Self-making and the brain

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Abstract Although explanations of human social behavior based directly on the activities of neurons in the brain are pervasive and entrenched in the natural sciences, scholars in the humanities and social sciences are not agreed about how to critique this new knowledge. Using ethnographic material from the United States of America, this article describes how quite different forms of subjectivity are being constructed by non-experts in relation to neurological explanations of social behavior. The article seeks to open up some questions about what is at stake in this variation and to suggest some possible implications of this variation for the scholarly critique of neuroscience. *Subjectivity* (2010) 3, 366–381. doi:10.1057/sub.2010.23

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It is thus perfectly possible that certain psychological phenomena *cannot* be investigated physiologically, because physiologically nothing corresponds to them. (Ludwig Wittgenstein, 1967, *Zettel*)

Introduction

The goal of this essay is to open up some lines of inquiry about different forms of subjectivity people are working toward in relationship to their brains. In my ethnographic fieldwork focused on how people live under the description of mood disorders, there is more than one kind of self-making involving the brain. The same is true of several academic conferences I have attended on the topic of subjectivity and the neurosciences. Debate – sometimes ferocious – is flourishing about the role of brain-based accounts of subjectivity in both the lives of non-experts and the lives of academic scholars in the social sciences and humanities. In contrast, neuroscientists

are generally working within a consensus that brain activity at one level or another provides an adequate account of such elements of subjectivity as memory, attention or emotion. My finding is that although brain-based explanations of human consciousness are entrenched in the neurosciences, their uptake in the wider public and in other academic disciplines is uneven. Instead of a certain take-over by a newly dominant paradigm, we are witnessing an open moment whose outcome is far from clear.

Background

My fieldwork on bipolar disorder led me to participate in medical school classes on mood disorders, support groups for bipolar disorder, interviews with pharmaceutical employees and university classes in neuropsychology. In the end, my account of this research focused on the cultural imaginary around extreme moods in the twenty-first-century United States of America and the experiences of people living under the diagnosis of a mood disorder (2007). As this ethnographic project involved a mental disorder generally thought to involve the brain, I assumed that some version of a brain story – however, far removed from the actual state of scientific research – would be iconic and potent in any popular understanding of psychiatric disorders (Singh and Rose, 2006). Yet, when my research was finished and I tried to write what I assumed would be the chapter on the brain, I found that what I could say seemed rather simple: the role of the brain was simply taken for granted. The belief that the brain and its genetic determinants lie behind mental disorders, like manic depression, was flatly assumed by most of the people in my fieldwork, inside and outside medical settings. In group discussions, people often made remarks about having disordered or unbalanced ‘brain chemistry’, which they hoped the drugs they were taking would fix. As having a physical malady has far more validity in Western culture than having a mental one, people usually greeted new evidence that bipolar disorder is a ‘brain disease’ as welcome news because of the generally accepted belief that physical ailments can be cured and, in the meantime, would be covered by health insurance, disability payments or compensation claims.

It was not surprising to me to find that thinking of psychological experience in terms of brain activity was pervasive. From the beginning of my fieldwork, I knew that Terrence Sejnowski, then a colleague at Johns Hopkins, had made an important breakthrough in cognitive neuroscience. There was enormous excitement among the neuroscientists I knew at Hopkins because Sejnowski had succeeded in building a computer that could learn how to translate English text into phonemes. The computer’s software was designed with numerous ‘neural nets’, laterally interacting parallel pathways that were modeled on the way human neurons are organized.

Later developments from this discovery came to be called the ‘neuron doctrine’ (Gold and Stoljar, 1999). The neuron doctrine was based on:

The working hypothesis ... that emergent properties are high-level effects that depend on lower-level phenomena in some systematic way. Turning the hypothesis around to its negative version, it is highly improbable that emergent properties cannot be explained by low-level properties. (Churchland and Sejnowski, 1992, p. 2)

Assertions that the structures of neural networks in the brain are directly and causally linked to the language phenomena studied by linguists and philosophers of language soon followed. Enlisting a broad range of scholars, a chorus claiming that neural structures are *the same thing as* our cognitive operations became ubiquitous. For example, for the linguistic philosopher, George Lakoff, the cognitive operation called ‘metaphor’ now consists in two physically separate parts of the brain, two domains, that are neurally linked in response to experience (Lakoff and Johnson, 1999; Martin, 2000; Churchland, 2005).

Quite obvious to the ordinary citizen in the following years were the mass media articles and books that described this line of research and its implications. A full account of the impact this work had on media descriptions of mind-brain interactions is beyond my scope here. But one story can stand in for many others. Titled ‘Friends for Life’, this *New York Times Magazine* article reported on a key discovery within the field that was coming to be known as ‘social neuroscience’. The finding, in rats and macaques, was that the same neurons in the brain (called ‘mirror neurons’) fired in response to a class of events. The same neurons fired in response to a particular sound – say the sound of ripping paper – whether the animal produced the noise itself, saw another rat produce the noise, or only heard another animal produce the noise. The fact that these neurons were located in Broca’s area of the brain, the part of the brain associated with speech in humans, was interesting to researchers because the ‘mirroring’ seemed to involve a kind of abstraction that might be a precursor for human language (Kohler, 2002).

Accordingly, the *Times* article reported that mirror neurons are a class of brain cells that operate ‘like neural WiFi’. They

track the emotional flow, movement and even intentions of the person we are with, and replicate this sensed state in our own brain by stirring in our brain the same areas active in the other person. ... This brain-to-brain link may also account for feelings of rapport, which research finds depend on extremely rapid synchronization of people’s posture, vocal pacing and movements as they interact. In short, these brain cells seem to allow the interpersonal orchestration of shifts in physiology. (Goleman, 2006)

Capturing the view of social interaction in this description was a memorable drawing of a person's head. Inside the head, clustered where his brain would be, were a dozen or so heads of other people.¹ The message was clear: from the brain's activity we can read off not only individual subjective experience but intersubjective experience as well.

Academic Debate

In the aftermath of finishing my ethnography, I attended a number of academic conferences devoted to exploration of the cultural impact of neuroscience research.² The general remit of these conferences was to consider the ramifications of what Nikolas Rose has called 'the new style of thought in biological psychiatry'. This new style of thought:

not only establishes what counts as an explanation – it establishes what there is to explain. The deep psychological space that opened in the twentieth century has flattened out. In this new account of personhood, psychiatry no longer distinguishes between organic and functional disorders. It no longer concerns itself with the mind or the psyche. Mind is simply what the brain does. And mental pathology is simply the behavioral consequence of an identifiable, and potentially correctable, error or anomaly in some of those elements now identified as aspects of that organic brain. (2007, p. 192)

There was a ferment of different opinions about how threatening, possibly dangerous, this research could be to the social science or humanities view of the world. Some scholars (including me) argued that in this new style of thought we are seeing the effects of a form of reduction that is likely to impoverish the richness of human social life. Of course, simplification and reduction are necessary parts of any explanatory enterprise, even ethnographic ones. But reduction in social neuroscience has an important hallmark. It claims to explain phenomena on one scale (those embodied for example in social relationships, places, practices and institutions that have a material existence outside the brain) by means of phenomena on another scale (those embodied in the brain). Social practices involved in gift giving, child raising, courting, working, cohabiting, co-organizing and a myriad others – all situated in particular contexts, times and places – fall out of the picture and do not return. Although an anthropologist might find it astonishing to claim that social processes could be reduced to neuronal ones, this is exactly what is accomplished by the neuron doctrine: it asserts that phenomena at a higher level can be explained by low-level properties. Social practices, deeply embedded in particular histories, which anthropologists find are necessary in order to think about social problems, seem to have disappeared. On this and allied views, the neuronal doctrine should be subjected to vigorous critique.³

Other scholars, Nikolas Rose among them, argued that we should not panic about neurological accounts of human behavior threatening the basic understandings of human agency and behavior held in place by many Euro-American institutions for many centuries. We should instead examine dispassionately domains in which ‘neuro’ thinking ‘enables us to be governed in new ways. And ... enables us to govern ourselves differently’ (2007, p. 192). We should also examine domains in which the limits to neuro accounts are apparent, such as the law. Courts of law in the US have thus far refused to accept brain scans as evidence for functional abnormalities (where there is no lesion or injury) that might affect the ability of the accused to act freely. This is because the fiction of ‘free will, autonomy of choice and personal responsibility’ are part of the ‘prevailing notions of moral and political order’:

Indeed, the trend of contemporary legal thought, especially in the USA, is to operate on the premise of the inescapability of moral responsibility and culpability. On this basis, no appeal to biology, biography or society should be allowed to weaken moral responsibility for the act, let alone to diminish the requirement that the offender be liable to control and/or punishment. (Rose, 2010)

Rose argued that although the new style of thought ‘entails a new way of seeing, judging and acting upon human normality and abnormality’, it is limited in its impact. The law continues to assume moral responsibility and to assign culpability. Sentencing may be affected, in the direction of longer terms for those whose brains are deemed flawed, but prevailing notions of individual choice and free will remain intact.

Back to my Field Notes

Seeing the range of opinions and emotions among my colleagues at conferences inspired me to return to my ethnographic materials. I had already realized that many people took for granted that different psychiatric conditions are associated with different kinds of brains and that the problems with these brains have to do with neurotransmitters or brain chemistry. These points were frequently stated and restated:

- Bipolar disorder is physical. You cannot get over it, just like you cannot get over diabetes. You have to be medicated for life.
- Your brain is different, it does not make enough serotonin.
- It is physical, a handicap. Your brain can only do what it can do.

(Remarks by members of bipolar disorder support groups, at meetings)⁴

I had been taking these flat statements as a sign that not much more could be said about the role being attributed to the brain.

Revisiting my ethnographic material in the wake of the debates among academic colleagues made me look with fresh eyes. I now saw that there was a range of positions. Some people were indeed being governed and governing themselves in new ways, much as Rose predicted. In an interview, Richard, a physician on disability for bipolar disorder, explained to me his view of the primacy of the brain in determining his mood disorder.⁵

[My wife] saw my depression as a complete absence of a primary love object that I had to grieve for and get over – really it was just sheer serotonin levels ... because I remember that day ... I was walking down Ocean Boulevard, and I'm on Prozac and Wellbutrin, but I've only been on Prozac a couple of days and I remember this just like it was yesterday, I looked at her and after more than a year, she looked attractive to me ... so that's been my experience ... because when the chemicals are okay, I'm usually okay.

For Richard, relationships with loved ones and emotional states have become 'really' just neurotransmitters. Drugs like Prozac and Wellbutrin repair the lack of serotonin, causing depression to lift and desire to return. He willingly obtains, ingests, and evaluates such drugs, and changes the mix and the dosage accordingly. The fact that Richard had been a practicing physician for most of his working life was probably not incidental to his allegiance to a neurological view, closely allied as it is to the reigning view in the neurosciences.

But there were some other people in my fieldwork, who linked the activity of their brains to their life circumstances in a different way. These accounts moved out from the brain to weave its physicality into a rich and complicated web extending to other social contexts. I will examine one case in some detail as an illustration. John is a retired Vietnam veteran living on disability and active in patient advocacy groups for bipolar disorder. He sees his brain as necessary for life but not sufficient to understand the kind of life he wants to craft. Crafting his life is not that easy: he describes his self-creation as an active, two-way relationship between himself and his brain. Over many sessions these were the main points John wanted to convey to me:⁶

- *My brain contains both health and illness, strength and weakness, darkness and light.*

If you can learn to rely on your healthy neurons and learn to focus your mind on tasks that enhance the probability of success for your healthy neurons, you can learn to have a healthy existence.

- *My brain can learn from me.*

No matter how sick you are, there are areas where you have healthy neurons and you can teach those neurons.

- *Whether the way my brain works is a problem in my life depends on what life I am leading.*

I've lived a very humble poor life, on social security and Veteran's Administration at a very low economic level. If I ever get in trouble, like get manic or something like that, the damage is not too great. It used to be horrific. I lost houses, went through divorce, bankruptcy, all that sort of thing. So ... many times it comes back and I sort of grieve, but it's dead, it's time to move on, this is what is now.

- *Other people can learn this way of thinking about their brains from my behavior.*

If you can be there, slowly people will kind of – you know – you can do it by osmosis, that is what it is. That is the whole role of a support group and of people who have the stamina. They gotta be there by osmosis ... I'm doing such and such: I used to be great in this area but I had to move on. But these are the new skills that I've developed. These are the things I watch out for, these are the things I avoid, because I am weak in this area.

- *Even after my brain fails me, I can recover and start anew.*

Each time I've gone psychotic or had a really bad episode, I think of myself as being reborn. I've gotta start completely over. The old life is dead. Must move on ... be freed from the old life, start a whole new life. In each chapter of my life, it is a whole new person.

Pragmatism ... [a] very American trait, *the* American trait. What works. I will build a new life; if I've just been kicked out on the street I will begin from here. Everything that didn't work in the past I will review and label extremely toxic and I will move on from here. I don't know exactly where I am going, but I know that I am not going to the same place I was before.

For John, the brain is not sufficient to determine anything. By focusing his mind, he can learn to sidestep faulty neurons; through his behavior he can teach his neurons how to act. No matter what his brain does, he is able to adapt to new circumstances or create new circumstances that allow his personhood to survive. 'In each chapter of my life, it is a whole new person'. Most tellingly, he believes he can convey this way of living to other people through 'osmosis'. He means that people in the support groups he leads will be able to model their lives on his example: avoiding weaknesses, learning new skills.

Broader Conversations

To see whether the range of positions represented by Richard and John could be found beyond my ethnographic material, I turned to online discussion groups devoted to bipolar disorder. I began by collecting all references to the brain in two online discussion groups from the present back to 2003: alt.support.depression.medication and the Icarus Project discussion forum, Bipolar: Mania

and Depression. Neither group stipulates that participants must embrace any particular position about the causes of bipolar disorder. Alt.support.depression.medication is open to anyone, and does not endorse any particular position about psychiatric disorders or the pros or cons of psychiatry, psychotropic drugs or alternative treatments. Nonetheless, the term ‘medication’ in the group’s name indicates its central concern. The Icarus Project, also open to anyone, is known for offering support to people who wish to express their unhappiness over treatment with psychotropic drugs and find relief in other ways.⁷ But the range of treatments and remedies Icarus Project participants discuss is wide and eclectic, including many psychotropic drugs and ranging far beyond them. Psychiatric categories themselves sometimes come under question when, for example, participants stress the positive, creative aspects of their ‘illnesses’ and look for common elements across conditions psychiatry considers separate (such as bipolar disorder and schizophrenia).⁸

In the following, I compare two incidents from the 5-year period, one from each group, in which conflict about the way the brain should be understood in relation to mental illness broke into fierce argument – ‘flames’ – with profanity and threats to abandon the group. My goal is to explore the dimensions of engagement with brain-based explanations in a wider public than that of my fieldwork or academic conferences.

Polar Opposites

During the exchange in alt.support.depression.medication, a participant called Haily tries to challenge whether the minds and experiences of people with mood disorders can be reduced to the function of their brains. Another participant, Eric, vociferously attempts to discipline her into conformity with the reductionist model. Haily begins:

Depression isn’t a medical illness it’s a mental illness. It’s not all just science and mathematical equations. How could you put YOUR emotions into a mathematical equation. You can’t. Doctors know very very little about how the brain itself works let alone psychiatric drugs. It’s like hit and miss, well this didn’t work let’s try another drug and see if we can’t stir things up a bit in that brain of yours. Hopefully it’ll work! This is your brain! These medications could potentially do permanent damage.

Getting people outside doing things, starting and finishing something gives you a sense of achievement, which in turn activates hormones in your body to elevate your mood, & your mind. You’re right – physical exercise may not itself fully help but it is a step, and depression is something that needs to be addressed one step at a time. Simply taking medications is basically tricking your body. You’d be putting off the real problem. I’m not saying,

‘stop taking all medications or make them illegal’. I just don’t think being on medication alone is a reliable treatment for depression. It’s not just the chemical reaction, it’s what ‘causes’ that chemical reaction, that should be addressed.

Eric singles out two of Haily’s statements: ‘Depression isn’t a medical illness it’s a mental illness. It’s not all just science and mathematical equations’. He retorts: ‘Uh, you’re wrong. Ultimately that is all it is ... science and math’. Further, he dismisses Haily’s question – ‘How could you put YOUR emotions into a mathematical equation’ – by asserting, ‘It is very easy. Your emotions come from your brain’. Haily replies:

Really? I never knew this. So basically when we get excited or sad, it’s just our brain doing its job? Not the fact that we just lost a loved one or won the lottery? If it is all math and science, why is it that when a little girl sees a man, she screams with fright? Is it because she was abused by a man or is it just her brain chemistry doing its thing again. ... Your mother dies you get sad. You didn’t do anything other than see her die. Didn’t take any pills or touch her. Just saw her. Did your eyes send a message to your brain saying, I see a woman dying and I’m going to cry now, so be sad. Or is it your heart & soul that aches because you loved her and now she is gone? Or are we just ‘programmed’ so well and in depth that after so many days of our eyes seeing the same person it tells our brain that if anything happens to her, you will be sad?

Eric responds:

It’s you that has no idea what they are talking about. While here on planet Earth we are physical beings. Ashes to ashes, dust to dust. While here on Earth your heart and soul exist but your brain and central nervous system do the actual work necessary to be able to ‘feel’ things like love, happiness, hate, anger, sadness, and all the other feelings and emotions. If your brain and central nervous system are diseased your ‘heart and soul’ may not work quite normally ... hence clinical depression. Your brain and central nervous system can break down and become diseased like any other organ or body part. Why can’t you understand this? This is exactly what happens with clinical depression. You have had a breakdown of the central nervous system basically, a glitch. It is a brain disease. [Haily], you are very, very much in denial of either your or your family’s mental illness.

Memory is neurochemistry, a pattern of neurons and synapses and neurotransmitters that stores experience just as surely as bits on a computer disk. There are even different mechanisms for long and short term memories. When a certain stimulus is perceived, a chemical cascade

in the brain is triggered, and the pattern attached to the stimulus is retrieved much as a file name retrieves a computer file. It is all chemistry. What else could it be? Do you think that there is some great big transmitter in the sky that beams our memories, our reactions, our fears, down to us? They are made part of us through brain chemistry. And if brain chemistry can retain and retrieve the events that cause particular emotions, they can create or recreate those emotions – which themselves are chemical reactions. Try fear: the adrenaline jolt in your system is measurable when you are faced with a life-threatening event. Why can't you accept that other chemicals cause and mediate other emotions, often several at the same time. And if it is all chemical, it can all be dealt with as chemistry, even if we have little current knowledge of the details.

For brevity I have omitted the next sections of the exchange in which Haily and Eric exchange obscenities. Haily finally says, 'OK I give up, I'm gone'.⁹

Haily tries to maintain a connection between the social contexts she lives in and her brain; Eric wants to erect a barrier between the two. Haily sees herself as a person who has a brain that is inextricably embedded in the wider experiences and activities of her life. Eric sees his brain as an almost inanimate computer-like mechanism that operates on its own terms. Perhaps the contrast between Eric and Haily can be put this way: Eric takes comfort in the existence of a correspondence – a shared structure – between his brain and his problematic moods. Just as faulty software would translate into faulty computer performance, Eric's brain problems translate directly into life problems. Eric operates the computer but bears no responsibility for the faulty software and the computer failure: these are givens present in nature. Poor code at the level of software will translate – will read as – poor performance in the rest of life. Eric does the best he can despite his poor equipment, but his life's 'read out' has the same faulty code embedded in it. To use another analogy, for Eric the person is like a crystal, every part of which is made up of the same arrangement of molecules. Haily, on the other hand, sees her life – mind, body and brain – as complexly related and unfolding through time. Seen historically, mutating through time, the idea of shared structures loses appeal. Haily has little liking for correspondences or shared structures between her brain and her life because her focus is on her changing view of her life's landscape and the varied territories she is able to explore. A structural homology between brain and body at one point in history might disappear in the next moment. Haily is less interested in deciphering the code of her life than in reading it like a text. Reading her life as a text, Haily would not be looking for a code that could enable her to translate from her life to her brain or the reverse.

If Haily needed an authority to cite, she might have turned to Wittgenstein's remarks on psychology, where he asserted that 'there is no process in the brain correlated with associating or with thinking; so that it would be impossible to

read off thought-processes from brain-processes'. This is not a statement about the limitations of scientific knowledge; it is a statement about what kinds of things allow us to understand human social life. There surely are systematic processes occurring at the level of the brain without which we could not think, speak or interact. But it would be a mistake to assume that the properties or structure of the brain are the same as the properties or structure of human social lives. The order of social lives, Wittgenstein says, could even 'proceed out of chaos'. I take this to mean that if we try to understand the order of social lives by looking into the brain, we are looking in the wrong direction, one that will give us a mistaken understanding of what human social life is made of. The kind of order that placed those dozen friends inside the brain in the *Times* article (Haily might say) comes from social processes with their own historically specific forms: relations of kinship, offers of support, resolutions of conflict, sharing of reminiscences, loaning of tools, joining of hands and so on, ad infinitum. When Wittgenstein says

No supposition seems to me more natural than that there is no process in the brain correlated with associating or with thinking; so that it would be impossible to read off thought-processes from brain-processes. I mean this: if I talk or write there is, I assume, a system of impulses going out from my brain and correlated with my spoken or written thoughts. But why should the *system* continue further in the direction of the centre? Why should this order not proceed, so to speak, out of chaos? The case would be like the following – certain kinds of plants multiply by seed, so that a seed always produces a plant of the same kind as that from which it was produced – but *nothing* in the seed corresponds to the plant which comes from it; so that it is impossible to infer the properties or structure of the plant from those of the seed that it comes out of – this can only be done from the *history* of the seed. (1967)

I take this to mean that we would need to look at the larger environment of the seed – where it was planted, who planted it, and how – and at contingent, contextual, and specific features of time and place. In Haily's example of the little girl who screams with fright when she sees a man, we would want to know: Who was the man? What was his relationship with the girl or people close to her? Who does the man remind her of? And much more.

Haily and Eric represent extreme positions on a scale; they are in polar opposition to each other. For them, either the brain determines all or it determines nothing in and of itself. Haily was disciplined for not seeing her brain as a separate and faulty software package to the point that she left the alt.support.depression.medication discussion group altogether. This should not be taken to mean a defeat of her view; however, for unlike the entrenched paradigms of the natural sciences, public conversations are not held to any

particular position by institutions like journal editorial boards or granting agencies' peer review. Haily could easily find another newsgroup or chat room more amenable to her point of view.¹⁰

A Midway Position

A participant in the Icarus Project group 'Bipolar: Mania and depression' got into trouble for taking a position akin to Eric's from people whose position was akin to Haily's. The incident began with an enthusiastic post about a video on Youtube, which praised the pleasure of the highs associated with bipolar mania.¹¹

A psychiatrist using the online name of crazydoc (a regular poster on the Icarus forum for some years) commented:

There are aspects of this video that are valid, but in general it appears to cultivate the view that mania is somehow something good and wonderful, an awakening of sorts? To me, if I use illegal drugs and get high, I suppose that is an awakening of sorts. When my brain does the same thing for no reason and it is called mania, I suppose that is an awakening, but I don't call it something more REAL than what I experience when I'm not manic, which is most of the time. I don't need to call it something wonderful in order to be wonderful me. I just don't get why illness is something we can't accept. I really think my brain misfires sometimes, and then I think I see the Virgin Mary, I drive 90 miles an hour, I run up and down the stairs, I don't sleep for days, and as cool as it feels, I am completely unable to do my job as a doctor, and I'm in danger of doing something completely dangerous, so ultimately, it sucks for me. So I take medication, and that goes away. What is so awful about that? It doesn't mean I hate myself or the illness or anything. It doesn't mean I don't think that aspects of my personality, my creativity, may be linked to those mood swings. But I don't find it glorious, or the central element of my identity. At least not right now. I don't know. Reactions to this post are welcome. I'm still figuring this thing out. Obviously I can't hate doctors, because I am one.

There were heated rejoinders, reminiscent in tone of the interaction between Eric and Haily. One person sent crazydoc an oblique insult, which implied that any psychiatrist who promoted drugs to treat a mental problem must be a fascist. He ended the post, 'Obviously I can't hate Germans because I am one'. Crazydoc replied, 'is that supposed to be comparing me to a Nazi b/c I'm a physician? I can't figure out what else it would be. That is the most offensive thing I've ever heard, also most confusing. Since my grandparents were the only survivors of Auschwitz in their entire village, I think they would turn over in

their graves if they read that. How cruel can you get? I spend 75 hrs per week talking to people trying to help them as they struggle with mental illness. And I spend all the other hours struggling myself'. The heat generated by this issue was enough to plunge the discussion into the topic of the holocaust. Finally, crazydoc threatened to leave the group for good.

Anyway, I shouldn't keep trying to explain b/c every time I do people say really harsh nasty things. I'll just shut up, I know that is what y'all want. I know where I'm not wanted.

For those who objected to crazydoc, the experience of mania as pleasurable is not reducible to something like the 'misfiring of the brain'. On this position, whatever one experiences, at the phenomenal level, has a kind of validity of its own that cannot survive translation into the neuronal level. Crazydoc, unlike Eric, relegated only a *part* of himself to the things his manic brain does for no reason. He refused to make this manic part of himself the central part of his being, his work life, or what he describes as 'wonderful me'. Crazydoc's position is midway between Haily's and Eric's. He accepts the determining role of the brain, but only for a portion of his being.

Conclusions

Clearly, concepts of the brain can do a variety of kinds of work in the enterprise of self-making. Some anthropologists like me, focused on the importance of social connections, might want to question the ways Richard, Eric, and crazydoc use the brain, ways that assume neuronal level processes can translate directly into social level processes. We might wonder whether the neurological self some people imagine and desire could be considered less rich and complex in its social dimensions than others. If we wanted to work toward changing the view that neuronal processes could be crystalline building blocks for social processes, we would have to understand much more about why the brain-based view appeals to so many people. Surely one reason, which has often been discussed in the context of the diagnosis of mental disorders, is that biologically based explanations seem to relieve people of guilt. Many people can think: it is not my fault that I am depressed or manic, and it is not my fault that my parent or child is depressed or manic. Nothing in my behavior or environment caused these problems; instead they came from biological features of the brain, and behind the brain the genome. Despite the feelings of relief associated with this train of thought, biological explanations might now offer less refuge from guilt than one might imagine. As the brain itself becomes a site of pharmacological intervention and enhancement, responsibility for its quality (and guilt over

failure to have a brain of sufficient quality) could easily enter the picture once more. Perhaps the self-making project that sees culture and brain as made up of the same sort of material is just as 'social', just as 'cultural' as John's or Haily's more heterogeneous one.

We would also need to know more about what is at stake when Haily or John try to preserve room for something beyond the brain. Are they clinging to the hope of self-actualization through choice and to a fantasy of individual uniqueness? Despite the appeal of their efforts to anthropologists mindful of the social contexts in which bodies and brains are embedded, we would also need to ask whether their hopes and desires have become particularly vivid under neoliberal conditions. When market forces have become preeminent in many social domains and individual identity plays an important role in generating customers for proliferating lifestyle products, we can no longer take the desire to enhance individual identity at face value.

Are they sensing and trying to avoid the new ways of governing that Nikolas Rose describes? Despite Rose's argument that the effects of neurological accounts of behavior are limited in courts of law, many people are aware that neurological accounts of behavior have already had profound effects on social contexts such as families, schools and workplaces. Managing the behavior of children in classrooms or enhancing performance of workers on the job by drugs that act on the brain are examples of how brain-centered understandings can lead to brain-centered interventions.¹² Further extensions of brain-centered interventions are frequently in the news, such as recent efforts to develop pharmaceutical solutions for women's sexual dysfunction or to lay marital conflict at the feet of attention-deficit hyperactivity disorder (ADHD) (Duff, 2010; Tara, 2010). Haily and John may be holding out for more complex understandings of social behavior that would place more weight on management of a social rather than biological sort.

Disputes about the social life of the brain in academia are no less diverse than the vividly argued positions taken among members of the wider public. We are far from a full understanding of why brain-based understandings are taken up enthusiastically in some institutions and not in others, and by some scholars and not others. Whatever the answers to these questions, I would suspect that practitioners in those places, such as the law, where brain-based accounts have been held at bay, have been drawing strength in important ways from the vitality of those who, in the ordinary give and take of daily life, insist that the brain is only part of the story of their social lives. The scholarly debates over what critical position to take in relation to neurological accounts of human social life would benefit from looking into what is at stake among non-experts struggling over how to position the brain in their lives. This is an open moment: although the outcome is far from clear, it is apparent that the brain is a plural thing, culturally speaking. The brain is one organ that is generating many kinds of self-making projects.

About the Author

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Notes

- 1 In Goleman's popular book *Social Intelligence*, he summarizes: 'our brain's very design makes it sociable, inexorably drawn into an intimate brain-to-brain linkup whenever we engage with another person. That neural bridge lets us impact the brain – and so the body – of everyone we interact with, as they do us' (2006).
- 2 These conferences were held at Cambridge, MA, Nottingham, Berlin, and Potsdam. Because most of the papers have not yet been published, I have not made reference to particular authors.
- 3 As I am unable to quote from the conference papers, these are some related publications: Dumit (2003), Martin (2007), Vidal (2009).
- 4 It was not possible to take notes or audio record during these meetings: the remarks here are from my fieldnotes, which I wrote as soon as possible after the meetings were over.
- 5 All names from people in my fieldwork are pseudonyms. The interview with Richard was recorded with permission.
- 6 Interviews with John were recorded with permission.
- 7 'The Icarus Project and Freedom Center's 40-page guide gathers the best information we've come across and the most valuable lessons we've learned about reducing and coming off psychiatric medication'. <http://theicarusproject.net/HarmReductionGuideComingOffPsychDrugs>
But elsewhere on their web site, and at community meetings, they assert that 'everyone is welcome, whether you take psychiatric drugs or not and whether you describe yourself with diagnostic categories or not' (Mission statement). Icarus Project groups meet in numerous cities, including Minneapolis, New York, Philadelphia, and San Francisco.
- 8 From the Icarus Project mission statement: 'The Icarus Project envisions a new culture and language that resonates with our actual experiences of "mental illness" rather than trying to fit our lives into a conventional framework. We are a network of people living with experiences that are commonly labeled as bipolar or other psychiatric conditions. We believe we have mad gifts to be cultivated and taken care of, rather than diseases or disorders to be suppressed or eliminated'.
- 9 [Alt.support.depression.medication](http://alt.support.depression.medication) 7 Nov 1999 (spelling corrected for readability).
- 10 Groups such as Mindfreedom (mindfreedom.org) might be more hospitable to her views.
- 11 <http://www.youtube.com/watch?v=hCFEDiwGcYU>.
- 12 See Singh (2003, 2004) for analysis of the effects of the diagnosis of attention disorders in the classroom. Dlenke (2009) discusses the ramifications of performance-enhancing drugs, as advocated in some major scientific venues such as Greely *et al*, 2008.

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