and human behavioral differences. (Joseph, 2002, p. 350).

Why is there so much news about genetic causes?

Let's talk about industry funding of research

From the article "The Great DNA Data Deficit: Are Genes for Disease a Mirage?":

“ The Salt Institute website, for example, currently maintains that diseases linked to salt reflect the existence of a small number of highly predisposed individuals. This assertion, [...] is clearly intended to undermine efforts to restrict salt in the diet. For the same reason, the tobacco industry has for many years encouraged research into the genetics of nicotine addiction (Gundle et al. 2010). This same reasoning, that disease is the fault of the victim's genes, also protects corporate defendants from after-the-fact liability. If lung cancer patients, for example, suffer from even the possibility of a genetic predisposition, suing tobacco companies is very much harder than it would be otherwise [...] (Latham, Wilson 2010).

What is funding bias?

Funding bias is a phenomena where the research tends to reflect positively on those who paid for it (shocking, I know). Here is some research reflecting funding bias in psychiatric research:

“ Favorable outcomes were significantly more common in studies sponsored by the drug manufacturer (78%) than in studies without industry sponsorship (48%) or sponsored by a competitor (28%). (Kelly, et al, 2006).

Well, everybody knows it's a chemical imbalance. Right?

"Chemical imbalance" is a myth.

From the Council for Evidence Based Psychiatry:

“Psychiatric drugs have often been prescribed to patients on the basis that they cure a 'chemical imbalance'. However, no chemical imbalances have been proven to exist in relation to any mental health disorder. There is also no method available to test for the presence or absence of these chemical imbalances (2014).

The Psychiatric Times, also weary of the "chemical imbalance" nonsense, writes:

“In the 1980s, the 1990s, and beyond, pharmaceutical companies heavily promoted something resembling a chemical imbalance theory of mood disorders directly to consumers—or, at least, used the “chemical imbalance” trope to explain how antidepressants supposedly work. In recent years, as psychologist Dr John Grohol has pointed out, some non-professional websites have provided misleading graphics that reinforce the “chemical imbalance” trope. *It is not surprising that the “Theory That Never Was” has taken hold in the minds of so many.* [\[the illusory truth effect\]](#) (Pies, 2019)

So, who has been publicizing this myth of "chemical imbalance"?

From the article "Is Depression Just Bad Chemistry?":

“A commercial sponsored by Pfizer, the drug company that manufactures the antidepressant Zoloft, asserts, "While the cause [of depression] is unknown, depression may be related to an imbalance of natural chemicals between nerve cells in the brain. Prescription Zoloft works to correct this imbalance." *Using advertisements such as this one, pharmaceutical companies have widely promoted the idea that depression results from a chemical imbalance in the brain.* (Arkowitz, Lilienfeld, 2014)

if you do a search of NAMI (National Alliance on Mental Illness) for "chemical imbalance", you will find the phrase [109 times \(search performed Sep 14, 2019\)](#). Later, we will explore the cozy relationship of NAMI with the drug companies.

The chemical imbalance narrative has been shown to have successfully developed [the illusory truth effect](#), as revealed in this survey "in a 2007 survey of 262 undergraduates, psychologist Christopher M. France of Cleveland State University and his colleagues found that 84.7 percent of participants found it "likely" that chemical imbalances cause depression" (Arkowitz, Lilienfeld, 2014)

Creating a false narrative: the case of NAMI

False claims

NAMI has published some rather dubious claims with an unjustified air of authority. Here is an example from their web site from 2004 "Here are some important facts about mental illness [...] Mental illnesses are biologically based brain disorders." (NAMI website, 2004). This bold sweeping statement of "fact" is not accompanied by any research or corroboration.

These speculative claims were written about by the Citizens Commission on Human Rights International:

“ In a 2000 Insight Magazine article, NAMI spokesperson Bob Carolla stated, "Mental illness is a biologically based brain disorder" and deferred to the U.S. Surgeon General's 1999 Report on Mental Health as evidence of this. Yet the author of the article, Kelly Patricia O'Meara reviewed the entire report looking for this evidence, and found, *"The Surgeon General's report does not provide a single piece of scientific data supporting mental illness as a brain disorder or disease."* (CCHRI, 2009).

Or this, from the authoritatively titled blog post "Depression: A Scientific Approach":

“ "Although depression cannot actually be cured without medicine" (NAMI website, 2014).

The suggestion is that medicine (psychotropic drugs) are required to successfully treat depression. Here is an excerpt from a research study, showing that psychological treatment is as effective as medication:

“ The effects of psychological treatment of adult depression have been tested in several hundreds of randomized controlled trials. [...] The effects are comparable to those of antidepressant medication and probably last longer. (Cuijpers, Gentili, 2017).

NAMI's statements about psychological problems emphasizing the biological and unproven genetic aspects might be explained by the \$23 million that the drug companies contributed to NAMI from 2006 - 2008.

Gardiner Harris of the NY Times writes:

“ NAMI, has long been criticized for coordinating some of its lobbying efforts with drug makers and for pushing legislation that also

benefits industry. [...] [NAMI] which is hugely influential in many state capitols, has refused for years to disclose specifics of its fund-raising, saying the details were private. [...] But according to investigators in Mr. [Senator] Grassley's office and documents obtained by The New York Times, drug makers from 2006 to 2008 contributed nearly \$23 million to the alliance, about three-quarters of its donations. (2009).

\$23 million, or 75% of NAMI's funding came from drug companies in the years 2006-2008.

A visit from NAMI to my graduate school class

Right before I graduated from graduate school, a NAMI outreach person came to speak to our class. The emphasis was on mental illness being a biological issue and she shared her daughter's struggle with major psychological issues, including her "delusions." I asked the speaker what those delusions were. She replied that her daughter kept insisting that her father (the speaker's husband) had sexually abused her. I overheard another student mumble "How does she know it isn't true?"

It is possible that a biological or genetic abnormality were the complete cause of her daughter's psychological problems. Of course, it is also possible that the sexual abuse did occur. And since childhood sexual abuse is related to subsequent psychological problems (Fergusson, Horwood, Lynskey, 1996), it could be the proximate cause of her daughter's issues. Also, since lack of maternal support exacerbates the damaging effects of sexual abuse (Everson, et al., 2010), the mother's disbelief that abuse had occurred may have also been a contributing factor.

Well, surely we can trust all the research from NIMH, right?

Conflicts of interest at the National Institute of Mental Health (NIMH)

Well, it seems that drug companies have been paying researchers in the same way they have been funding NAMI. Let's take the case of *Dr. Charles B. Nemeroff, author of more than 850 research articles*. According to the NY Times, Dr. Nemeroff:

“earned more than \$2.8 million in consulting arrangements with drug makers from 2000 to 2007, *failed to report at least \$1.2 million of that income to his university and violated federal research rules* [...] Dr. Nemeroff is a charismatic speaker and a widely admired scientist who has written more than 850 research reports and reviews. He was editor in chief of the influential journal *Neuropsychopharmacology* (Harris, 2008).

And the Chronicle of Higher Education writes:

“In the case of Dr. Nemeroff, a pattern of accepting undisclosed

corporate payments goes back at least a decade. In 2003, [...] *Dr. Nemeroff used an article in Nature Neuroscience to praise treatments for depression in which he had an unreported financial interest.* In 2004, Emory issued a report citing him for multiple "serious" violations of its conflict-of-interest policies for protecting patients (Basken, 2010).

And Bernard Carroll (past Chairman of the Dept of Psychiatry at Duke University Medical Center) writes how Dr Nemeroff stayed silent as a junior presenter falsified parts of a Continuing Medical Education (CME) class:

“ [...] the video presentation one of the junior presenters stated very clearly that there was "significant improvement in both response and remission with both doses" of Seroquel. That is a falsification of the scientific record. [...] Dr. Nemeroff was required to correct this false statement made by his junior assistant, but Dr. Nemeroff failed to do so. (2009)

Other instances of failure to disclose drug company payments

And the failure to report all drug company money was not limited to Dr. Nemeroff:

“ The Congressional inquiry, led by Senator Charles E. Grassley, Republican of Iowa, is systematically asking some of the nation's leading researchers to provide their conflict-of-interest disclosures, and Mr. Grassley is comparing those documents with records of actual payments from drug companies. The records often conflict, sometimes starkly. *"After questioning about 20 doctors and research institutions, it looks like problems with transparency are everywhere," Mr. [Senator] Grassley said.* (Harris, 2008).

What does this have to do with the credibility of the NIMH?

Dr Thomas Insel's relationship with Dr. Charles Nemeroff

To answer that we have to examine the relationship of Dr Thomas Insel (director of the NIMH from 2002 through 2015) and his relationship with Dr. Charles B. Nemeroff. Let's start with more from the Chronicle of Higher Education article:

“ Dr. Nemeroff began offering help to the now-director of the NIMH in 1994, when Dr. Insel was facing the nonrenewal of his research job at the NIH, Mr. Carroll said, bringing him to Emory to serve as a professor of psychiatry and director of the Yerkes Regional Primate

Research Center. Dr. Nemeroff also led a lobbying effort that helped ensure Dr. Insel's appointment in 2002 as NIMH director, Mr. Carroll said.

Mr. Carroll, who supervised Dr. Nemeroff for six years at Duke, describes the career assistance for Dr. Insel as part of a strategy in which Dr. Nemeroff would "put people in debt to him, and then call in the chips later." (Basken, 2010).

So, the same person who reportedly accepted millions from drug companies, who was silent when a CME class was falsified and failed to make required conflict of interest disclosures, also helped Thomas Insel become director of the National Institute of Mental Health.

A deeper look into Thomas Insel, director of NIMH from 2002 - 2015

How did Insel discipline Nemeroff for his multiple, serious violations of COI policies?

Well, that's simple. He helped him get a job at the University of Miami. Again, from Bernard Carroll:

“What message does it send for Insel, a well known crony of Nemeroff, to blithely assure Pascal Goldschmidt at Miami that Nemeroff is "absolutely in fine standing" with NIH and that he "not only could begin applying for NIH grants as soon as he arrived in Coral Gables, but that he could also continue to serve on the NIH's expert panels that help decide on which grant applications win federal financing?" (2010).

Dr Insel's blog post suggests that *we should medicate more children*

1. Insel exonerates the pharmaceutical industry with one line "And drug companies, while frequently maligned, have reduced, not increased, their marketing budgets in the US" (Insel, 2014) and cites a single source. That press release says that pharmaceutical company spending on marketing is flat, not "reduced". (FiercePharma, 2014).
2. Insel states "In light of the evidence that about 1 in every 12 youth suffer from a severe developmental, behavioral or emotional disorder, under-treatment remains a serious problem." (Insel, 2014). So, 1 in 12 kids have "severe" disorders that requires them to be medicated? More documentation should be presented to support such an extreme and dramatic claim.
3. Insel states "In fact, evidence from nationally representative surveys of youth in the U.S. challenges recent concerns regarding widespread overmedication and misuse of medications, at least in adolescents." and cites 3 sources. Let's have a look.

 The first is an NIMH funded study done in 2013 (Insel is director of the NIMH at the time).

It agrees with Insel's thesis, relying heavily on this "Only 14.2% of youth with a mental disorder during the past year reported psychotropic use, and the majority who had been prescribed medications, particularly those who received treatment in specialty mental health settings, had a mental disorder with severe consequences and impairment, functional impairment, suicidality, or associated behavioral and developmental difficulties." (Merikangas, K, He, JP, Rapoport, J, Vitiello, B, Olfson, M, 2013)

So much can be said about this, including how "severe" was assessed, whether these "specialty mental health settings" were regularly visited by drug company reps. When this author interned at a "specialty mental health setting," we had regular visits and free lunches from drug reps as part of the \$20 billion they spend a year to "market" to health care professionals (Schwartz, Woloshin, 2019). When I casually mentioned the side effects of Risperdal, it was met with a distinctly hostile response from the clinical director.

🌍 And then there's the fact that the study was funded by NIMH, an agency with a track record of conflict of interest relationships with drug companies (Fava, 2007, Nature.com, 2012).

4. The other 2 studies do not appear to support Insel's contention that adolescents should be medicated at a higher rate at all.

🌍 The CDC study is descriptive of adolescents who use psychotropics.(Jonas, Gu, Albertorio-Diaz, 2013).

🌍 The other study is supportive of more engagement of (and not necessarily medicating) adolescents (Hacker K, et al. 2014).

What Dr Insel's blog post failed to mention about the overmedication of children

Dr Insel's blog post made a weakly supported, exculpatory argument that the drug companies are largely innocent.

What facts did he ignore while extolling the benefits of medicating more kids? *The substantial side effects from using psychotropic drugs.*

From the 2012 book "[Drugging our children: How profiteers are pushing antipsychotics on our youngest, and what we can do to stop it.](#)" [Note SGAs = second-generation antipsychotics]:

1. "When investigators [...] surveyed their juvenile patients with exposure to SGAs, they found that more than 50 percent were overweight or obese. This weight gain [...] may also cause pediatric patients to become depressed and suffer from low-esteem." (Olfman, Robbins, 2012, p. 12)

Note the irony of giving adolescents medication to help reduce psychological problems where the medication itself may cause additional psychological problems.

2. "Endocrine dysfunction Several news stories reported on teenage boys prescribed Risperdal who have grown breasts and even begun lactating." (Olfman, et al., 2012, p. 13)

3. "SGAs can also cause an array of emotional and cognitive problems. In the TEOSS study, 26 percent of the patients reported being anxious. Other common side effects include irritability, depression, emotional lethargy, and decreased concentration." (Olfman, et al., 2012, pp. 13-14). Again, note the irony of drugs meant to treat psychological problems possibly causing additional cognitive/psychological problems.
4. The book also mentions "poor global health [...] long term brain damage [...] early death" (Olfman, et al., 2012, pp. 14-16)

Nothing illustrates "the undermedication of children" better than Rebecca Riley

At age 28 months (a toddler), Rebecca was diagnosed as having "bipolar disorder" and ADHD. By age 4, Rebecca was dead from an overdose of psychotropic drugs and her mother charged with murder.

Was this a case of child abuse or was there more involved? This is what the Alliance for Human Research Protection had to say:

“ Boston residents are jolted by news reports detailing the drug-induced death of 4 year old Rebecca Riley who had been "diagnosed" as suffering from both ADHD and Bipolar disorder at the tender age of 28 months. She was prescribed three powerful psychotropic drugs whose toxic effects have never been shown to be safe or appropriate.

[...]

Neither the ADHD/ Bipolar diagnosis nor the toxic drug cocktail which the child was prescribed — Seroquel, an antipsychotic drug; Depakote, an equally powerful mood medication; and Clonidine, a blood pressure drug—are backed by medical-scientific evidence. However, the four year old's treatment reflects the prevailing practice in U.S. psychiatry, the pharmaceutical industry's most lucrative specialty. (2007).

What's your opinion of this? Should a psychiatrist be able to diagnose a 28 month old toddler with bipolar disorder and then prescribe Seroquel, Depakote and Clonidine?

Last, Dr Insel's TED talk "[Toward a new understanding of mental illness](#)"

First, faulty analogies

To begin, this talk is a textbook faulty analogy, as it attempts to compare early interventions with physical diseases (cancer, heart disease) to early intervention in psychological issues (in this case, the highly controversial diagnosis of childhood onset schizophrenia).

Presenting COS [childhood onset schizophrenia] without important

disclaimers

Dr Insel talks about childhood onset schizophrenia. So let's address that first. From Health Psychology and Behavioral Medicine:

“COS [childhood onset schizophrenia] is a very rare illness and as such is poorly understood. This lack of understanding makes it difficult to accurately diagnose and, as a result, children with schizophrenia are often misdiagnosed. [...] and as such many clinicians are reluctant to do so. One of the key difficulties in making this diagnosis is distinguishing between true hallucinations and delusions and a child's imaginative play" (Bartlett, 2014).

Dr Insel has no such hesitation, though, in presenting COS as fact. And in his drive to portray a biological "illness", he ignores contradicting studies. From the article titled "Childhood stressors and symptoms of schizophrenia":

“There are many psychiatric disorders for which severe adverse events in childhood have been shown to be significant risk factors. This is particularly true for schizophrenia." (Gallager, Jones, 2013).

And this one, 'All That Glitters Is Not Gold': Misdiagnosis of Psychosis in Pervasive Developmental Disorders - A Case Series" which states:

“This article looks at problems arising from overdiagnosing psychosis in those with PDD. Four case examples of misattributed diagnosis of psychosis are described. The features that were mistaken for psychotic phenomena are described and explained and successfully treated in the context of a diagnosis of PDD. (Dossetor, 2007).

Dr Insel later shows some brain scans, showing abnormalities (Insel, 2013). Based on the research just presented, those brain scans might have indicated PDD. That possibility was not accounted for.

The research that Dr Insel does cite (again, funded by the NIMH) states "unusual psychological trauma, do not appear to account for the earlier age at onset on a clinical basis." (Rapoport, 2000, p. 177). This is directly contradicted by the research just cited in "Childhood stressors and symptoms of schizophrenia." But no matter, let's move on to the scare tactics.

Dr Insel refers to heart attacks and arrhythmias "either one would kill you"

And compares that to early intervention with a controversial diagnosis like COS. Advocating for "early detection, early intervention" sounds like we should medicate more children. Well, look at how "early intervention" worked out for [Rebecca Riley](#)

Is "mental illness" a misleading misnomer?

Should it be called an "illness" or a syndrome?

Imagine a man is rushed to the ER and the attending doctor diagnoses him with PAI (Perforated abdomen illness). While the diagnosis does accurately describe his physical condition, it does not identify a cause. Might it be more accurate to call it a gunshot wound to the abdomen? This connects an experience (getting shot) to the physical symptom (a perforated abdomen). The problem with the term "mental illness" is that there is no definable illness, only a syndrome. This is detailed in the 1999 report, "Mental health : a report of the Surgeon General":

“ The diagnosis of mental disorders is often believed to be more difficult than diagnosis of somatic, or general medical, disorders, since *there is no definitive lesion,- laboratory test, or abnormality in brain tissue that can identify the illness.* The diagnosis of mental disorders must rest with the patients' reports of the intensity and duration of symptoms, signs from their mental status examination, and clinician observation of their behavior including functional impairment. These clues are grouped together by the clinician into recognizable patterns known as syndromes (p. 44).

A suggestion for a better description

A more accurate description would be "PTANS" or post trauma/abuse/neglect syndromes, clearly specifying the experiences that cause (based on research noted above) psychological problems. In other words, no more "Perforated abdomen illness" used to describe gunshot wounds to the abdomen.

Why is "mental illness" so prevalent a description?

Doing a google search of the NAMI website finds the phrase "mental illness" mentioned about 11,000 times (search done Sep 15, 2019). This organization, with extensive funding from drug companies, used to promote the idea of a "brain based biological disorder" (a phrase no longer used, apparently due to lack of evidence) and now uses the "mental illness" moniker. NAMI and other "patient advocacy groups" have testified before congress, lobbied, put out "educational materials" and as I mentioned earlier, sent speakers to schools.

So the repetition of the "mental illness" meme, makes it seem obviously true. This is known as the "illusory truth effect," explained in Advances in Consumer Research:

“ Repetition does not seem like a sound basis for determining truth, but researchers have consistently found that people rate repeated statements as more true than non-repeated statements. This effect is known as the illusory truth effect and appears to be quite persistent. (Cronley, Kardes & Hawkins, 2006)

A story...

Sometimes, individual testimony can help make sense of this subject more than any statistics. A client (who suffered with anxiety and depression) gave permission to share one experience from their childhood (this is not a literal account but a paraphrased account of the story).

“My mother screamed that she was leaving and my father followed her to the garage door. I knew where this was going when he shouted "you're not going anywhere." I ran down stairs to find that he had started to strangle her. I couldn't believe my eyes, I could not fathom what was happening in front of me. I started screaming and crying "please stop, please stop." I pulled my hair as hard as I could, fell to the ground and began rocking, begging him to stop "please Daddy, please stop, please." He kept strangling her and eventually she went limp and dropped to the ground.

When she came to, he still would not let her leave, so she called 911 (one of many such calls). When the police came, my mother was sitting at the top of the stairs, my father at the bottom. They immediately saw the necklace of bruises around her neck and asked if she wanted to press charges. She smiled in a strange way and said "no." They advised her that it was her right to press charges, and she still refused, still smiling oddly. They turned their attention to my father, who was staring down, blankly. "Sir, she has the right to leave if she wants to." My father kept staring down, unresponsive. The police looked at each other, visibly unnerved. "Sir, your wife has the right to leave. You can't stop her." Still, no response.

At this point, I am pacing behind the 2 officers and I can see each of them slowly raising their right hand, one reaching for his gun, the other for his baton. I didn't know what a panic attack was then but I was in full panic. "What am I going to do? I can't let them shoot my father. What am I going to do?" raced through my mind. I decided that if the officer pulled his gun, I was going to grab his arm. Finally, my father said "OK."

I was 11 years old and I went to school the next day, as if nothing happened.

The incident was never spoken of again.

So it is possible that this client had a "biologically based brain disorder" (NAMI website, 2004), a "chemical imbalance" or a "genetic" problem. Or, maybe, just maybe, being exposed to life threatening episodes of domestic violence was the proximate cause of the anxiety and depression.

This case was one of many, many stories of trauma, abuse and neglect that I have heard in over a

decade of practice. And what all these stories have in common is that they can logically (and intuitively) account for the psychological problems of the person who experienced them.

Cui Bono (who benefits)? A closer look at drug company influence

Alan Brandt succinctly sums it up "the best public relations work left no fingerprints" (2012).

But eventually, fingerprints (conflicts of interest) did show up for tobacco corporations in the 1950's, for sugar corporations in the 1960's and now, for the pharmaceutical industry. Let's recap:

- 🌍 NAMI describes itself as "the nation's largest grassroots mental health organization," (NAMI website, undated) yet received 75% of its funding from drug companies in 2006-2008 (Harris, 2009). That is one reason why the Citizens Commission on Human Rights International called NAMI "a Pharma front group" (2009).
- 🌍 NIMH research has been tainted by undisclosed conflicts of interest and an ethically compromised director, who ran the agency for over a decade. Thomas Insel, acting as an apologist for drug companies, stated that "[...] drug companies, while frequently maligned, have reduced, not increased, their marketing budgets in the US" (Insel, 2014). According to Schwartz and Woloshin (2019), that is a patently false statement. In the research that I have reviewed (funded by NIMH), there is a pattern of ignoring or marginalizing the role of trauma, abuse and neglect.
- 🌍 Drug companies have almost DOUBLED their marketing spending, going from \$17.7 billion to \$29.9 billion in the last 20 years. *Marketing to health care professionals now totals over \$20 billion.* (Schwartz, Woloshin, 2019).
- 🌍 The repetition of the genetic/biological/"disease"/"illness" narrative by NAMI and NIMH (via Dr Insel) has caused it to gain the illusory truth effect.
- 🌍 "Mental illness" is a misnomer because "there is no definitive lesion,- laboratory test, or abnormality in brain tissue that can identify the illness" (DHHS, 1999).
- 🌍 There is extensive evidence that trauma, abuse and neglect results in both physical and psychological (cognitive & emotional) damage (Perry, et al., Mikulincer M, Shaver P, Felitti, et al., Perry, Pollard).
- 🌍 Generous, sometimes undisclosed drug company payments to speakers known as KOLs

“ The former sales representative Ms Elliott says drug companies desperately need key opinion leaders. "There are a lot of physicians who don't believe what we as drug representatives say. If we have a KOL [key opinion leader] stand in front of them and say the same thing, they believe it." (Moynihan, 2008).

So who does benefit from the conflict of interest laden research, highly compensated "KOLs" and "grassroots organizations" who proclaim (often with no basis) that "mental illness" is a biological/genetic/chemical imbalance issue?

Who benefits from marginalizing the research documenting how therapy can be effective in treating the after effects of trauma, abuse and neglect?

Fingerprints?

You decide

Occam's razor suggests that the explanation that requires the least speculation is likely the correct one. So, it is possible that you did not actually read this article. Instead, aliens captured you, implanted the memory of the article and then erased your memory of the capture. It is a possibility and it would be hard to disprove. Of course, it is more likely that you just read the article. While admittedly an extreme example, it illustrates why speculation can easily lead one astray.

Right now, there is no direct, causal evidence of a genetic basis for psychological problems (except Fragile X syndrome, Rett syndrome and Down syndrome). And many studies were funded to search for just that.

🌍 Studies that proclaim a genetic cause of psychological problems overstate their findings. One reason is that correlations are vulnerable to a critical weakness, the lurking variable (see Appendix A). In this case, that lurking variable is very likely trauma, abuse and neglect (see [research cited earlier](#)).

🌍 Right now, the preponderance of evidence shows that trauma, abuse and neglect (with epigenetic modifications) are the proximate cause of psychological problems.

Appendix A: a note on statistics

Have you ever read that eating XYZ is bad for and then a month later, you read that it's good for you. Welcome to the world of statistics.

Statistics are based on correlation and correlation is not proof of causation. Correlations are always vulnerable to what is called a "lurking variable" which "a variable that is unknown and not controlled for; It has an important, significant effect on the variables of interest." ("Lurking Variable: Simple Definition, Examples", 2018).

Here is an example of how correlation can be misleading. There is a 99% correlation between margarine consumption per capita and the divorce rate in Maine (Fletcher, 2014). Should people stop eating margarine to prevent divorce? Of course not, but that is how correlations can be misleading, creating connections and relationships where there are none. Go to <http://www.tylervigen.com/spurious-correlations> to see hundreds of absurd correlations.

So be wary of federal agencies with a history of compromised research, industry funded "consumer advocacy groups" and especially skeptical of research that is funded by for profit corporations (e.g., tobacco, sugar and pharmaceutical).

And don't worry, you can still eat margarine without causing divorces in Maine.

Appendix B: Does this mean that parents should feel guilty?

For the vast majority, no. Most parents raise their children the way they were raised, coupled with some informal learning (Miller B, Myers-Walls J, 1983). Parenting is a stressful, demanding job and

occasional issues are to be expected.

However, if someone's parenting included sexual abuse, damaging levels of physical abuse or severe emotional abuse, then yes, guilt is appropriate. The best use of this guilt would be to seek counseling to understand what motivated the negative behaviors and then to offer remorse and amends to the children harmed.

Appendix C: the parting words of President Eisenhower

Warning against the enormous power and influence of the military industrial complex, he says:

“ This conjunction of an immense military establishment and a large arms industry is new in the American experience. The total influence -- economic, political, even spiritual -- is felt in every city, every State house, every office of the Federal government.

[...]

In the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military industrial complex. The potential for the disastrous rise of misplaced power exists and will persist.(Eisenhower, 1958).

Can the same be said of the enormous power and reach of the drug companies?

Glossary

Illusory truth effect - If someone hears a statement repeated enough, they will tend to believe it (e.g., the "chemical imbalance" theory of depression).

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