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SOME THEORETICAL CRITERIA FOR CLINICAL PSYCHIATRY

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TABLE OF CONTENTS

LIST OF FIGURES

ABSTRACT

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When it comes to the topic of mental illness, there are three broad areas of concern that are of interest to all of us as human beings—and to the theorists, researchers, and clinicians who wish to offer help—besides knowing what our symptoms are. First, we might be interested in finding out some normative facts about ourselves as individuals, such as whether or not we are mentally healthy, perhaps to what extent, and how this should affect our motivations. A second area of concern involves descriptive facts our minds. In what ways do we deviate from typical human psychological nature, and what implications does this have? A third concern is about diagnosis, the familiar labels like 'bipolar 1' and 'obsessive compulsive' which inform our very being. Ought any of these apply to us?

Clinical psychiatry, understood broadly as a practice which integrates science, theory, and clinical observation for the purpose of understanding and promoting mental health, is the most vital tool we have for answering these questions, and combatting the suffering caused by mental illness. Without a critical understanding of what good clinical reasoning consists in, however, it is simultaneously our most dangerous tool. Without it, we risk amplifying suffering rather than combatting it, by failing to distinguish and respond appropriately to illness and health. This project examines the nature of clinical reasoning from a theoretical perspective, by proposing some conditions for a discipline which pays heed to psychiatry's dual nature as a science and as an evaluative system—with the hope that a proper understanding of mental illness and mental disorder will follow from an understanding of the enterprise of clinical psychiatry itself.

1. INTRODUCTION

"I am but mad north-north-west: when the wind is
Southerly I know a hawk from a handsaw."
--Hamlet Act 2 Scene 2, William Shakespeare

1. What is Good Clinical Reasoning?

On September 13th, 2014, 32-year-old Kamilah Brock, entered NYPD precinct PSA 6 to find the whereabouts of her impounded car. Claiming she was making them nervous, police handcuffed Brock and forcibly removed her to Harlem Hospital. During her involuntary stay there, Brock was repeatedly sedated with lorazepam and lithium against her will despite showing no signs of violent behavior. In an effort to gain her freedom, Brock repeatedly told hospital staff—truthfully—that she was a gainfully employed banker, and that President Obama followed her on Twitter. Hospital staff made no effort to check these claims, called them delusional, and made their repudiation a condition of her release. Brock was held there for eight days (Law Offices, 2015).[1]

Exactly a month later on November 13th, 37-year-old mother Tanisha Anderson, diagnosed with schizophrenia, was killed by police responding to a non-emergency call from her family (Beres, 2015). Anderson is just one of many individuals in recent years, with history of mental illness, who have had the misfortune of becoming victims of police violence when they in fact sought aid (Santos & Goode, 2014; Ernst & Putzel, 2014). Especially in cases of threatened suicide, the prospect of calling 911 is a growing fear among loved ones. And where there are not loved-ones to look to for support, many sufferers of mental illness in the United States end up in prison (Carey et al., 2014).

[1] Apparently, not much has changed since American psychologist David Rosenhan's experiments placing 'pseudopatients' in psychiatric hospitals, when after between seven and fifty-two days, all eight individuals were discharged; but only after accepting their 'diagnoses' (1973).

Clinical psychiatry, understood broadly as a practice which integrates science, theory, and clinical observation for the purpose of understanding and promoting mental health, is the most vital tool we have for combatting the suffering caused by mental illness. Without a critical understanding of what good clinical reasoning consists in, however, it is simultaneously our most dangerous tool. Without it, we risk amplifying suffering rather than combatting it—either as in Anderson's case by failing to respond appropriately to genuine illness, or as in Brock's by failing to respond appropriately to genuine cases of health.[2] Developing and engaging in an empirically minded and normatively adequate clinical practice, then, is necessary in order to provide better care for ourselves and others.

With this project, I aim to open up a new avenue for research in the philosophy of psychiatry which considers the nature of clinical reasoning from a theoretical perspective, by proposing some conditions for a discipline which pays heed to psychiatry's dual nature as a science and as an evaluative system.[3] I offer one condition in each of my three primary chapters. To be clear at the outset, these conditions are not intended to be sufficient for characterizing clinical psychiatry. I would be happy if others were revealed by future research. I also do not intend to argue for any positive account of mental illness or mental disorder. Rather I hope that a proper understanding of these and other concepts will follow from an understanding of the enterprise of clinical psychiatry itself—this leaves a vast space for future philosophical work, and in my concluding chapter I will outline some open questions that strike me as particularly fruitful.

Even so, it is hard to begin a discussion about clinical reasoning without at least some basic understanding of how terms like 'mental illness' and 'mental disorder' are used. Before outlining the arguments of each chapter, then, it will be useful to lay some groundwork. In the next section, I will try to elucidate a general trend in the literature, and note how I will be using these terms in my project. I am less concerned with how well or poorly my usages fit the trend, than I am about clearly stipulating how I will use the terms

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[2] It is also not a coincidence that clinical psychiatry represents an even greater danger to marginalized groups (both Brock and Anderson are black women living in the States). Concerns of social justice disparities in mental healthcare are an additional motivation for my project (for more see: Woolfolk, 2002; Poland & Caplan, 2004; Banaji, 2013; Carey et al., 2014).

[3] Over the past few decades, philosophers of psychiatry have been making strides in three broad areas: the thorny conceptual issues that surround psychiatry as a science, the very idea of mental illness, and how clinical phenomena can illuminate issues in philosophy of mind (Murphy, 2015b).

going forward. Then, in section three, I will give a quick sketch of the relevant conception of the discipline of psychiatry that employs these terms. A preview of my primary chapters appears in section four.

Before moving on, a quick note on the most confounding piece of terminology in philosophy these days—the word 'we': In the most general case, 'we' is ideally used to refer to the group human beings, humankind, thinking things, or, perhaps, persons; as in *we tend to think that... we simply don't know whether...* or, *we can agree that.* The rationale for this usage seems to rest on the idea that philosophical argument and philosophical thought are universally valuable and universally applicable enterprises. However, there is some controversy concerning the value and role of philosophical intuitions in making philosophical arguments.[4] Especially in the analytic tradition, much work proceeds via the introspective and reasoning capabilities of trained experts, that is, philosophers. That the majority of professional analytic philosophers have been and continue to be Anglo American men has only recently been conceived of as a major biasing issue. As it turns out, analytic philosophers aren't great representatives of human thought (Henrich et al., 2010).

Because the overarching theme of my project concerns individual variation in the structure and content of human the human mind (or, if you prefer, mind/brain), I am particularly concerned with this issue. At the same time, 'we' can be stylistically indispensable. I've already used it twice. Therefore, I will strive to use 'we' as shorthand for 'we human beings' only in those cases where the entire group is the appropriate referent. When referring to a more restricted group I will do so explicitly by saying things like 'we philosophers' or 'we in the United States'.

2. Terminology

Consider the following case. Allie makes an appointment with a therapist because she has been feeling melancholy and unmotivated, which has interfered with her work and social life. What does it mean for her that she seeks a diagnosis? Presumably it is not to be told that she feels sad, which is something she already knows. Imagine Allie had gone to her

[4] For more see the Intellectual Humility Project, an international endeavor among philosophers and psychologists interested in the cross-cultural stability of philosophical intuitions (2013).

physician for a cough, only to be diagnosed with something called 'coughing disease'. This is laughably uninformative. Yet many who seek assistance for psychological symptoms like Allie's have just this experience. Clinical psychiatry today stands apart from physical medicine in that there is no clear distinction between symptoms and the conditions that underlie them. This points to one of the biggest stumbling blocks for explaining and understanding concepts like 'mental illness' and 'mental disorder'. Namely, many of the diagnoses we are most familiar with, like 'depression' and 'anxiety', pick out sets of disjunctive and overlapping symptoms, rather than any underlying facts that might explain these symptoms.

There are three broad areas of concern that might be of interest to Allie, and to other theorists, researchers, and practitioners, besides knowing what her symptoms are. First, Allie might be interested in finding out some normative fact about herself as an individual—whether or not she is mentally healthy, perhaps to what extent, and how this should affect her motivations. A second area of concern involves descriptive facts about Allie's mind. In what ways does she deviate from typical human psychological nature, and what implications does this have for what kind of human agent she is? Knowing these facts will help answer questions like w*hy is this happening and how can I change it?* A third concern is about diagnostic kinds, the interactive social kinds which take the form of those labels like 'bipolar 1' and 'obsessive compulsive'. Ought any of these apply to Allie?

These three, intimately related concerns can be roughly distinguished by the kinds of facts which are supposed to explain Allie's symptoms. To answer the question of why Allie is feeling sad we might report an evaluative fact (Allie is sick), a descriptive fact (Allie has a chronic surplus of cortisol in her system), or a classificatory fact (Allie has Major Depressive Disorder (MDD)). Each may be a satisfactory explanation for Allie. Unfortunately these facts can interact in complex ways. As a result, it is next to impossible to tell, in practice whether a particular theorist thinks any of these facts entail the others, or what the normative significance is of the explanation a theorist gives. As philosopher of psychiatry Dominic Murphy puts it, "there is widespread agreement that our thinking about disease pays attention to both human values and biological phenomena, and it is not always

easy to tell... whether a given analysis is descriptive or prescriptive" (Murphy, §6, 2015a).[5] To my mind, a number of disagreements over the nature of psychopathology—for example how and whether mental diseases are related to physical diseases, how they are delineated, and whether they are in some sense 'constructed'—rest on this ambiguity. It interferes with our ability to keep concepts like 'illness', 'disorder', and 'disease' disentangled.

Clearer conceptual tools are needed for future discussions that can help benefit people like Allie and alleviate her mental suffering. Employing a strict theoretical boundary between the target phenomena of clinical psychiatry's evaluative, descriptive, and classificatory goals is a good starting point. Therefore I propose, first, that the terms 'health' and 'illness' be used in a strictly normative sense. Regardless of whether Allie is typical or atypical with respect to her symptoms or their underlying causes, to say that she is ill carries the implication that there is something about her that ought to be corrected. It is a value judgement. To put this in psychological terms then, I mean 'being mentally ill' to describe any way of being in which an individual's flourishing[6] is significantly impaired or limited by some features of their psychology. To be mentally ill is to fall below some standard of flourishing as a result of certain objective psychological facts. Exactly what the right standards are is an interesting question I take up later in Chapter 2.

How should mental health be understood in contrast with mental illness? I mean 'being mentally healthy' to describe any way of being in which an individual's flourishing is not so limited. On this way of thinking, mental health is defined negatively as the absence of illness. Importantly, we need not think that this poses problems for using the term 'healthy' in a positive way—to capture a good degree of flourishing rather than just meeting some minimum standard. In a recent paper, S. Andrew Schroeder argues that this

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[5] Take for example the debate between objectivists and constructivists over the concept of health in medicine. Briefly, objectivists hold that descriptive facts about the human body alone can ground distinctions between sick and healthy bodies, while constructivists hold that symptoms or their causes must, in addition, be disvalued with respect to human interests (Murphy, 2015a). Many theorists in both camps end up relying on 'disorder', 'disease', and 'illness' as stipulated terms to differentiate between descriptive and prescriptive claims, with individual differences as to which means what. One must engage closely with a particular author to tell whether a claim like 'Allie has a mental disorder' carries normative implications, or whether this just reports the existence of some deviation.

[6] This can be a tricky piece of terminology in normative ethics, and I do not want too much to rest on it here. For now a naïve notion will do, where flourishing is not a technical term and is more or less synonymous with terms like well-being, welfare, or eudemonia. I will have more to say on how evaluative concepts like these interact with our thinking about mental health in my concluding chapter.

confusion stems from overlooking the possibility of *comparativist* theory of health, where to say that 'X is healthy' is to claim that X belongs to a range of individuals in some class, where differences in that range are still differences in health (2012). On a comparativist view of mental health, two individuals can be healthy, while one is healthier than another, or flourishing to a greater degree. I will follow Schroeder here in taking a comparativist view.

My second proposal concerns the targets of clinical psychiatry's descriptive and classificatory goals. In short, the predicate 'has a mental disorder' can be ambiguous between the purely descriptive 'is psychologically atypical' and the evaluative 'is psychologically atypical and ill as a result'. I will use it only in the second sense. To say that Allie has a mental disorder is to make both a descriptive and an evaluative claim. This may seem like a fairly radical move, but it is one which I think is entirely warranted.

To see why, consider how the science of psychopathology is currently conceived, the discipline that attempts to distinguish between *kinds* of mental illness by investigating its underlying causes. The product of this labor, a *nosology*, should taxonomize different psychological conditions, already assumed to underlie mental illness, into useful diagnostic categories.[7] Mental disorder, then, can be usefully defined in terms of mental illness. I mean 'has a mental disorder' to describe a person who is mentally ill when the features of their psychology which impair flourishing fit one or more such categories. In Allie's case, she has a disorder because her chronic surplus of cortisol is the cause of her suffering. This usage should transfer a kind of normative status to the diagnostic categories of a nosology, such that MDD, as a mental disorder, is a kind of mental illness. A good nosology fulfills a classificatory goal. It allows us to make evaluative claims like 'Allie is depressed'.

It may be objected that labels like MDD, when properly deployed, are not meant to carry normative content at all but rather pick out a set of noteworthy symptoms and underlying causes. I am sympathetic to this concern, but I believe that this usage results in a dangerous source of confusion. To see why, consider the possibility that someone has a psychological condition that fits some descriptive criteria even though they are mentally

[7] Much work in the philosophy of psychiatry has mirrored psychopathology by trying to provide a theoretical account of just what these categories are and how they function. I intend the term 'diagnostic category' to apply very generally, to point out a label's role in a classificatory scheme without specifying further which scheme is at play.

healthy, for example, Guinness World Record holder Scott Flansburg. Scott can mentally compute mathematical calculations faster than almost any other human. Unlike the rest of us, he uses his motor cortex to complete these calculations, the part of the brain responsible for making complex snap decisions such as catching a ball (Flansburg, 2015). Let's say Scott fits the hypothetical diagnostic category 'human calculator syndrome'. Human calculator syndrome is certainly statistically abnormal, though without making undue assumptions about his personal life, it seems reasonable to think of Scott as mentally healthy. If mental disorders are stripped of their normative content, we would owe Allie the same courtesy as Scott. We would need to withhold judgment about whether or not Allie is mentally ill after learning that she has MDD. But this is not how these labels typically function. Indeed it would be difficult to prevent the inference that Allie is unwell. Thus follows the motivation for stipulating that an individual who fits a diagnostic category has a mental disorder only if they are mentally ill—if their flourishing is inhibited by their psychological condition.

Certainly, it is an open question so far whether the list of mental disorders is identical with the list of conditions that are of interest from a perspective of psychopathology. If it would be wrong to say that Scott has a mental disorder, how should we describe him? To avoid confusion, I will use a further piece of terminology 'typical deviation' to describe statistically abnormal psychological conditions which are not implicated in mental illness. Regardless of whether Allie is healthy or ill, to say that she has some typical deviation is to classify her as belonging to some interesting category with respect to her symptoms or their underlying cause, with no normative implications whatsoever. Though a catalogue of typical deviations would be different from a nosology of mental disorders, the two taxonomies could mutually inform each other in practice. Still it is crucial to keep them conceptually separate, as they have different extensions. If the notion of typical deviation gained a place in public discourse, we would need to take care that it would not carry normative implications.

I should also preempt one confusion that might follow from certain expectations of what diagnostic categories are supposed to do. Specifically, it might be thought that, while 'mental disorder' is not a natural kind, specific disorders like MDD or their underlying typical deviations are, such that everyone diagnosed with MDD shares a kind of essence.

No part of my project should be construed as relying on this assumption. I agree with thinkers like Şerife Tekin and Ian Hacking, who stress that mental disorders are interactive kinds that change in response to their uses by human beings (Hacking, 2006; Tekin, 2014a; 2014b). As Tekin helpfully summarizes, "the encounter with mental disorder changes an individual's self-concept and behavior, and it is not easy—if indeed possible—to discriminate the influence of diagnosis of mental disorder from that of the mental disorder itself" (p. 228, 2014a). In other words, a mental disorder like MDD changes how a subject behaves, both because of changes in brain chemistry, and because the subject consciously alters her behavior in response to new information gained from the label itself. These behaviors then get reified as parts of the diagnosis, causing MDD to change over time. A particularly striking example of this process occurred when an underfunded hospital in Argentina re-diagnosed its patients—switching from a Kraepelinian scheme to the DSM standards—in order to work with a French drug company. Overnight, patients experienced their symptoms in new ways (Lakoff, 2006). As Hacking describes the case, "such are the mechanisms of cultural imperialism" (Hacking, 2013).[8]

Tekin suggests that it may be necessary to leave aside the subjective in order to taxonomize mental disorders (Tekin, 2014b). Murphy agrees, arguing that "psychiatric diagnoses should be seen as referring to idealizations... that abstract away from the details of their realization in patients" (p. 105, 2014). Additionally, there may be social reasons to think of metal disorders as natural kinds. For example to allow patient groups and charities to form around mental disorders as "distinct and visible brands" (Adam, p. 418, 2013). Of course, the scientific adequacy of these idealizations rests on our ability to find boundaries in the structure of the mind that correspond to them. Philosopher Kathryn Tabb calls this the assumption of diagnostic discrimination, and many recent thinkers, including myself, are beginning to doubt its value (for more see: Tabb, *ms*; Friesen, *ms*; Theuer & Hartner, 2015; Tekin, 2014a & Mallon, *ms*). For my part, nothing I have to say should turn on the question of whether that assumption can be vindicated.

One further thing to note about the relationship between mental illness and mental disorder as I have outlined the terms so far, is that the possibility remains open for

[8] See also: Heaton (2013).

someone to be mentally ill, but not a have a particular mental disorder. That is, an individual's flourishing may be inhibited by some psychological feature, without them fitting a particular diagnostic category. This is a possibility that might be closed, however, by simply naming the condition. I wish to remain agnostic about the advisability of taking this route, though many, including myself, tend to think that there are conditions both clinical and subclinical which, while not mental disorders per se, have very much to do with mental health. Brain injury, bereavement, and lacking coping skills are just some illustrative examples.

To recap, I will use these terms in the following ways:

(1) *Mental illness*—refers to any way of being in which an individual's flourishing is significantly impaired or limited by some features of their psychology irrespective of what those features are.
(2) *Mental disorder*—refers to a psychological condition fitting one or more diagnostic categories that causes mental illness.
(3) *Typical deviation*—refers to a psychological condition fitting one or more diagnostic categories irrespective of whether there is mental illness.

3. An Initial Case for a Two-Stage View

Psychiatry is often conceived of as the study and treatment of mental illness, emotional disturbance, and some kinds of abnormal behavior. But what is mental illness, in contrast to physical illness? And what makes a behavior abnormal? These questions have deep roots in the philosophical literature. I am most interested, however, in the contrast that this very rudimentary definition sets up: namely that psychiatry is thought of both as a scientific study and as a practice of treating people. As psychiatrist Lloyd A. Wells puts it in a recent blog post, good clinical reasoning, "is not a laboratory exercise but one which involves a doctor, a patient, and the world around them" (Wells, 2014).

Of course, both of these ways of conceiving of psychiatry are crucial to the discipline, and why they are at odds may not at first be apparent. On one hand, we are in the nascent stages of discovering facts about the human mind, and psychiatry, as a science,

ought to be consilient with psychology, cognitive science, neuroscience, and the other sciences of the human mind and behavior. As psychiatric research develops, its discoveries should be grounded in objective facts about the individuals it characterizes. On the other hand, it is impossible to divorce the study of mental illness from its subjects. Psychiatry is meant somehow to *help* those who suffer from mental illness, not just examine and understand them. It addresses a very urgent and practical problem, the promotion of mental health and reduction of human suffering and its economic costs.[9] So while it is true that psychiatry must be objective in the above sense, it is also an essentially normative enterprise. Evaluating patients' welfare is crucial to improving it. As philosopher of psychiatry George Graham says, "this is not just because the purpose of medicine is premised on the disvalue of pain and reduced life expectancy... But it is due to the fact that the notions of bodily health and physical well-being are evaluative or normative though and through" (p. 93, 2010).

The evaluative and descriptive sides of psychiatry reveal two goals, to heal and to explain, which are at once complimentary and competitive.[10] To see how they compete, one need only consider how labor is divided among mental health professionals. Psychiatry is by its very nature interdisciplinary, and the psychiatrists, clinical psychologists, therapists, and researchers[11] who make up the field have differing levels of investment in healing versus explaining, as well as differing levels of training in the scientific and practical knowledge needed to accomplish each goal. It is not well understood what constitutes good clinical reasoning in any particular context, and mental health professionals' varying priorities have so far resulted in varying (and often incommensurable) theoretical constructs. It is not clear, for example, how a researcher uncovering the neurobiological mechanisms which regulate serotonin production ought to relate to the diagnostic categories we are most familiar with in taxonomies like the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (DSM), or how a therapist practicing Freudian psychoanalysis or cognitive behavioral therapy should take on

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[9] Especially at a time when the World Health Organization estimates that mental and substance use disorders are the leading cause of disability worldwide, making up 14% of the global burden of disease (2015).

[10] Many thanks to Kathryn Tabb and Phoebe Friesen for discussions on this point.

[11] To say nothing of the geneticists, neurobiologists, pharmacologists, cognitive scientists, social workers, or lawyers who specialize in mental health/illness.

board new discoveries about the role of serotonin. While there have been some attempts to unify psychiatry's descriptive and evaluative aspects (for more see: Friesen, *ms*), philosophers of psychiatry and other theoreticians have traditionally focused just on one goal or the other.

Phoebe Friesen is another philosopher of psychiatry interested in the tension between psychiatry's evaluative and descriptive goals. In a recent paper she suggests that, rather than attempt to integrate these goals, theorists should favor an approach which "encourages an exploratory and open ended approach to ontology within psychiatric research" (Friesen, *ms*). Her approach, which she calls *ontological pluralism*, is an attempt to provide a workable metaphysics for concepts in psychiatry. She asks theorists to get comfortable with the idea that, while mental illness is sometimes reducible to underlying neuropathology, at other times it is best understood by higher level cognitive phenomena which are not exhaustively constituted by brain states.

While not directly concerned with the metaphysics of mental disorder, my project is sympathetic to Friesen's position. Good clinical reasoning must make use of both descriptive information from the sciences, and evaluative information from our best normative theories, and this highlights a tension between the arenas of fact and value at play in psychiatric practice and research. Indeed, when it comes to being scientifically minded in particular, part of what is interesting in the philosophy of psychiatry is determining just what psychiatry's relationship to science *is*—and what it should be. For while it is generally agreed that part of scientific respectability is consilience with the other sciences of the mind and human behavior, the discipline has been less than successful at this task (Murphy, 2006). Psychiatric diagnosis is often guided by prevailing norms and values in spite of empirical evidence.

To illustrate of psychiatry's problematic relationship to science, there are clear historical cases of diagnostic categories which functioned as nothing more than a pseudoscientific means of institutionalized oppression—some of which are former diagnoses of the DSM—such as hysteria and homosexuality (Murphy, 2006). These labels refer to sets of behaviors, irrespective of any underlying, stable, objective entity that is investigable from the point of view of psychology, biochemistry, or any other medical science. If we are to take psychiatry seriously as a scientific endeavor, its nosology should

not merely pathologize counter-normative behaviors, and it should not characterize individuals as unwell who aren't. Any discipline which merely enforces cultural norms in this way, is paternalistic. I will have a good deal more to say about the problem of paternalism in my second chapter.

For now it is important to note how these cases introduce the worry that psychiatric practice *today* is also merely a way of pathologizing unwanted behaviors, and that its prescriptions do not actually encourage psychological flourishing. In fact, psychiatry's lack of success at remaining objective has inspired various forms of antirealism about mental disorders (Doris & Robins, 2007). But the jump from the worry that particular diagnoses are fraudulent or politically motivated to the objection that mental disorders are 'not real' or have no underlying natural causal explanation is unwarranted. We should take seriously the idea that there is genuine mental suffering in individuals that can be explained naturally, whether by recourse to social and environmental facts, or underlying neuropathology, or both. As philosophers Sarah Robins and John Doris reflect in their review of *Psychiatry in the Scientific Image*,

> "...examples of prejudice cloaked in pseudo-science are regrettably common in the history of psychiatric medicine, common enough to provoke denials that there is such a thing as mental illness (e.g., Szasz 1987). Yet we embrace such a general skepticism at our peril – and the peril of those who suffer. Depression, for example, is a widespread and life-threatening affliction, estimated by the World Health Organization to be the 4th leading cause of productivity loss worldwide" (Doris & Robins, 2007).

This peril is not to be underestimated. Psychiatry must come to terms with its dual nature as an empirically grounded science of the mind, and as an evaluative system that requires a normative theory. The view of clinical psychiatry I am interested in, in this project, therefore, employs a two-stage methodology. This is a common, and effective response to psychiatry's past failures. In short, a two-stage view takes psychiatry's target to be those psychological phenomena which cause harm to individuals. On this picture, one way of specifying the target is by investigating the nature of harm, and another is by

investigating the nature of the human mind. The tools which are appropriate for one investigation are not necessarily appropriate for the other, hence the two stages.

One of the strongest reasons for endorsing a two-stage methodology which separates clinical psychiatry's descriptive and evaluative projects is that we are not driven to skepticism about the reality of mental illness (Murphy, 2006; Doris & Robins, 2007). The two-stage picture allows us to resist a commonly made move from the worry that particular diagnoses are fraudulent to the objection that psychiatry itself is a non-objective, non-scientific endeavor, and admits a role for clinical psychiatry in bettering lives (Murphy, 2006). It pays due respect to the danger of politically or socially motivated diagnoses while at the same time endorsing realism.

Further, when psychiatry is grounded in objective facts about the individuals it characterizes, the possibility for culturally relative norms about what behaviors are and aren't desirable to compromise psychiatric practice is limited.

On a two-stage picture, addressing the tension between fact and value gives psychiatry an open-ended 'soft-naturalism' where mental disorder is not a natural kind. As Murphy explains,

> *"[m]ental disorder* is a concept like *pest, weed,* or *vermin*. Weeds and vermin are not natural kinds, but they are made up of... kinds that can be explained empirically. Furthermore, whether something counts as a weed or a vermin depends on human interests in a way that allows the class to grow over time, or vary across projects... Folk thinking does not determine in advance whether a species is a pest, nor does it make scientific investigation of a species of pest into a normative endeavor" (Murphy, p. 98-99, 2006, italics in original).

A second strength of a two-stage methodology is that its focus on causal etiologies and consilience with contemporary psychology and cognitive neuroscience gives it a scientifically reputable methodology. This allows the discipline of psychiatry to be situated as consilient with the other sciences of the mind such that it can better identify, explain, and treat mental disorders than its competitors. This may sound obvious to the empirically minded, but one of the things Murphy demonstrates very well in his book is how lack of

consideration for the sciences of the mind and human behavior stymies psychiatric research. As he argues,

> "[o]ur current demarcation of mental disorder is scientifically uninteresting... the superordinate concept of mental disorder, as it stands, does not pick out a nonarbitrary class. And as well as suggesting that the conceptual issues need to be reframed, this arbitrariness has scientific consequences. It can obstruct our ability to generalize across related conditions, mislead us into thinking that disciplinary boundaries correspond to an interesting break in nature, and stymie the linkage of psychiatric research in other disciplines, notably the cognitive sciences" (Murphy, p. 61, 2006).

The controversy surrounding the classification of mental disorders in the DSM is a good example of the confusion that can result from starting with some folk concept or pretheoretic intuition about what mental disorders are.[12] Consilience with the sciences is itself an invaluable defense against the pernicious influence of norms of human interest.

Ultimately, these two virtues demonstrate a commitment to good clinical reasoning. Good clinical reasoning in this sense is thinking about mental illness and mental health which:

(1) is consilient with the other sciences of the mind/brain, and
(2) employs a normative theory with properly justified evaluative standards for psychiatric diagnosis.

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[12] Ian Hacking is another philosopher who shares the above concerns about the state of contemporary psychiatric practice. He is critical of how the diagnoses of the DSM-V systematically overlap symptoms to the point where they are virtually undifferentiable. In his review of the book Hacking writes, "[t]he DSM is not a representation of the nature or reality of the varieties of mental illness... it is founded on a wrong appreciation of the nature of things" (Hacking, 2013). Indeed, a quick glance through the various incarnations of the DSM makes the business of psychiatric diagnosis seem absurdly ad hoc, heterogeneous, overinclusive, and prone to the influence of arbitrary social, political, and historical factors. Perhaps it is because the DSM is first and foremost a document of convenience—the best way of getting clinicians on the same page, or of getting insurance companies to pay out (First & Westen, 2007). Or perhaps the best explanation lies in the DSM's rejection of causal explanation in favor of construct validity, the organizing of mental disorders by statistical correlations among symptoms (APA, 2013). All of these criticisms have been ably defended. Good clinical reasoning, in my view, will mark a step away from this classificatory scheme.

A two-stage picture will be my starting point for what follows.

4. Preview of Primary Chapters

(2) Culturally Unbound: How Cross-Cultural Cognitive Diversity Affects Methodology in Clinical Psychiatry—My first criteria for good clinical reasoning is that it strictly separates its descriptive and evaluative projects into two stages, such that notions of typicality do not delimit the class of mental disorders. To substantiate this, in this chapter I consider how human psychological variation should affect methodology in two-stage psychiatric research. I examine recent empirical evidence and develop what I call the Cross-Cultural Diversity (CCD) picture of the human mind, according to which, variation in the underlying causal structure of the human mind implies variation in mental illnesses. I then examine the implications of the CCD view for a discipline which tries to separate the descriptive from the evaluative in taxonomization of mental disorders, by examining one methodological proposal given by philosopher Dominic Murphy in his book *Psychiatry in the Scientific Image*. I argue that, even in an idealized case, Murphy's methodology is hindered by its reliance on a conception of 'normal human nature', and thus does not adequately accommodate cognitive diversity. Next I sketch a promising way to revise Murphy's proposed methodology, by examining Grant Ramsey's recent work on human nature and his Life-history Trait Cluster (LTC) view. I end with some notes on how these considerations are beginning to shape inquiry in the form of the Research Domain Criteria (RDoC) project.

(3) Individualism as a Solution to Paternalism in Psychiatric Practice—If the goal of psychiatric practice is to alleviate the suffering caused by mental illness, what kinds of standards are the right ones to use in determining what counts as mental illness? In this chapter, I will address the problem of paternalism in psychiatry, the frequent occurrence of clinical intervention—including diagnosis itself—on the basis of unjustified standards. Following Daniel Groll's work on paternalism, I will argue that, in face of avowals from competent patients that they are not ill, the burden of proof falls on the clinician to show that a diagnosis is justified. Further, following Valerie Tiberius and Alexandria Plakias's discussions of well-being, I will argue that a theory with properly justified evaluative standards for psychiatric diagnosis must have normative authority. I

examine how several theories of mental disorder fail to have normative authority, and conclude that clinical psychiatry must ground what it means to be mentally ill or mentally healthy in the concerns of individual patients. My second criteria for good clinical reasoning, therefore, is that it respect variation in what makes individuals flourish by locating mental health in the concerns of individual patients.

(4) Stewardship of the Mind: How an Ecological Perspective Can Help Us Better Understand Psychiatric Therapy—Understanding how therapeutic change occurs in clinical psychiatry depends non-trivially on how we understand human cognition and human agency. In this chapter I will closely examine what an ecological perspective on cognition and agency tells us about what has gone wrong in cases of mental illness, and how successful therapeutic interventions generate change. Briefly, an ecological perspective casts human beings as stewards of the mind—ecological agents that manage cognitive ecology. Manifest variation in individual cognitive ecology, then, implies that there will be variation in the ways we achieve, maintain, and improve mental health. From this ecological perspective, therapeutic techniques are best conceived of as a species of agential technologies; a set of often non-obvious methods and strategies of control, whose pathway of influence over behavior and psychological functioning often loops outside the boundaries of the skin and skull. My third criteria for good clinical reasoning, then, is that it take advantage of the unique insights of an ecological perspective that can help teach us how to be better, mentally.

2. CULTURALLY UNBOUND: HOW CROSS-CULTURAL COGNITIVE DIVERSITY AFFECTS METHODOLOGY IN CLINICAL PSYCHIATRY

1. Is Human Nature Messy?

It is now taken for granted in many circles that substantial psychological variability exists across human populations; *we don't merely differ in the ways we behave, but in the ways we think, as well.* Though versions of this view have been around for some time,[1] Joe Henrich, Steven Heine, and Ara Norenzayan's 2010 paper, 'The Weirdest People in the World?' has had an exciting and catalyzing impact on the field, getting researchers involved in discussions of human nature to take cross-cultural cognitive diversity seriously. Reviewing a broad selection of comparative studies from across the behavioral sciences, in social psychology, cognitive psychology, developmental psychology, and neuroscience, Henrich et al. catalogue substantial evidence of population level psychological variation in humans—which is all the more surprising because the database of cross-cultural studies is at this point quite narrow. Further, Henrich et al. show that while behavioral scientists rely disproportionately on subjects from Western, Educated, Industrialized, Rich, and Democratic (WEIRD) societies, these WEIRD subjects "are among the least representative populations one could find for generalizing about humans" (p. 61, Henrich et al., 2010).

I would like to thank the members of the Moral Psychology Research Group and the audience at the 2014 SSPP, as well as Dominic Murphy and Rob Wilson for feedback on earlier presentations of this material.

[1] Not least since early interest in 'cultural relativism' in cultural psychology and anthropology. But here I'm thinking of more recent work such as Peter Richerson and Robert Boyd's views on gene-culture coevolution, Richard Nisbett and Dov Cohen's many contributions to anthropology and social psychology, and Stephen Stich's work on cross cultural differences in philosophical intuition. These are all great examples of this trend in the human behavioral sciences, and the effort to get clearer about the nature, scope, and source of human psychological variation. For more, see Nisbett & Cohen (1996), Nisbett (2003), Boyd & Richerson (2005), and Stich (2010).

Clinical psychiatry is just one discipline that has a stake in our evolving understanding of psychological variability. What is and isn't a part of human nature and just how much psychological variation is included in our notion of human nature will have a significant impact on how we conceive of, investigate, and treat mental disorders. Indeed, researchers and clinicians have been grappling with this issue at least since the advent of 'cultural psychiatry' in the early 1960s.

[2] Even so, for much of this time, many empirically oriented philosophers of mind thought there to be a fairly large common core of human psychology that was relatively stable and invariant across cultures.[3] This was the dominant view of the mind in the late nineties in evolutionary psychology, a picture which has been inherited by many contemporary, scientifically minded views of psychiatry.

In this paper I am interested in how the emerging view of human psychological nature, which I'll call the Cross-Cultural Diversity (CCD) view, should in turn affect clinical psychiatry. In particular, I want to begin to think about what the implications are for the discipline when we take Henrich at al.'s paradigm of human psychological variation to be correct. I will work from Dominic Murphy's account of scientific psychiatry in his 2006 book *Psychiatry in the Scientific Image*, focusing on the methodology he prescribes for investigation in psychopathology. I've chosen Murphy's account as my starting place because he has done the most to articulate and defend a view shared by philosophers interested in scientifically-minded psychiatric research which employs a two-stage methodology. I will ask whether Murphy's account of the two-stage picture has the tools to accommodate what we now know about human psychological variation.

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[2] Most recently, the American Psychiatric Association's (APA) *Diagnostic and Statistical Manual of Mental Disorders (DSM)* struck the concept 'culture bound syndrome' from its pages in the 5th edition (after it was added just one edition before) (APA, 2013). As a project which rejects causal explanation as a way to ground mental disorders, talk of culture in the DSM has tended to focus on how human culture shapes the context of mental disorders, their expression, and how they may be competently treated. Little attention has been paid to the implications of the kind of underlying, cross-cultural cognitive diversity sketched by Henrich et al., just as little has been paid to consilience with the other sciences of the mind and brain.

[3] I'm thinking here of the pervasive influence of the massive modularity hypothesis in the past few decades. This line of thought emerged after the publication of philosopher Jerry Fodor's 1983 book *The Modularity of Mind* made a substantial impact on thinkers in Evolutionary Psychology such as John Tooby and Leda Cosmides (1992), Dan Sperber (1994; 2002), and Stephen Pinker (1997). Massive modularity has received its most sustained and powerful defense in Peter Carruther's 2006 book, *The Architecture of the Mind*.

Addressing this question will require elaboration on two points. First, I'll say more about Murphy's account of the two-stage picture, including a working example of how a mental disorder is identified. Second, to develop the CCD view, I will draw a number of 'lessons' from the work of Henrich et al. and other's interested in cognitive diversity. My main contention with Murphy's account is that it fails to adequately accommodate these lessons. Shaping these two pieces will be the work of the remainder of this section, in 1.1 and 1.2 respectively.

In section two, I will highlight a particular weakness in Murphy's account which I'll call the *variant mechanisms* problem. I will argue that, even in an idealized case, its methodology cannot adequately accommodate cognitive diversity, because of its reliance on a notion of 'normal human nature' which does not square with evidence of psychological variation across cultures. As a result of this—even at its most responsible—a program of psychiatric research along the lines of Murphy's account will generate an impoverished nosology of mental disorders. Even so, the two-stage picture retains many theoretical and methodological virtues over its competitors.[4] For this reason, I think there is good motivation to retool the two-stage picture, rather than give up on it entirely.

In section three I will consider two strategies for modifying Murphy's account: expanding the notion of human nature at work in the two-stage picture, and rejecting it entirely as a guide to what is and isn't mental a disorder. I argue that the later strategy is the preferable option. Finally, I will conclude with some thoughts on how this debate is taking shape in current research.

1.1 Murphy's Account

Murphy conceives of psychopathology, the science of psychiatry that investigates and delineates mental disorders, as "the study of failures of normal human nature" (Murphy, p. 11, 2006). In his book, he is concerned with articulating a view where the notion of mental disorder is not grounded in folk conceptions or existing disciplinary conventions, arguing that these things can compromise the objectivity of a nosology (Murphy, 2006). Take for example the case of *drapetomania*, as described by the American physician Samuel

[4] For more on this refer to my arguments in the introductory chapter.

Cartwright in 1851, a condition that causes black slaves to flee captivity. This powerfully illustrates how disciplinary conventions are often fashioned in response to culturally relative norms and conventions about what behaviors are and are not desirable, thereby enforcing those norms and characterizing individuals as unwell who aren't.

As long as the notion of disorder at work in contemporary psychiatry is tangled in existing disciplinary conventions such that what Murphy calls 'norms of human interest' determine the class of mental disorders in advance of scientific investigation, psychopathology will not, as the saying goes, cut nature at its joints. To combat this kind of pseudoscience, Murphy argues, mental disorders should be understood as real entities with discoverable causal etiologies of which it is the purview of the social sciences and the sciences of the mind to discover and delineate (2006). This view of mental disorder is common among contemporary theorists, and of the sort I am interested in analyzing here.

The methodology for psychopathology that Murphy describes in his book makes room for just this kind of objectivity. Rather than going around looking for people who exhibit behaviors which are already considered undesirable and letting this determine what mental disorders are, researchers let scientific investigation into human minds lead inquiry into the concept of mental disorder. Inquiry literally happens in two stages, the first descriptive, and the second evaluative. This way, "classification of mental illness [groups] symptoms into conditions based on the causal structure of the abnormal mind" (Murphy, p. 11, 2006). On Murphy's picture, mental disorders are to be grounded in objective facts about the individuals they characterize, including both sociocultural facts and facts that make recourse to underlying neuropathology.

Ideally, the two stages mediate a realm of positive fact within which science operates, and a separate but equally real realm of moral and social evaluation within which conceptions of human flourishing have a home. This keeps the sciences "at a distance from the various non-scientific projects we otherwise wish to engage in", and allows us to resist the worry that clinical psychiatry is *in the business of* enforcing culturally relative behavioral norms under the guise of objective scientific practice (Murphy, p. 103, 2006). At the same time, because our evaluative concepts still play a role, the cognitive and neurosciences do not have the final say in how we think of mental disorder in practical and social arenas.

According to Murphy, the ideal two-stage methodology should work in the following way: First, researchers identify and taxonomize cognitive breakdowns that prevent individuals from being within the 'normal range' of function for a particular cognitive mechanism (Murphy, 2006). That is, they search for psychological conditions manifesting patterns that are atypical with respect to how one or more pieces of cognitive architecture functions for human beings. They then hand over this objective menu of conditions to various therapists, lawyers, social workers, and ethicists who refer to it in the course of their respective normatively informed projects. This second group of researchers supplies some normative considerations in order to decide which breakdowns count as mental disorders and belong in the nosology.[5] In this way, norms of human interest do not determine the class of mental disorders in advance—as a result of which, drapetomania would never enter Murphy's nosology, as it refers to a set of behaviors irrespective of any underlying objective entity investigable by the sciences. Notice also, that the resulting nosology is not governed by uniquely neuroscientific considerations. The classic example, a condition called *gourmand's syndrome* which causes 'excessive' interest in fine dining, may be interesting because its underlying cause is a brain lesion, but it is unclear whether it should be considered a mental disorder.

Murphy considers scientific investigation into mental breakdowns to be a non-normative enterprise, or at least normative in a 'weak and unproblematic' sense, as it does not appeal to norms of human interest (Murphy, 2006). The sense of normativity here is statistical, revealing 'natural norms' rather than evaluative or justificatory norms of human interest. Murphy expects that for each cognitive mechanism there will be some generalization about the role it tends to play in a larger system, and that role will determine the natural boundaries within which that mechanism ought to operate. Says Murphy, "[m]y hope is that a combination of causal and statistical reasoning can go some way toward settling where the boundaries are" (Murphy, p. 349, 2006).

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[5] In the service of keeping the two stages separate I am going to use these terms in a strict manner, with 'mental disorder' and 'nosology' referring to the output at stage two, and 'norms of human interest' to the cultural conventions and theoretic commitments of stage two's evaluative project. 'Breakdown', 'taxonomy', and 'naturalized norms' will refer exclusively to the output and concepts in stage one. This should align with usages in rest of my project. Murphy is not careful about these distinctions, as his project is very much focused on stage one, and issues in the philosophy of science such as the ontological status of mental disorders and what explanatory role they play.

Murphy is generally optimistic about the mechanistic tractability of human psychology and the success of further research in the cognitive sciences. Sharing this optimism—by taking on the assumption that human psychology is for the most part mechanistically tractable, and that research in the sciences of the mind will be productive and informative—is the main respect in which I'm considering an *idealized* version of Murphy's program.[6]

To make this a bit more concrete, consider how a diagnosis like Attention Deficit Hyperactivity Disorder (ADHD) would enter the nosology of mental disorders on Murphy's account. First, researchers pick out an individual who exhibits noteworthy behavioral, biological, or neurological symptoms, say, little Calvin from Bill Watterson's *Calvin and Hobbes*. Calvin serves as an *exemplar*. At stage one, scientists discover the causal etiology of these symptoms and trace them to the underlying structure which is their cause. In other words, they do cognitive neuroscience. Perhaps in Calvin's case, they identify mechanism *A*, which is responsible for managing attention. If this underlying structure is mechanistically tractable, *and* if it is a shared aspect of human psychology (a part of human nature), *and* if that mechanism is functioning abnormally (outside of its normal range), then a breakdown has been identified in Calvin. Finally, the researchers build a model of this breakdown, generalizing from the features of Calvin which cause the abnormal function, and add it to the taxonomy of breakdowns. Notice that every step described so far takes place in stage one. Indeed, it is unknown whether ADHD is a mental disorder until further normative input is supplied from stage two.[7]

In order to be successful, Murphy's account will need a principled way to capture the panoply of illnesses that cause human beings to suffer, and this reveals an unanswered question about how stage one researchers should proceed. We may grant that some combination of causal and statistical reasoning will show when a particular cognitive mechanism is functioning in an atypical way, but which atypicalities in human psychology are interesting from the perspective of psychiatric research, and which mechanisms are

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[6] Of course, this idealization overlooks the possibility that much of our cognition may not be decomposable into discrete mechanisms in the way Murphy's theory would require. Murphy recognizes this possibility, and dismisses it with the quip 'human nature is messy' (Murphy, 2006).

[7] Because he is mainly interested in stage one, the normative stage of determining what counts as a mental disorder is largely ignored in Murphy's book, to the detriment of the theory. It remains to us to think critically about the second stage, and how the two stages of scientific psychiatry are supposed to interact.

parts of human nature? For Murphy's account to work, researchers will need to know, at stage one, certain facts about mechanisms of attention, and mechanism *A* in particular. Namely, *is mechanism A shared or common to most humans across different demographics? Is mechanism A, the way it functions in Calvin, a part of human nature?*

It is quite clear that Murphy's project depends on there being some empirically useful notion of human nature, but less clear what notion he's relying on in *Psychiatry and the Scientific Image*. His talk of 'normal human nature' is vague at least partially because he is not concerned with giving an account of human nature in his book. Whatever the details of the right account of human nature are, Murphy seems to think they can be worked out elsewhere, arguing that, "[i]t is quite correct that we will not be able to explain everything about people without using culturally specific, and indeed biographically specific, information. But that does not mean that no interesting generalizations can be formed that cross cultures" (Murphy, p. 148, 2006).

That there are at least some cross-cultural generalizations to be made about human psychology which are of interest from the standpoint of psychiatry seems likely. Whether these generalizations will allow us to demarcate clear disease categories is another matter. I agree with Murphy that it is too soon to give up on a science of human psychological nature, and will have more to say soon about what I think that science might look like, but for now it is interesting to note a few details about how Murphy himself is conceiving of the subject. First, he relies heavily on the term 'generalization.' Second, crucially, because the sense of 'abnormality' in stage one is statistical, without input from stage two, the most we can say about a breakdown is that it *rises to the level of interest necessary for being considered as a mental disorder*. On Murphy's picture, there is nothing *evaluatively* normative about exhibiting or not exhibiting a breakdown.

Human nature, for Murphy, functions as a statistical standard for identifying breakdowns. If ADHD is modeled as a breakdown, it will only be if mechanism *A* is in fact a part of human nature. The normal distribution curve that describes how mechanism *A* usually functions gives us a guide for forming a generalization that can be said to be a part of human nature, such as 'mechanism *A* manages attention in humans in such and such a way'. When an individual falls on the tail-end of that curve—or when their cognitive

mechanism is operating outside of its normal functional range—they can be said to exhibit a failure of normal human nature in virtue of statistical abnormality.

There are two important features of human nature, then, that Murphy's picture requires. First, non-essentialism; properties which are parts of human nature should be described by true generalizations.[8] Second, non-normativity; these generalizations should not describe necessary and sufficient conditions for being included as a member of the human species. To my mind, there are two good candidates of naturalistic interpretations of human nature which have arisen in recent debate that might fit these criteria, Edouard Machery's (2008) *nomological notion of human nature*, and Richard Samuels' Homeostatic Property Cluster (HPC) account of human nature (2012).[9]

Consider first Machery's nomological notion. The nomological notion is a scientifically useful notion which acknowledges and accommodates our manifest variability and adaptive plasticity, by denying that the properties that make up human nature are strictly universal, and that there is anything right or wrong in having them (Cashdan, 2013; Machery, 2008). According to Machery, "human nature is the set of properties that humans tend to possess as a result of the evolution of their species ... the fact that many generalizations can be made about humans explains in which sense there is a human nature" (Machery, p. 232, 2008). On this way of thinking, walking on two legs is a part of human nature. On the HPC account, by contrast, human nature consists of the cluster of causal properties or mechanisms which explain "[t]he more readily observable, reliably occurring generalizations that hold of human beings" (p. 25, 2012). Whatever set of biological mechanisms that explains why a generalization like 'humans walk on two legs' is true, is a part of human nature on Samuels' view.

The nomological notion and the HPC account both meet the criteria of non-essentialism. Indeed, both views were designed in response to empirical problems with essentialist accounts of human nature. But they differ with respect to the second criteria of non-normativity. To see why, consider Olympic sprint runner Oscar Pistorius, whose legs

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[8] In this sense, 'humans walk on two legs' is a true generalization about humans. Walking on two legs is a property that most (not all) humans share. This should rule out Sarah Jane Leslie-style striking property generics like 'birds lay eggs' since of course, this is true of less than half of birds (for more see: Leslie, 2007).
[9] In fact, Samuels account has been taken up in a theory of psychiatric kinds recently developed by Kenneth Kendler, Peter Zachar, and Carl Craver (2011).

were amputated below the knee when he was eleven months old. Both the nomological notion and the HPC account grant that, despite not having two legs in the usual sense, Oscar is indeed a member of the human species. Neither is in the business of giving necessary or sufficient conditions for being human. However because Oscar does not possess the mechanism that makes 'humans walk on two legs' true, Samuels must conclude that there is something abnormal about Oscar. The HPC account implies that there is something wrong with Oscar in virtue of his not having legs (Samuels, 2012). There is no such implication for the nomological notion, as whether or not a particular individual possesses a property of human nature is of no consequence. As Machery describes it, "human nature is not normative. There is nothing wrong in not having the properties that are part of human nature" (Machery, p. 324, 2008). To my mind therefore, nomological notion provides the most charitable interpretation of Murphy's usage of 'normal human nature' in his book. It will be helpful to keep this in mind as I describe the Cross-Cultural Diversity view of human psychological nature in the next part of this section.

1.2 Lessons of Cognitive Diversity

A picture is beginning to emerge from recent empirical evidence that, to the extent there is a core of human psychological nature, this core is much smaller than was thought even fifteen years ago. Today, in the work of Henrich et al. and others, much more emphasis is put on the environment, culture, and cultural variation, than is put on innateness and invariance. The following four 'lessons' I've drawn from Henrich et al.'s work typify a recent trend of research sensitive to diversity in human cognition. They bear directly on current thinking about human nature, and are the kinds of claims which any view that aspires to take cognitive diversity seriously ought to be able to accommodate.

(1) *There is an astounding amount of population level variation*—Comparative studies in social psychology, cognitive psychology, developmental psychology, and neuroscience have revealed evidence of population level variation in self-concepts, norms of fairness and cooperation, folk-biological reasoning, spatial reasoning, representing integer amounts, the visual system including color perception and susceptibility to visual

illusions,[10] motor development (Karasik et al., 2010), philosophic intuition (Stich, 1998; 2010), physiological response to insult (Nisbett & Cohen, 1996), susceptibility to biases such as self-serving and self-effacing biases, situation and attention biases, and hindsight biases (Nisbett, 2003), as a partial list.

(2) *Much is likely due to variability in contingent, social and ecological conditions rather than genetic variability*—While Henrich et al. cite many possible explanations for the existence of population level variation (Henrich, 2010), the growing consensus seems to be that our behavioral variation is for the most part traceable to our uniquely human adaptive plasticity (Panchanathan, 2010). There are two main ways of understanding what this adaptive plasticity amounts to. In the tradition of Peter Richerson and Robert Boyd's work on cultural evolution, human beings may have evolved "[n]umerous domain-specific mechanisms that are designed to interact with the cultural, social, and ecological environment to produce locally adaptive phenotypes" (Henrich et al., p. 102, 2010; see also: Boyd & Richerson, 2005; Machery, 2010; Fessler & Machery, 2012). This view has much in common with the nativist and modularity hypotheses in the philosophy of mind (see: Carruthers, 2006). An opposing, but not strictly incompatible thesis in the tradition of Kim Sterelny's work on ecological niche construction posits that our cognitive architecture is for the most part constituted by domain-general mechanisms which allow us to absorb, through learning and cultural transmission, vastly different psychological processes, traits, or capacities (Sterelny, 2003; 2012; Machery, 2010). Each explanatory model seems to agree that we are comprised of some combination of domain-specific and domain-general mechanisms; the points of contention are rather how much of our cognition is innate and how much is learned, and how much is domain-general or domain-specific. No matter how this score is settled, the common point is that differing environments can cause vastly different developmental trajectories.[11] Each rejects what Rob Wilson calls the *External*

[10] For a fuller bibliographic listing of the relevant studies see Henrich et al. (2010).

[11] If the point here was simply that our external environments play a role in development and shaping our psychologies, it would be rather trivial. But these lessons present a methodological problem for research in the human behavioral sciences, especially when evaluative concepts come into play!

Minimalism Thesis, that "[s]tructures and processes external to an individual play at best a secondary causal role in...development" (p. 15, 2004).[12]

(3) *The prevalence of variation is reflective of differing minds*—The diversity in question here is cognitive diversity. Whether caused by domain-general mechanisms or domain-specific mechanisms, genuine underlying psychological differences across populations explain the prevalence of behavioral variation. Put another way, human adults from different cultures and environments have different minds. Humans don't just act differently, we think differently, too. This is quite significant, though what effect it will have for psychiatric diagnosis depends on how much of the variation each explanatory model accounts for. Whatever the case, our shared psychological endowment is certainly less substantial than has traditionally been assumed by behavioral scientists.

(4) *It is difficult to disentangle innately shared aspects of human psychology from developmentally, culturally, or environmentally contingent aspects*[13]—Because of our adaptive and developmental plasticity, and because of the variance among our cognitive mechanisms, there is a methodological difficulty for human behavioral research. It is hard to find data that show that a particular behavior found in a particular population can be found across populations. It is even harder to discover what mechanism drives that behavior, whether that mechanism is common to all humans, and whether it operates in reliably similar ways across contexts. All these things matter when determining truths about the human mind. Yet despite the narrow sample size, and the status of WEIRD subjects as outliers, "behavioral scientists are often interested in drawing inferences [from WEIRD populations] about the *human* mind and *human* behavior... This lack of epistemic vigilance underscores the prevalent, though implicit assumption that the findings one derives from a particular sample will generalize broadly" (Henrich et al., p. 63, 2010; italics in original).

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[12] For more on the relationship between nativism and modularity across the sciences, see Wilson's *Boundaries of the Mind* (2004).

[13] "developmentally, culturally, or environmentally contingent aspects" is Henrich et al.'s phrasing (p. 63, 2010).

2. The Variant Mechanisms Problem

My objection to the methodology that Murphy outlines is that its reliance on 'normal human nature' does not adequately address the facts described by Henrich et al.'s lessons. The best way to understand the variant mechanisms problem may be to first outline an objection against Murphy that I think *fails* to get off the ground.

2.1 Rejecting the Exemplar Objection

Symptoms of mental illness are one type of behavior which we should expect to exhibit population level variation, and we do not in general expect that all of our psychiatric categories will be universally applicable. Considering this might lead one to worry that the real problem with Murphy's view is the very process by which psychiatric diagnoses enter the nosology; that scientific psychiatry's methodology biases psychiatric theory building in unacceptable ways, because it proceeds by relying on *exemplars* of this or that failure of a cognitive mechanism to populate the list of mental breakdowns that make up our taxonomy. Call this the exemplar objection.

The exemplar objection notes that on Murphy's picture, if a disorder has been successfully modeled, then the underlying computational structure it is based in is, by fiat, common to most humans. In actual practice, Western researchers tend to look only into exemplars and conditions that are salient to them. Other times, budget considerations limit research to subjects that are practically within reach. Western researchers are therefore liable to leave out interesting conditions more common in non-WEIRD populations, and may even fail to model some prevalent abnormalities in their own niches. This turns the use of exemplars to guide inquiry into a biasing mechanism. For contingent, and perhaps ethnocentric reasons, given that the discipline of psychiatry as we know it is mainly a Western enterprise, we may expect the resulting taxonomy to be incomplete—so says the exemplar objection.

As Henrich et al. are at pains to point out, this has been a methodological problem with research in the human sciences all along. With contemporary research in psychopathology in particular, we have no reason to think that the exemplars we are familiar with completely represent the ways in which humans might break down. Instead,

the taxonomy is likely reflective of conditions that afflict our WEIRD exemplars. Those belonging to the cultural psychiatry movement have often made this complaint about the DSM in particular. While a few non-WEIRD mental illnesses have caught Westerner's attention, such as the startle matching syndrome known as *latah* in Southeast Asia and other members of the former 'culture bound syndrome' category, it is possible that the majority of DSM diagnoses are in fact 'culture bound' to the United States (Kleinman, 1997).[14]

The exemplar objection is not a fair criticism of the two-stage view. It fails because it is unwarranted to saddle an *idealization* of two-stage methodology with concerns about psychiatry as it's currently practiced. A responsible stage one researcher who takes the first of Henrich et al.'s lessons seriously would make an effort to conduct a great deal of cross-cultural research, and generate a more representative collection of models.

2.2 Variant Mechanisms Impoverish the Nosology on Murphy's Account

Even if we imagine a world in which a smart and responsible group of super-scientists had unlimited resources at their disposal in order to implement Murphy's program, there would still be two very important complications. First, as demonstrated by the fourth lesson, we have no way of knowing *a priori* whether the structures that underlie WEIRD behavioral variants are shared or instantiated in other cultures.[15] Upon investigation, sometimes they'll be shared, and sometimes they won't. In other words, the question of whether some exemplary behavioral variant really is evidence of a breakdown cannot be settled in advance of the research.

Second, and more importantly, if Henrich et al.'s third lesson is right and it is our minds themselves and not just our behaviors which differ cross-culturally, we should expect a 'rich diversity of functional modes' when it comes to our cognitive mechanisms—different minds, different mechanisms (Amundson, 1999). And if we really do vary with respect to

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[14] Indeed, as cross-cultural research is starting to get more attention (and more resources thanks to efforts like the Intellectual Humility Project (2013)), the situational embeddedness of symptoms of mental illness becomes more and more apparent. There is now good evidence to think that hallucinatory voices are shaped by culture both geographically (Parker, 2014) and across time (Jay, 2013).

[15] This may be true of many diagnoses currently deemed widely applicable by the DSM. In many of these cases, we don't even know what the underlying structures *are*.

our cognitive machinery, then we should expect that the ways in which things go wrong will vary across populations as well. We should find not just that the way failures of cognitive mechanisms are expressed in behavior changes from culture to culture, but that the mechanisms themselves, and therefore the failures, change. *Variance in the underlying causal structure of the human mind implies variance in illnesses.* This is the upshot of the CCD view. Much of the cognitive structure in which characteristically 'disordered' behavior is grounded is liable to be built by culture, or learned from the environment. Thus the mechanisms in question will vary across ecological niche, and there will be no appropriate generalizations about them from the perspective of scientific psychiatry.

That there is no way of accommodating this kind of variation on Murphy's picture is the basis of the variant mechanisms problem. Because the only conditions that rise to the level of interest from the standpoint of psychiatry on his construal are those that are common across cultures—or part of human nature—mechanisms that are not shared are not eligible to be modeled as breakdowns. Consider for example, the recent mass psychosis occurring in the village of Kalachi in Kazakhstan, causing almost ten percent of the population to fall asleep (Hay, 2014). If the underlying cause of this behavior is not a part of human nature, do these villagers not count as sick? This strikes me as a way of overpopulating the list of mere 'problems in living' and impoverishing our taxonomy, which is especially problematic from the perspective of a clinician who relies on diagnostic categories to secure treatment.

When it turns out that the structures picked out in exemplars like Calvin aren't shared what should be done? Suppose, as is not unlikely, that mechanism *A*, which underlies Calvin's ADHD, is not widely instantiated across cultures because our ways of managing attention are culturally learned.[16] Perhaps *A* is the result of a domain-general mechanism and develops in some niches, but not others, or perhaps it is a domain-specific mechanism that develops vastly different tendencies in different niches.[17] *If we ask, has*

[16] Indeed, there is a suggestive correlation between high rates of ADHD diagnoses and state laws that penalize schools when they fail to meet the standards set by No Child Left Behind (Miller, 2014).

[17] These are two different ways of parsing what 'shared' might mean, according to the two explanatory models outlined earlier. Importantly, both are abhorrent to Murphy's view, as they severely limit the number of generalizations that can be drawn about most humans. My sympathies lie with the anti-nativist and anti-modularity hypotheses of Sterelny's view, according to which a good deal of humans' information processing structure is not innate and in the head, but external and in the cultural niche. This is important because the

something gone wrong here? Murphy must reply *no*. There is no true generalization that can be made about how this mechanism tends to function in most humans. And the same goes for any other cognitive mechanism which is unevenly distributed across human populations, of which there are liable to be many.[18] On his account, these simply won't enter the nosology.

The way Murphy has framed it, nothing about any differentially distributed psychological entity rises to the level of interest necessary for being a mental disorder. The notion of normal human nature that he relies on generates a taxonomy of breakdowns that does not adequately accommodate cross-cultural cognitive diversity because it does not fully capture what is interesting about the way human minds fail. In the hypothetical ADHD case, the problem Calvin has still seems very much rooted in the malfunction of a psychological entity. Murphy's picture, however, is only interested in those mechanisms we share, and not fully sensitive to the ways we differ.

3. Saving the Two Stages

In which direction do we proceed? What if a taxonomy of breakdowns as composed by Murphy's stage one does not capture everything that is interesting about the way human minds fail? Put another way, what will it take to consider people suffering with symptoms of ADHD or latah or any other condition to be candidates for disorder without recourse to norms of human interest? Because if the story told by Henrich et al. is right, humans have far less in common psychologically than Murphy is likely to need to get his project off the ground. Can the two-stage view be modified so as to retain the virtues mentioned above, and still capture what is interesting about the many ways in which human minds can fail?

I hope you share the intuition that the kind of response given by Murphy in the hypothetical ADHD case is suspect, and not just because we have an interest in patients' welfare. If you are motivated by this problem, a dilemma seems to emerge: either rethink human nature, or rethink the two-stage view. Next in 3.1 I will consider the possibility of

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problem here may be seen as much worse if it turns out that there is not much at all which is stable or generalizable about human psychological nature

[18] One might also point out a similar difficulty for identifying shared features of human psychology across times.

modifying the notion of normal human nature on Murphy's account. I end up rejecting this move because it will actually make accommodating the suffering caused by mental illness even more difficult. In 3.2 I consider the possibility of modifying the two-stage view.

3.1 The First Horn: Expanding Human Nature

After considering the manifest psychological variation revealed by the CCD picture, one might be tempted to think something like the following: *if we really do have different minds we should expect that we break down in different ways as well. There should be ways of specifying failures in contingent aspects of human psychology, which are candidates for a psychiatric nosology, on any adequate account.* Is there, then, another way of thinking about human nature, compatible with the CCD picture, which psychiatry might rely on?

At one point in his book, Murphy suggests that it may be acceptable to sort people into classes, and specify a range of normal properties for each class. For example, the eyes of babies, elderly people, and adults have different functional tendencies, and expectations for what is statistically normal reflect this fact (Murphy, 2006). If the nomological notion of human nature is expanded to include properties that belong to some subsets of humans, it would grant researchers the ability to specify failures in contingent aspects of human psychology in a natural way. For instance, we would be able to narrow the domain for our generalization about Calvin's mechanism *A*, perhaps specifying that it tends to develop a certain way in the East and another way in the West. Using this modified notion, if Calvin's mechanism *A* is statistically abnormal with respect to the normal functional range for Westerners, then it is evidence of a breakdown.

Whether this is an acceptable move in part depends on whether relativized properties are proper parts of nomological human nature. Machery himself emphatically argues that they are not. In a 2012 response to Tim Lewens, Machery defends what he calls the *universality proposal*, his claim that only those generalizations that hold for most humans are properties of human nature. If we relax this proposal and include properties relativized across age groups or biological sexes, he reasons, then why not include properties relativized across small subcultures or kin groups? Machery argues that the resulting notion is absurdly arbitrary since it is too inclusive (Machery, 2012).

I will have more to say on what makes a notion of human nature scientifically useful in the next section. Regardless, it is clear that rejecting the universality proposal will have disastrous consequences for a two-stage methodology as Murphy has outlined it. Remember that Murphy's original motivation for using a notion of human nature to determine what counts as a breakdown in stage one was to prevent pseudoscientific diagnoses like drapetomania from entering the nosology (Murphy, 2006). This is still vitally important.

Suppose that you are handed a culturally relativized taxonomy of breakdowns and asked which count as mental disorders. What reason would there be for claiming, in an evaluative sense, that Japanese people ought to think Japanese and Paraguayan people ought to think Paraguayan?! If we make the move from thinking that it is statistically abnormal for people raised in a certain cultural context to have certain cognitive mechanisms, to thinking that it is necessarily *disordered* for them to have those mechanisms, the ugly specter of paternalism rises, such that psychiatric diagnoses are made based on unjustified evaluative standards. Imagine other explanations of this form—*your mind should be shaped this way because you're a woman, because you grew up poor, etc*. Quite plausibly, no relativized breakdowns would ever go on to be considered disordered at stage two. This supposed fix for scientific psychiatry has actually made Murphy's problem worse, and for these reasons the first horn of our dilemma should be ruled out.

Before moving to the second horn of the dilemma, I would like to consider one further objection. Namely, that one way to avoid the difficulties I have proposed is by denying that they are there. It might be argued that, despite our manifest psychological diversity, the generalizations that can be drawn are enough for Murphy's program to capture what is interesting about mental illness. In order for this to work, when there is evidence of cross-cultural variation, researchers must abstract away from those differences in order to make an appropriate generalization which is a property of normal human nature. So for example, if we do not all share the same visual system, then researchers abstract away from the properties of those systems that make us differ until it can be said that we do. If moving up a level of abstraction is not possible, researchers might instead identify the shared developmental mechanism responsible for the phenotype in question.

So though we may have wildly different, culturally transmitted mechanisms managing attention, we may have a shared mechanism for acquiring them.[19]

Perhaps, so described, these mechanisms will be operating outside of their normal range in our exemplars, and perhaps not. Of course, this is an empirical question. But I would like to sound a note of caution—for both of these strategies, loss of detail makes it more likely that the appropriately specified psychological system is functioning within its normal range in our exemplars.[20] Further, my worry about relativized properties still applies here. Claiming that it is a part of human nature for a developmental mechanism to produce several different functional attention systems in different environments does not answer the question of whether Calvin's behavior is causing him harm.

3.2 The Second Horn: Rejecting the Search for 'Breakdowns'

Before suggesting how the two-stage view might be modified, I want to stress that it need not (indeed, ought not) be rejected entirely by, for example, building a normative theory for what counts as disorder into the science of psychopathology, or rejecting the idea that there are such things as mental disorders altogether. Though this is not the place to fully defend the two-stage view of clinical psychiatry, it is worth recalling some of its virtues: realism about mental disorders, a scientifically reputable methodology, and its use as a critical tool to keep paternalistic diagnoses like drapetomania out of a nosology of mental disorders. Separating psychiatry's descriptive and evaluative projects is both an empirical benefit and a defense against the pernicious influence of norms of human interest.

Of course, one precondition for the practicality of the separation of fact and value the way Murphy would have it is the 'common core' picture of the mind that he inherited. In defending his account, especially his use of normal human nature to ground failures in cognitive mechanisms, there is an underlying assumption that stage one researchers can get a lot of work done in the lab before allowing norms of human interest to enter the picture.

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[19] Many thanks to Eli Shupe for interesting and fruitful discussion on this point.

[20] I think part of the temptation of this view comes from the apparent success of pharmaceutical tools to mitigate psychiatric problems. I am not denying that psychoactive drugs can be good clinical solutions, but these chemicals (antidepressants, stimulants, antipsychotics, mood stabilizers etc.) solve both *very general problems* and a *very diverse set of problems*. In many cases, in current practice, it is like using a sledgehammer where a scalpel will do, neatly stepping around the question of which diagnoses necessarily applies to the patient.

Because the core of human psychological nature is large enough, the thinking goes, fact and value can be separated such that researchers will not have to prejudge which 'malfunctions' or 'failures' in human psychological nature are mental disorders, and which are not. As I have argued, this will simply not be possible if the CCD picture is right, because much of what is interesting for clinical psychiatry falls outside the boundaries of the common core.

My suggestion is as follows: to achieve strict separation of psychiatry's descriptive and normative projects, stage one researchers should simply catalogue human cognitive mechanisms, to what extent they are universal or culturally acquired, how they operate, and under what conditions. One immediate worry is methodological. Perhaps a taxonomy of this kind will somehow not be 'enough' for a normative theory of mental disorder at stage two to work with. This worry strikes me as unwarranted. I believe that the two-stage view's difficulties with cross-cultural cognitive diversity can be solved by thinking critically about how the two stages are supposed to interact. On my view, the second stage of clinical psychiatry does not require a taxonomy of breakdowns from the first stage.

If this new methodology can be vindicated, it will provide theorists and clinicians two great advantages. First, what is and is not true of most human beings need not have an influence on a stage one research program. Instead of worrying about where to draw the line between normal and abnormal, stage one researchers can draw bell curves and population frequencies without making assumptions about what we should expect to find in any one individual's head—in virtue of their being human, or for that matter from Chicago's south side. Second, by reinforcing a strict boundary between the descriptive and evaluative in two-stage psychiatry, we may reexamine whether and how a concept of human nature is useful in thinking about mental disorder. Even if it cannot differentiate mental illness from mental health, statistical atypicality could provide us with other kinds of information from the perspective of clinical psychiatry.

There are two tasks left ahead, then: to show that a stage one that does not delineate breakdowns is methodologically sufficient for a two-stage program, and to elaborate on how facts about human variation are useful for the discipline. Happily, the second task may shed light on the first. In the remainder of this section, I will return to the

question of Machery's universality proposal, examine its implications for defining the target of scientific research.

3.2.1 The Life-History Trait Cluster View

In a recent paper, Grant Ramsey identifies three desiderata for a non-essentialist notion of human nature. He argues that the concept should,

(D1) be the empirically accessible (and thus not based on occult essences) subject of the human (psychological, anthropological, economic, biological, etc.) sciences,

(D2) help clarify related concepts like innateness and naturalness, which are associated with human nature, and

(D3) characterize human uniqueness (Ramsey, 2014).

According to Ramsey's view, which he formulates as a direct competitor to Machery's nomological notion, the human sciences ought to investigate associations between antecedent and consequent traits among all possible human life histories. The statistical trends we uncover are properties of human nature on this view, which he calls the Life-history Trait Cluster (LTC) account.

The LTC notion of human nature construes what it means to 'behave naturally' in a relative way, where "[i]nstead of saying that it is natural to C, we should instead say that it is natural for As to C where 'A' denotes the antecedent(s) and 'C' denotes the consequent" (Ramsey, p. 990, 2014). For example, 'lactation in females is a part of human nature' would be an appropriate claim on the LTC account, relating the antecedent trait 'being female' to the consequent trait 'lactation'. Says Ramsey, "[i]f there is to be an empirically-accessible human nature that sheds troubling essentialisms, then it should be founded on the unique pattern of traits within the collective human life histories" (Ramsey, p. 992, 2014).

Ramsey is quick to note that the LTC account's embrace of diversity and rejection of the universality proposal has one counterintuitive consequence, namely that it is as Machery would fear: incredibly inclusive. He counters that, although it is not unique to humans, female lactation is surely an important aspect of the human species. Indeed, there

are countless more trivial associations which are parts of human nature on the LTC account (for instance between having mass and eventually dying). Ramsey accepts the inclusion of trivialities, noting that the "[i]nteresting [associations] often occur when the antecedent is not universal, and when changes in the antecedent are causally associated with changes in the consequent", and order to narrow the focus, he defines *uniquely human nature* as "the subset of the antecedent-consequent associations that are unique to the human species" (Ramsey, p. 992, 2014).

On one reading, Machery's concern over a notion of human nature like the one provided by the LTC account is methodological, questioning whether Ramsey's account can satisfy D1. Think of all the associations which are unique to humans because the antecedent is especially restrictive. If human nature is *exactly how humans are, however they are* the thought goes, will it be a useful concept for scientific research? Ramsey counters that it is actually the nomological notion of human nature which fails to meet D1 as a result of its adherence to the universality proposal, questioning why we should assume that it is "sameness across individuals that is of interest to scientists, and not their variation?" (Ramsey, p. 986, 2014). I am in agreement with Ramsey that human diversity is of crucial scientific interest. Indeed it appears that the seemingly arbitrary mess of associations that the LTC account identifies is just what the human sciences are investigating, whether or not the subset that applies universally is of special interest.

On another reading, however, Machery's concern represents a terminological disagreement, as in *that's just not what is meant by human nature*. I am not much interested in settling the terminological dispute. What is crucial to recognize here is that what is universal does not determine what is interesting from the perspective of clinical psychiatry, so if Machery is right, then human nature is a concept of limited use in thinking about mental disorder. In fact, as a purely descriptive catalog of trait frequencies in the human population, the LTC account could be useful for psychiatric diagnosis in particular, shedding the need to identify breakdowns, and leaving space for stage two to contribute the evaluative work. Therefore, since both Machery and Ramsey make clear that their notions

are empirically accessible subjects, we may proceed by thinking of Ramsey's LTC view as an account of *human diversity*, rather than of human nature.[21]

What is most intriguing about the LTC view and its rejection of the universality proposal is the possibility that the conditional schema that Ramsey gives may be mapped onto distinction between symptoms and underlying causes. It is very likely that what we now call depression, for example, admits of many, causally heterogeneous explanations which may be more usefully conceived of as separate diagnoses. Understanding the set of antecedent traits that result in certain symptoms is needed to make more accurate diagnoses.

A taxonomy of the many and varied components of the mind will also be crucial for understanding what causal pathways may best ameliorate symptoms for any particular subject. Whether or not an individual fits a diagnostic category is a different question from what therapeutic process is most appropriate for that subject, and locally specific information provided by the LTC account will be central to discovering this. Locally specific information may also help us make sense of culturally bound syndromes like latah and ADHD.

3.2.2 The LTC and the RDoC

It may not take much imagination to begin to mold the discipline of psychiatry towards a two-stage project like the one I have outlined above. The National Institutes of Mental Health's *Research Domain Criteria* (RDoC) matrix has much in common with the kind of purely descriptive taxonomy of cognitive mechanisms which I am envisioning as the ideal output of stage one. Instead of being organized around current diagnostic categories, the RDoC is organized according to our best research programs in the sciences of the mind and brain. Research categories often take the form of symptoms such as 'hearing voices' or capacities such as 'self-knowledge'. It is intended "as a framework to guide classification of patients for research studies, not as an immediately useful clinical tool" (NIMH, 2015).

[21] Surely Ramsey and his supporters will reject this move, but while it's clear to me that human variation is critical to our understanding of ourselves, there is more to be said to support the idea that 'human nature' is the rightful name for either view.

Perhaps forming a list of diagnostic categories is an implicit goal of psychiatric research. Murphy and others reject the idea that diagnostic categories can be delimited by clusters of symptoms as is done with the DSM. I quite agree. Murphy's search for breakdowns, then, is motivated by the hope that clear disease categories will fall out of the search for causal mechanisms. But we have been given no reason thus far to think that this might be the case, nor that it need be the case—even without the issue of cross-cultural diversity to contend with. In fact, the assumption that clear disease categories will result from the search for causal mechanisms is now being questioned by philosophers of psychiatry. As Kari Theurer and Daniel Hartner note in a recent project, it is looking less and less likely that those clinically relevant diagnoses we are most familiar with, such as depression and anxiety, will even be preserved at the level of neurobiological mechanisms (2015).

The search for breakdowns in stage one is Murphy's mistake. On my view, theorists and clinicians will not need lines to be drawn between sickness and heath or normality and abnormality at stage one because the purpose of a stage two research program is precisely to supply these kind of normative considerations. This way researchers can refocus their efforts on "the pursuit of causal mechanisms that can undergird new therapies" (Tabb, *ms*). This will involve, as philosopher of psychiatry Kathryn Tabb has recently put it, dropping the pretense that "psychiatry's scientific and practical objects are one and the same," so that, "the fits and starts of biomedical research need not immediately impact clinical nosology" (Tabb, *ms*).

Care must be taken therefore, that we do not use an understanding of human diversity like that provided by the LTC account to double down on our commitment to the assumption that conceptually distinct mental disorders will fall out of further work with a project like the RDoC. Theuer and Hartner warn researchers of this possibility when they argue that "[p]sychiatry cannot hope to map diagnostically useful categories on to underlying multilevel mechanisms, no matter how complicated, because psychiatry is uniquely and precariously situated at the boarder of empirical facts and values" (2015). At the present time, it is not clear whether the RDoC is committed to keeping conceptual and methodological distance between the lab and clinic. As the NIMH currently notes,

> "[t]o date, there has been general consensus that the science is not yet well enough developed to permit neuroscience-based classification. However, at some point, it is necessary to instantiate such approaches if the field is ever to reach the point where advances in genomics, pathophysiology, and behavioral science can inform diagnosis in a meaningful way. RDoC represents the beginning of such a long-term project" (2015).

4. Concluding Remarks

In this paper I have tried to show two things. First, that Murphy's account of a two stage methodology for clinical psychiatry generates a taxonomy of breakdowns that cannot fully capture what is interesting about mental illness, and that some serious rethinking of its methodology is in order. Second that the way forward is to recommit ourselves to the methodological separation of psychiatry's descriptive and evaluative stages. Avenues for further research include critical assessment of what place normative concepts like well-being and flourishing have in psychiatry, and how they help define the class of mental disorders. Ultimately, I hope that clear thinking about both stages will lead to clarification of concepts like mental disorder and diagnostic category.

As I have argued, it is a mistake to think that the sciences of the mind can only be helpful for psychiatric diagnosis if they can determine what is normal or abnormal. The first stage of psychiatry is useful not for identifying *whether* a patient is suffering, but *how*. Calvin, his caretakers, and his therapists are best suited to answer the first question.[22] And when they need to find what therapeutic intervention will best help him, a taxonomy of the many possible human cognitive mechanisms and their functions seems exactly the place to look. At this second stage, clinicians may well make use of information regarding the statistical normality of Calvin's functioning, in general, or perhaps even relative to a particular population. Our lack of ability to draw neat lines around mental disorder on purely statistical grounds should be expected and embraced.

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[22] I do not mean to imply that there is some sort of priority in time here, such that stage two must happen before stage one or vice versa. Indeed, if purely descriptive, stage one researchers can act more or less autonomously from the clinic using a schema like the RDoC.

3. INDIVIDUALISM AS A SOLUTION TO PATERNALISM IN PSYCHIATRIC PRACTICE

Self-knowledge is a difficult thing. Many have had the experience of knowing that a friend or partner is in a bad mood before she herself realizes it. Similarly with mental illness, it seems that a person may be sick without realizing it, or even while denying it outright. Anosognosia, the lack of awareness that one is mentally ill, is most visible in cases of dementia or brain damage, but recent insights in psychology have shown that human beings generally lack accurate introspective awareness in matters of our own well-being.[1] Getting this right—whether or not someone is flourishing psychologically—is crucial in psychiatry, and self-report cannot always be relied upon.

At the same time, many have been in the unfortunate position of having to defend themselves from harmful accusations that they are unwell. Take, for example, the early 20th century pathologization of homosexuality. No doubt there was agreement on some descriptive facts between psychiatrists and their subjects, but such diagnoses are none the less inappropriate because the evaluative standards they are based in are unjustified. Any institution which enforces unjustified evaluative standards is harmful, and depending on what normative scheme is operative in our schools, prisons, and clinics, we are in danger of characterizing, and thereby mistreating, individuals as unwell who aren't. Theorists should have some principled way to resist what I will call the *problem of paternalism* in psychiatry, the frequent occurrence of clinical intervention—including diagnosis itself—which conflicts with an individual's psychological flourishing.

In this paper, I will address the problem of paternalism in psychiatry by framing it in terms of anosognosia. In the first section, I will elaborate on the complexity of

[1] For an extended treatment of this, see philosopher Dan Haybron's excellent book *The Pursuit of Unhappiness* (2008).

paternalism, by situating it in both its philosophical and historical context. Following the work of Daniel Groll I will argue that, in the face of avowals from competent patients that they are not ill, the burden of proof falls on the clinician to show that a diagnosis is justified. In section two, following Valerie Tiberius and Alexandria Plakias' work on well-being, I will consider what principles can provide such justification. I will argue that a theory with properly justified evaluative standards for psychiatric diagnosis must have normative authority. I consider George Graham's account of mental disorder in his 2010 book, *The Disordered Mind*, and argue that this contemporary account also fails to have normative authority. Finally in section three I will argue that in order to solve the problem of paternalism, psychiatry must ground what it means to be mentally ill[2] or mentally healthy in the concerns of individual patients, and consider some objections to this view.

1. The problem of Paternalism

The problem of paternalism in clinical psychiatry has a complex history. Centrally, it involves whether and how clinicians meet two rather uncontroversial standards in their reasoning about patients: first, that they be consilient with the other sciences of the mind, and second, that they use justified evaluative standards for psychiatric diagnosis. Historically, many different evaluative standards have been employed in diagnosing mental disorders, and not all standards have successfully captured only true cases of mental illness. To understand the problem of paternalism in psychiatry, then, one must bring together several threads. First, in 1.1 I will consider, generally, what makes an action paternalist. Then in 1.2 I will consider the harms involved in psychiatric diagnosis, especially inaccurate diagnosis. In 1.3 then, I will be able to articulate what makes paternalist action in clinical psychiatry especially problematic. Finally in 1.4, I will illustrate how the problem of

[2] Following work in earlier chapters, these terms will be used in the following ways for clarificatory purposes: *mental illness* refers to any way of being in which an individual's flourishing is significantly impaired or limited by some features of their psychology irrespective of what those features are, *mental disorder* refers to a psychological condition fitting one or more diagnostic categories that causes mental illness, and *typical deviation* refers to a psychological condition fitting one or more diagnostic categories irrespective of whether there is mental illness. To my mind, the interesting question here is the question of whether or not a patient knows they are mentally ill, though most theorists frame this in terms of disorder—of course, disorder implies illness but not vice-versa.

paternalism arises in contemporary theorizing about mental disorder, using two hypothetical examples.

1.1 First Pass: What Makes an Action Paternalist?

In his article on the subject, philosopher Daniel Groll suggests that the concept of paternalism in medicine is best seen as a conflict between two principles central to modern medical ethics. As he summarizes,

> "[t]he principle of beneficence (henceforth the '*beneficence principle*') enjoins clinicians to act in ways that are ultimately good for the patients in their charge. The second central principle of medical ethics is that of respect for autonomy (henceforth the '*autonomy principle*'), which enjoins clinicians to, unsurprisingly, respect the autonomy of their patients. This means, roughly, that clinicians must respect the patient's decision about his medical care" (Groll, p. 195, 2014, italics added).

The rationale of the beneficence principle is fairly straightforward. In a simplistic sense, the goal of psychiatric treatment is to heal or help people flourish psychologically, and therefore clinicians must act in ways that are good for patients. The rationale of the autonomy principle, on the other hand, deals with patients' *rights.* Every individual has the right to autonomy over their own person, and others ought to respect this. As Groll is quick to point out, respecting patients' rights and patients' good can sometimes come into conflict. Especially when a patient makes decisions that run counter to her interests, "[t]he specter of medical paternalism arises in this conflict: clinicians act paternalistically when, for the sake of the beneficence principle, they override or ignore the autonomy principle" (p. 197, 2014). More generally, we may understand paternalism as acting for the sake of a subject's good regardless of their will. Psychiatric diagnosis and subsequent clinical intervention, when these actions ignore patient autonomy, is paternalist.

Not all cases of ignoring an individual's autonomy for the sake of their good are necessarily impermissible, of course. Consider what you might do to prevent a non-native language speaker from walking onto a minefield. Though it counts as paternalist, it seems you would be perfectly justified to physically restrain that person, at least until they could

be made to understand the danger that lies ahead (Groll, 2014). Nevertheless, whether permissible or impermissible, paternalism implies wrongdoing in virtue of violating the autonomy principle. Paternalist action is *pro tanto* wrong. For this reason, Groll argues, "the burden of proof will fall on the clinician (or philosopher) that wants to argue that paternalism is justified when dealing with competent patients" (p. 197, 2014).

1.2 Is Psychiatric Diagnosis Harmful?

What makes paternalist action in clinical psychiatry especially risky? Wanting to help make people 'better', in whatever sense is appropriate, is an honest aspiration—but care must be taken about what is meant by 'better'. Who gets to decide who is mentally ill, and when, is of grave importance when the downstream effects of receiving a psychiatric diagnosis can include limiting the autonomy of the diagnosed. Because diagnosing an individual as having a mental disorder can be a way of saying that they have a condition that is bad and ought to be corrected, and that their pattern of behavior is somehow deviant or harmful, psychiatric diagnosis can be, and has been, used as a tool of social control. And while diagnostic categories themselves already carry evaluative content—we tend to treat individuals diagnosed as mentally ill prejudicially in comparison to those we consider healthy (Banaji, 2013)—it has often been the case that those on the receiving end of psychiatric diagnosis come from stigmatized, disadvantaged, or disenfranchised groups (Satcher, 2001).

For example, there is much controversy surrounding the diagnosis of disorders commonly treated with psychoactive drugs such as antipsychotics, stimulants, and Selective Serotonin Reuptake Inhibitors (SSRIs). Critics argue that a conflict of interest arising between psychiatrists and the pharmaceutical industry's representatives and lobbyists has compromised prescription practices, and led to a dramatic increase in the diagnosis of disorders such as Attention Deficit Hyperactivity Disorder (ADHD), autism, and depression and anxiety disorders (Healy, 2012; Elliot, 2004). The worry is not just that these disorders have somehow been 'invented', but that the medicalization of these individuals causes them harm (Hacking, 2006).

There are also clear historical cases of diagnostic categories which functioned as nothing more than a means of institutionalized oppression. Homosexuality, hysteria, and *drapetomania*, for example, have all once been considered mental disorders. Indeed,

homosexuality continued to be classified as a mental disorder as late as 1973 in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM), despite several studies at the time that showed that homosexual behavior is not linked to serious distress or disturbance. Until the mid-nineteenth century, feeling faint, nervous, or irritable, or 'causing trouble' were thought to be symptoms of a sexual dysfunction afflicting women specifically (Foucault, 1964; Murphy 2006).[3] And perhaps the most shocking case of codified cultural norms, drapetomania, was a diagnosis given to slaves in the years leading up to the civil war, characterized by 'the compulsion to flee' (distinguished from *dyesthaesia Aethiopica*, a slave's lack of respect for the property rights of her owners) (Murphy, 2006). All in all, western psychiatrists have often been "willing or merely compliant agents of political oppression" when it comes to psychiatric diagnosis (Lewontin et al 1984 p.167).

It would be nice to think of drapetomania as a historical artifact, but there are contemporary DSM diagnoses with an eerily similar flavor. Take, for example Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD), diagnoses given, mainly to children and adolescents of color in the United States, characterized by aggressive and anti-social behavior. Even taking for granted that these are genuine mental illnesses that cause individuals to suffer, it is quite likely that the diagnostic label itself perpetuates the conditions of social inequality that cause its symptoms. As Nancy Nyquist Potter puts it, "[t]he concern is that schools and other institutions are not merely identifying an existent mental disorder, but are creating the conditions under which that disorder thrives" (p. 190, 2014). Cases like this introduce the worry that psychiatric practice today is still merely a way of pathologizing unwanted behaviors, and that its prescriptions do not actually encourage psychological flourishing.

1.3 Paternalism on Rough Epistemic Terrain

Even given the above considerations, we should take seriously the idea that there is genuine mental suffering in individuals that can be explained naturally, whether by recourse to social and environmental facts or underlying neuropathology, or both. This allows the discipline of psychiatry to be situated as consilient with the other sciences of the mind,

[3] Hysteria's paradigmatic symptom profile survives in the DSM today under the auspices of somatoform and dissociative disorders.

which is essential to good clinical reasoning. Further, when psychiatry is grounded in objective facts about the individuals it characterizes, the possibility for culturally relative norms about what behaviors are and aren't desirable to compromise psychiatric practice is limited.

At the same time however, conceptualizing the discipline of psychiatry as a science seems to put a sharper point on the basic problem. While it is true that psychiatry must remain objective in the above sense, it is also *essentially* a normative enterprise. Evaluative concepts such as health and wellness are crucial to psychiatric diagnosis. Indeed, diagnostic categories themselves carry evaluative as well as motivational content. We consider a person diagnosed with a mental disorder as having the same kinds of reasons to seek treatment as they would if they were diagnosed as diabetic.[4]

For all these reasons, theorists and practitioners interested in mental disorder are under an additional burden to make justified diagnoses. The puzzle of anosognosia manifests itself in the difficulty of achieving this goal, that is, accurately and objectively identifying mental illness from a third person perspective, while at the same time respecting the individual subject's autonomy. This puzzle is not unique to psychiatric medicine.[5] But it is perhaps made more difficult when, compared to symptoms of physical illness, symptoms of psychological illness are often less readily apparent, less well understood, and confounded by the tough philosophical and epistemic issues that surround the mental.

In other words, what makes paternalism in clinical psychiatry especially problematic is that it occurs in such uncertain epistemic terrain. Symptom recognition relies on the judgement of clinicians, and clinicians are fallible.[6] In a recent paper, for example, Michael Bishop and J. D. Trout, list and review nine families of diagnostic method currently used. Some of these methods, especially those which rely more heavily on the opinion of the clinician, have "an appalling track record" when it comes to accuracy (Bishop & Trout, p. 1027, 2013). Structured methods like computer-aided interview fare better but are far from perfect. Some methods have not been validated at all (Bishop & Trout, 2013). Even with

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[4] For an interesting and nuanced perspective on this see Arpaly (2005).
[5] Think, for instance, of those who choose to undergo helminthic therapy for autoimmune disease. They may deny that they are sick, while fully aware that they now host hookworms.
[6] Some worry that an ineliminable tacit dimension to clinical judgment further clouds the issue (Thornton, 2013).

expert skill, clinicians may fall prey to a number of cognitive biases which can influence diagnosis, such as confirmation bias, availability bias, stereotyping, and others (Poland & Caplan, 2004). Epistemic difficulties create difficulties in producing justifications.

Given that the burden of proof is on the clinician to justify paternalist action with explicit consideration of the individual patient's circumstances, it is surprising how frequent paternalist diagnosis and intervention occurs.[7] *The problem of paternalism in clinical psychiatry is the problem of the frequent occurrence of clinical intervention—including diagnosis—on the basis of unjustified standards.* Overriding a patient's autonomy in a psychiatric context should be considered unwarranted by default, unless it can be shown that this action is all things considered good for the patient. Without this subsequent justification, the clinician fails to employ good clinical reasoning, and their paternalist actions are harmful.

1.4 Grappling with the Descriptive and the Evaluative in Psychiatry

Criticizing the state of psychiatric practice today is easy. What of how philosophers of psychiatry think about mental disorder in idealized contexts? Does ideal diagnostic procedure employ good clinical reasoning?

In their helpful essay, Pieter Adriaens and Andreas De Block sort extant views of mental disorder into three groups. As they write,

> "[t]he philosophical debate about mental disorder is mainly a discussion between normativists and naturalists. Naturalists hold that (mental) health is a natural concept, while normativists argue that it is a normative one. A third strand defends a hybrid concept, claiming that the concept of mental disorder involves a conjunction of facts and values" (Adriaens & De Block, 2011, p. 19).

All three groups are concerned with mental activity which is in some sense *abnormal.* According to Adriaens and DeBlock, "[a]ll naturalist approaches are convinced that a

[7] This has prompted some theorists to conclude that the discipline "disempowers patients while justifying professional authority" (Bracken & Thomas, p. 125, 2013). Indeed, there are large groups of individuals who see themselves as 'survivors' of their experiences with clinical psychiatry (Bracken & Thomas, 2013). The stigma against the survivor movement among practitioners is so strong, it has lead supportive clinicians to write about resisting bias pseudonymously (Anthony, 2004).

mental disorder is a deviation from a norm, but unlike normativists they argue that the relevant norm is a *biological* norm" (Adriaens & De Block, 2011, p. 19, italics in original). So, in all three cases, it is abnormality which is supposed to justify the evaluative claim that a patient is disordered. In order to better understand the difference between normativist and naturalist views, let's consider their judgments in the following two cases.

> *JOHN HENRY is a successful, high-powered lawyer at a Washington firm. He is well-known for taking cases on behalf of racial minorities and LGBTQ individuals, which are both communities of which he considers himself a constituent. John is known around the office for putting in long hours, much longer than any of his colleagues, often at the expense of restful sleep. He sometimes feels that his job puts him under considerable stress, but, at the same time, dislikes taking holidays or breaks. John Henry's physician has suggested that he ought to monitor his blood pressure more closely. Recently, he has been experiencing short periods of trembling and shortness of breath.*
>
> *VINCENT lives alone on a remote piece of property in the Pacific Northwest. After college he began to remove himself from his social circles, and now spends most of his time in his home, making highly detailed wooden sculptures, based on the suggestions of 'other voices.' Vincent has no phone or internet access, and interacts mostly with the owner of the general store in a nearby town. He make a modest living by occasionally making a sale of a sculpture. His buyers find him to be distant and abrasive, and are often disturbed by his behavior, and lack of adherence to social norms.*

Beginning with normativist approaches, then, take the normativist view called *constructivism*. Constructivism about mental disorders, as it is summarized by philosopher of psychiatry Dominic Murphy in his book *Psychiatry in the Scientific Image*, is a view distinguished by several related theses. It takes it to be the case that there are no objective

facts that one can appeal to, to decide whether or not someone has a mental disorder. Instead, all the relevant facts are social ones, as any talk of 'normal' and 'abnormal' is grounded in our values. It follows from this that there can be no science about mental disorder. Mental disorders are just constructs used to talk about certain kinds of norm transgressions (Murphy, 2006).

As I have argued, this lack of scientific objectivity is bad clinical reasoning. On a constructivist account, whether or not someone is disordered will not necessarily accord with the underlying causes of their behavior. For example, it is not whether Vincent hears voices, but whether he admits to hearing them or reacts to them in any other way, which makes him stand out. At least today in the West, Vincent deviates from common social norms. Plausibly therefore, a constructivist may consider a person like him to be disordered and therefore mentally ill, whether or not he hears voices at all.

In addition to being bad clinical reasoning, the very relativization of constructivist judgments of Vincent to a particular (Western, contemporary) set of norms illuminates how the view is infected with paternalism. One might easily imagine that Vincent would be motivated to deny accusations that he is unwell, while agreeing that he hears voices, or that he prefers to be alone. Is this a case of anosognosia, or is Vincent correct that he is not mentally ill? What makes it the case that he ought to adhere to these norms? Because how Vincent himself fares is never examined, constructivism cannot provide a defensible answer.[8] We do not know whether this prescription is good for Vincent.

At the other extreme from constructivism is a naturalist view Murphy calls *simple objectivism*, which takes objective facts about human psychology to be the only relevant facts. To be mentally disordered according to simple objectivism, then, is to function atypically relative to our best current theory of psychological functioning. If our best neuroscience says that John Henry's, or Vincent's brain or psychological functioning is atypical, then they are disordered.

One way of caching this out, as Murphy mentions, is to conclude that there are no such things as mental disorders, only somatic diseases. Thomas Szasz appears to have been

[8] Conceivably, there may be a normativist view other than constructivism which takes the psychological flourishing of the individual into account. I argue however, that as long as the place of descriptive facts and consilence with other sciences of the mind are ignored, normativist accounts should be rejected.

an eliminativist about the mental, and famously argued for such a view (Murphy, 2006; Szasz, 1974). However, even though physicalists might think that any kind of talk about psychological entities will have an explanation in terms of the behavior of physical entities, it does not follow from this that there is nothing distinctively interesting about the sciences of the mind and their subject. Christopher Boorse, for example, would be open to diagnosing John Henry and Vincent with mental disorders, as long as it were demonstrated that they deviate from the statistical biological norms of human psychological functioning (Adriaens & DeBlock, 2011).[9]

Again, both John Henry and Vincent may agree that they are statistically atypical in some way, and still claim that they do not need any kind of psychiatric intervention. Do they have accurate self-knowledge in this regard? While Boorse's view does effectively consider some important descriptive facts, whether or not the subject is flourishing psychologically is not part of what is examined. Further, as I have argued, it is unclear how statistical atypicality alone, without some evaluative theory, can be a guide to mental illness. Atypicality, after all, is a notion at some distance from suffering or distress.[10] As Murphy (2006) puts it, evaluative judgments cannot be all there is to mental disorder, but neither can they be neglected. Paternalism again rears its ugly head; naturalist accounts make claims about what is and is not mental disorder without the aid of any evaluative theory to justify them.

2. Normative Authority

Both the normativist and naturalist accounts examined above run into a similar kind of trouble. When confronted with plausible denials of the accuracy of psychiatric diagnosis, neither account has the right tools to draw a line between misdiagnosis on one hand, and illness and anosognosia on the other. Without the right normative theory, they fall prey to paternalism.

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[9] Boorse makes a distinction here between *disease* and *illness*, arguing that an individual with a disease is ill when that disease is harmful to them. This suggests to me some terminological dispute, and that debate between Boorse and his contemporaries may be resolved by examining the referents of 'disease' and 'illness' respectively.

[10] Adriaens and DeBlock (2011) further note that not all share the optimism that "a good naturalist account of the concept of mental disorder provides the necessary tools to revolutionize psychiatric classification" (p. 23).

There are several important questions which follow from the failures of naturalist and normativist accounts of mental disorder. One question concerns just what the right normative theory for psychiatry is. Investigating mental disorder without first understanding what makes a condition an illness is in some sense putting the cart before the horse. A second question concerns how this normative theory is related to the right descriptive or explanatory theory. Clinicians must be able to show how their evaluative claims have a hold on their subjects. Answering both of these goes beyond the scope of this paper, so in what follows, I will focus on the first question. Here in section two I will highlight one feature which is essential for a normative theory with properly justified evaluative standards. Namely, it must have *normative authority.*

To understand how normative authority is crucial to psychiatric diagnosis, it is helpful to examine a similar theoretical issue. In particular, the tension between the putatively distinct realms of fact and value is a familiar challenge to those philosophers working in the ethics of well-being and human flourishing—for example in the philosophical literature surrounding the fast-growing field of *positive psychology*, which aims to investigate well-being using the psychological sciences. In their paper on well-being, Tiberius and Plakias articulate two competing pressures on a theory of well-being, noting that on one hand, "[w]ell-being aims to pick out an empirical phenomenon that can be measured, compared, and (one hopes) realized in people's lives", and on the other hand that, "it has a kind of normative significance: it *makes sense* to promote well-being, procuring it is a good thing to do" (p. 401, 2010, italics in original). Thus, as Tiberius and Plakias describe the challenge, a good theory of well-being must be responsive to the twin demands of empirical and normative adequacy. As they write,

> "[o]ur argument aims to characterize well-being in a way that is both empirically grounded and able to play the role in our ethical practice that it needs to play. *Normatively*, if our account of well-being ends up being something we have no reason to care about, then we have gone wrong somewhere. *Empirically*, if an account of well-being implies that it cannot be investigated, measured, and achieved, there is reason to look elsewhere," (p. 402, 2010, italics in original).

What exactly gives a theory the kind of normative significance which would justify paternalist action? According to Tiberius and Plakias, a theory that is normatively adequate has *normative authority*, "[t]he feature in virtue of which people have a reason to follow the imperatives of a normative theory" (p. 419, 2010). In other words, a theory that concerns the kind of human-centered value that is important in discussions of flourishing is one that concerns the attributive/relational kind of good, *good for*, where one part of that relation is the individual it is about. It speaks to individuals' *interests.* Without this link, dictums of the theory will at best be uninteresting. Individuals may find that the theory does not address their concerns or actually help them flourish. At worst, individuals may be subject to the kinds of paternalist concerns outlined earlier—they may find that the theory harms them if its imperatives take the form of social or legal demands that can limit autonomy.

Because psychiatric practice operates in exactly this kind of context, properly justified evaluative standards for psychiatric diagnosis are of utmost concern. In order to ensure that the concept of mental illness will be a useful one for theorizing about human flourishing which picks out a real psychological phenomenon in human lives, it must have normative authority. In particular, we should find that (1) what the theory recommends actually promotes the interests of everyone to whom the theory is supposed to apply, and (2) that there are standards of justification for these recommendations.[11] In what follows in 2.1 I will consider how one kind of hybrid theory of mental disorder fares in this regard.

2.1 Failures to Provide Normative Authority

The standard way of reserving some place for both normative judgments and objective facts in a theory of mental disorder is to analyze the concept, and see what theses if any are supported by our commonsense intuitions about what counts as disorder. This methodology has attracted many contemporary analytic philosophers, who typically share the view that some combination of Jerome Wakefield's 'harm-dysfunction' thesis and a

[11] It should be noted that I diverge from Tiberius and Plakias' work here in one important respect. In their account of well-being, Tiberius and Plakias rely on a kind of internalism about reasons, and suggest that theories with normative authority supply individuals with motivating and justifying reasons. Personally, I am unsure that human individuals are sufficiently like the kinds of agents most reasons internalists are concerned about, and thus would like to distance myself from reasons-talk. That said, what I have to say here should be compatible with many different accounts of what and individuals' 'interests' are.

folk-psychological picture of the mind will generate the concept of mental disorder as it is 'prototypically understood' (Graham, 2010). Following Murphy, we may call this hybrid account the 'orthodox view' (Murphy, 2006).

According to the orthodox view, a particular dysfunction is a mental disorder when it is both distinctively mental, and harmful to an individual. Clinicians decide which kinds of dysfunctions are mental by appealing to existing disciplinary conventions (Murphy, 2006). Perhaps, John Henry should be diagnosed with an anxiety disorder, and Vincent with schizotypal personality disorder, as outlined in the DSM-V. Of course, the orthodox theorist must have some way of determining both when an atypicality is a dysfunction, and what counts as harm. As long as that notion of harm is tangled in existing disciplinary conventions of psychiatry as it is practiced today, then there is a good chance that our contingent cultural values guide inquiry in an unjustified way (Murphy, 2006). In his 2010 book, *The Disordered Mind,* Graham attempts to give one such hybrid account. In the next section, I will argue that his account fails to have normative authority because it does not ground what it means to be mentally ill or mentally healthy in the concerns of the individual patient.

2.1.1 George Graham on Mental Disorder

Graham's account of mental disorder consists of four theses. On his view, a mental disorder is a disability in one or more rational or basic psychological capacities (*rationality-disability thesis*), that has harmful or potentially harmful consequences (*harm thesis*). This disability must have its source in both 'brute neural causes' as well as more central, rational, or 'intentionalistic' activity (*mixed-source thesis*), where the reason-responsive capacities of the source in question are impaired, but not destroyed entirely (*some preservation of rationality thesis*) (2010).

As a hybrid account, one of the virtues of Graham's view is his recognition that normative considerations must be built directly into the concept of mental disorder. In fact, three of his four theses make significant evaluative claims. The harm thesis invokes the idea that mental disorders directly inhibit the flourishing of their subjects. However, this thesis leaves open exactly what constitutes a harm. This is where the rationality-disability thesis,

and the some preservation of rationality thesis come in. Graham proposes that healthy human beings exhibit some standards of rationality, and that the preservation of this rational capacity is what is crucial for mental health. He argues that when a disorder "gums up the works" of our ability to meet this standard, we are categorically harmed (Graham, p. 8, 2010).

According to Graham, then, an individual's irrationality or unreasonableness can serve as a standard for mental disorder. Of course, it is one thing to claim that there are some or other norms or standards of reasoning, and another to claim that a particular theory of rationality applies universally; especially if such a theory is to be grounded in facts about how human beings actually reason. Such cross-cultural claims are notoriously difficult to justify.[12] A theory of rationality must be assessed on its own terms before we can even understand its applicability to a theory of mental disorder.

The theory of rationality Graham endorses is one quite familiar to Western analytic philosophers of mind, which uses a Western, folk-psychological framework to explain behavior. Graham calls this the rationality-in-Intentionality thesis (RIT), which posits that,

> "a rational person in the RIT sense, ideally is not merely devoid of illogical or inconsistent attitudes, but someone with a definite positive description of their character and goals in life. If possible, they choose after deliberation, avoid acting on unreflective impulses, and maintain a certain level of prudence, self-regard or self-responsibility that balances their present or current preferences against next weeks, and next years, those of midlife and possible old age," (Graham, p. 122, 2010).

To further illustrate this kind of rationality, Graham refers to several exemplars which he takes to be paradigmatic of mental disorder. Many diagnoses found in the DSM, including depression and anxiety disorders, delusions, and substance abuse disorders, describe 'irrational' ways of behaving, in the RIT sense. It is because of this apparent irrationality that we should consider individuals with these symptoms as unwell.

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[12] As meticulously outlined in Henrich et. al (2010), a picture is beginning to emerge from recent empirical evidence that—to the extent there is a core of human psychological nature—this core is much smaller than was thought even fifteen years ago. For more on how this effects psychiatric diagnosis see the previous chapter.

Take John Henry, then—so described, John Henry plausibly represents many upper-middle class professionals in the United States, and without knowing much more about him, we may classify his behavior as irrational in the RIT sense. Based on his work schedule, his physical condition, and his physician's advice, John Henry seems to be spending a lot more time thinking about what's happening in the next five years than what's happening in the next forty, perhaps sacrificing his well-being or ability to meet his goals later in life for the ability to meet his goals now. On Graham's view, this kind of behavior is disordered. More obviously, Vincent is irrational in the RIT sense as well simply because he hears voices that do not correspond to his environment. Of course, John Henry and Vincent may claim to be unmotivated by Graham's injunctions to 'act rationally'. Indeed it is likely that both disagree with Graham over just what behaving rationally might consist in. But can they sensibly claim that they are not mentally ill, or do they suffer from anosognosia?

Consider Vincent: perhaps he finds his behavior perfectly warranted, arguing that he is happiest on his own engaging in artistic creation and his own aesthetic experience of the world, and that therefore he is neither irrational nor disordered for doing so. Of course, whether or not one is behaving rationally does not come down to believing so. But it should be noted that the kinds of recommendations the RIT thesis gives are based on a picture of the mind which takes paradigmatic human behavior to be characterized by accurate and reflexive self-direction, and that this has recently been called into question by a growing body of literature that sees much of human cognition as automatic and unreflective (Doris, 2009).[13] Even if Graham's picture of rationality succeeds in defeating these concerns, however, a more serious problem remains.

Remember, mental health, like well-being, should be good *for* an individual; the prescriptions of Graham's theory, in this case for Vincent to 'act rationally', should be good *for* Vincent. As Vincent's protestations reveal, it is an open question whether seeking treatment for auditory hallucinations would be good for Vincent's psychological flourishing. Graham's RIT analysis seems to miss this about Vincent's case, instead making some

[13] Graham, and others who endorse these kinds of reflectivist views—are under a burden to show that we can even come close to being 'devoid of illogical or inconsistent attitudes', or that we choose after deliberation and avoid unreflective impulses much of the time. For more see Doris (2015).

alarmingly specific assumptions about what is good for him without establishing that this is necessarily the case. A clinician following Graham's theory would diagnosis Vincent without considering whether Vincent shared that conclusion, and without considering the possibility that he is not in fact harmed by his 'irrationality'. Unless Graham can show that acting rationally in the RIT sense optimizes *every* individual's interests, his account of mental illness fails have normative authority.

3. Eliminating Paternalism

It is possible to extend the above arguments to any theory which grounds mental health in norms external to the individual. Tiberius and Plakias make a similar point about so-called objective list theories of well-being, noting that it is difficult to see how accounts with specific norms can have a legitimate claim to be action guiding given the gap between those normative claims and subjective experience (Tiberius & Plakias, 2010). Indeed, if it is possible that human individuals (however best conceived) do not share the same list of things which ground their well-being then objective list theories will not provide normative authority.

Similarly with mental health, an evaluative standard that is not grounded in what would actually be better for each actual patient fails to have normative authority. This suggests that mental health should be located in the subjective point of view. In order to solve the problem of paternalism, psychiatry must ground what it means to be mentally ill or mentally healthy in the concerns of individual patients. Whatever the right normative theory has to say about John Henry and Vincent, it must pay due respect to their flourishing. For this reason, the right normative theory for psychiatric diagnosis must be *individualist*; it must ground what it means to be mentally ill or mentally healthy in the concerns of the individual subject it treats. I will have a bit more to say on this idea in 3.1, before considering a number of objections to the view in 3.2.

3.1 Individualism about Mental Health

Individualism about mental illness does not mean that we ought to be subjectivist with regard to psychiatric diagnosis. Many have expressed worries about making such a move, as this would not allow for the fact that individuals do not often know what is best for them. In his book, *The Pursuit of Unhappiness*, philosopher Dan Haybron argues from a wealth of empirical evidence that "[i]ndividuals' judgments about their own lives do not bear anything like the kind of authority that common opinion takes them to" (p.80, 2008). Of course, this is just to highlight the possibility of anosognosia. But individualism with respect to mental health, which denies that there is one objective list of norms that are necessarily good for all humans, is not the same as a subjective account that does not allow for fundamental errors about ones values or interests.[14] Things are not good for individuals 'just because' they say so. Here, I am in agreement with Groll's view that, "[i]n a normal clinical encounter, clinicians can have open, frank discussions with the patient about what is best for the patient without thereby acting paternalistically" (p. 191, 2014).

Fortunately, exactly how to determine what is good for human beings is something that is being gradually revealed by empirical research on happiness and life-satisfaction. This can easily be extended to subjects of psychiatric care. It may even be the case that there is at least some statistical norm at work about what values and goals help human being flourish psychologically. Several philosophers have recently made an attempt at articulating values that most humans share in this sense, Haybron and Tiberius among them. Even if some set of values or virtues is important for all human beings in a statistical sense, however, it is not because of some special status those values have but because, contingently, they do in fact promote flourishing for most individuals.[15] Researchers should be prepared to encounter some values or bases for flourishing which look strange from a Western perspective.

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[14] This tripartite distinction (individualism vs. subjectivism vs. objectivism) is my main motivation for labeling this thesis 'individualism'. There are other philosophical arenas that use this term differently. In his ground-clearing book on the individual in the cognitive sciences Rob Wilson makes another important distinction, claiming that "individualism is the thesis that psychological states should be construed without reference to anything beyond the boundary of the individual who has those states... those who deny individualism are externalists" (p. 10, 2004). In this sense, my thesis is an externalist one, as what is good for the individual subject may depend on features of the environment beyond the boundaries of the individual.

[15] For more on contemporary attempts to measure psychological well-being see the work of Kalisch et. al (2015) on resilience as well as research on gross national happiness (Centre for Bhutan Studies, 2015).

3.2 Objections Considered

At first gloss, one may wonder why it is not as easy to tell whether someone has a mental disorder as it is to diagnose them with a physical disease. We don't tend to take people seriously who disagree with their physicians over whether they have HIV or are paraplegic. But if we see these diagnoses as something beyond mere descriptions—as normative claims about health or injunctions to seek treatment—physical medicine is equally philosophically murky. Disagreements over the concept of health apply to physical medicine as well (Boorse, 2011). Some disability advocates even claim that the idea that there is something 'wrong' with their way of being is entirely a matter of unwarranted social conventions (Amundson, 1999).

Either way, in both arenas there is an intuition that there must be more to disease and disorder than the interests of the individuals under evaluation.[16] In this final section I will consider three forms of this intuition, which I will call the Successful Psychopath, Wellness Syndrome, and Conversion Therapy objections, and reject each.

3.2.1 The Successful Psychopath

Vincent hears voices. One might feel that this should be considered disordered whether it is good for Vincent or not. This raises the question of how we should treat patients who are considered to be less than fully rational (and perhaps, then, less than fully autonomous) (Dworkin, 2014). The thought is that facts about Vincent's psychology undermine the significance of his avowals about what is good for him. Of course we all, to some extent, harbor false beliefs about what would be good for us, and this does not automatically render us incompetent patients. Surely we want to leave room for competent patients to err.[17]

Take an even harder case: that of the 'successful psychopath,' an individual who's psychological functioning fits the DSM criteria for psychopathy, but who is also flourishing.

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[16] Many thanks to Tim Schroeder for helpful discussions on this topic.

[17] For a fuller discussion on the criteria for when a patient fails to be competent, see the concluding chapter.

The thought is that, if individualism about mental illness means the successful psychopath is no psychopath at all, then it is a reason to reject individualism.

Suppose that on the right normative theory for psychiatry, the successful psychopath is indeed mentally healthy. As a first response, it should be stressed that this does not mean that there is nothing cognitively or neurologically atypical about him which is interesting from the point of view of the sciences of the mind and human behavior. If one means 'psychopathy' to pick out a typical deviation consisting of mere descriptive facts about an individual, then of course this label applies. But this is not how the dual nature of psychiatry works.

I am willing to bite the bullet here, if it is indeed a bullet to bite. There may be interesting expressions of psychological atypicality which fit the criteria for mental illness in some cases but not others. The successful psychopath is a legitimate possibility.[18] One additional virtue of this response, I think, is that it makes sense of what is going on in cases like the autism rights movement, and other neurodiversity movements, where individuals claim that their diagnosis is no disorder at all, but just another way of being on the spectrum of human psychological variation. There are many who assert that they live full, flourishing human lives, despite psychological atypicality.[19]

3.2.2 The Wellness Syndrome

Perhaps these considerations lead you to the worry that individualism about mental illness leads to an opposite kind of problem—that of overinclusivity. As Geoffery Miller (2011) puts it there may be "no principled distinction between maladaptive disorder and 'normal variation'," in the discipline of psychiatry. As he writes,

> "[t]he implication is that almost all living humans beings have many mental disorders, mostly minor but some major, and these include not just DSM disorders like depression and schizophrenia, but diverse forms

[18] This has nothing to do with our areteic judgments, or judgments of responsibility. If the psychopath is also a murderer, we should surely put him in jail (but not because he is mentally ill... because he is a murderer!)
[19] There may be a further worry here about psychological conditions which 'gum up the works' of individuals interests. In other words, what if what is best for the heroin addict is to sit around ingesting heroin until they die? This is a question I am very much interested in, but which depends on other features of the right normative theory for the discipline of psychiatry which go beyond the scope of this paper.

> of stupidity, irrationality, religiosity, vices, and personality quirks" (p. *viii,* 2011).

Miller himself is comfortable with this possibility. I am as well. Whether or not it is considered a disorder, not having any coping skills, for example, is very much a problem of mental health, even if it doesn't look like any diagnostic category we are currently familiar with. Consider one final case.

> *OCTAVIA is a writer who works from home. She enjoys her work-life set up because it allows her to spend more time with her sister and nephews, who she lives with. Octavia has always considered herself to be distractible; growing up she had trouble focusing in school, and nowadays she spends more time reading blogs on the internet than she would like. Octavia is happy with her modest career success, but admits that she might be more productive if she were able to concentrate more easily.*

It seems clear that Octavia may enjoy the benefits of the therapeutic aspects of psychiatric practice to improve her life, just as John Henry and Vincent. That her problems are common or modest are not appropriate barriers to understanding them from a psychiatric perspective.

3.2.3 Conversion Therapy

One way to judge what would be good for a person, all things considered, is to ask how they would fare if their values or desires were other that what they are. John Henry, for instance, might flourish to a greater extent if he cared less about his political causes, because the good he would get from investing in a family life, for example, would outweigh the good he can get now. For my part, I am perfectly willing to accept the truth of this counterfactual claim, and so might John Henry. But he may find that he cannot simply decide to have other interests than the ones he does. There may be other forms of control he can take over his values, but if he does not want to exercise these options, then to

intervene would be to act against his will. For this reason I would deny that it has any implications for the justifiability of acting paternalistically on John Henry's behalf.[20]

What then, if a patient elects to change their desires in order to increase their good. Take one of the most controversial cases of this today, that of so called 'conversion therapy' for homosexuality. A patient may plausibly argue that, given the social circumstances they have been born into, including harms stemming from discrimination and institutionalized oppression, they would be better off with heteronormative desires. Does it follow that, on an individualist account of mental illness, homosexuality is a mental disorder? Absolutely not. Altering ones desires may effectively relieve a kind of suffering in this case, but the underlying cause of that suffering is a set of social facts rather than psychological ones.

4. Concluding Remarks

In this paper I have argued that clinical psychiatry faces a special kind of problem with paternalist action, the frequent occurrence of clinical intervention on the basis of unjustified standards. Because of this, in the face of avowals from competent patients that they are not ill, the burden of proof falls on the clinician to show that a diagnosis is justified. Further I have argued that clinical psychiatry must ground what it means to be mentally ill or mentally healthy in the concerns of individuals.

Some of the considerations in the last section highlight the complex interaction between those psychological features of an individual which are bound by the skin and skull, and those which are features of being situated in a particular environment. This suggests the possibility that, as with well-being, individualism about mental illness may give way to a more contextualist view, where more emphasis is placed on living in a context that fosters mental health (for more see: Haybron, 2008). I see my arguments here are happily compatible with that move, and will have more to say about context in the next chapter.

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[20] Even supposing there was a magic pill that could alter desires, we should be cautious about what this action would even amount to. Recent evidence suggests that it is an individual's moral traits that above all else determine their personal identity (Strohminger & Nichols, *in press*). Taking the pill may amount to changing the very person John Henry is, and this possibility is outside the scope of my considerations here.

4. STEWARDSHIP OF THE MIND: HOW AN ECOLOGICAL PERSPECTIVE CAN HELP US UNDERSTAND PSYCHIATRIC THERAPY

1. We Don't Have to Be the Way We Are

One of the most interesting things about being human is the emphasis we place on our betterment. Hardly even the most sainted among us are considered perfectly rational, perfectly virtuous, or perfectly healthy by any standard. The idea that there is room for improvement, along with the fact that we are able to change the way we are in a goal-directed manner, then, invites a special kind of opportunity to do so.

It is not always clear if one ought to change, or in what way. Human nature, human variability, and the possibility of a 'transhuman' or 'posthuman' future are all areas of intense philosophical debate. But there are also relatively mundane cases of betterment on which most would agree—if I get a hang nail I would do better to let it heal rather than pick at it all day. Cases of illness, especially mental illness, are similarly straightforward. The idea that someone is mentally ill automatically invokes the idea that she may change for the better.[1] The further question is how. What is the recipe for therapeutic change in clinical psychiatry?

To begin with, a proper account of how to effect therapeutic change should be consistent with our best theories of the human mind and human behavior. Particularly when it comes to identifying the specific clinical practices and techniques that best address mental illness, an improved understanding of what kinds of things we are affords an improved understanding of the most efficient kinds of leverage we have over ourselves, so

[1] This is controversial, of course, but it will be one of the starting assumptions of what follows. For more on the normative character of the concept of mental health, see previous chapters.

to speak. In this paper, I will examine two extant and opposing pictures, and their influence on thinking about psychiatric therapy. First, what I will call the '*traditional picture*' represents the dominant trend in Western thinking about the human mind. The traditional picture is not a view of the mind in itself, but a collection of views in philosophy and the human sciences distinguished by commitments to a species of 'internalism' about the mind. Second, what I will call the '*ecological picture*' represents a rival trend that has been gaining influence in recent years. The ecological picture rejects internalism.

As I intend to show, tacit reliance on the traditional picture has had a limiting influence on what is viewed as therapeutic intervention and hindered our pursuit of the question of therapeutic change. Under its influence, dealing with mental illness has been framed as an inward-focused process—deep reflection, will power, and perhaps the occasional pharmaceutical drug being the recognizable tools at hand (Saks, 2013).[2] Clinical intervention, in other words, tends to be limited to the boundaries of the skin and skull. This is unfortunate for those with a practical interest in managing mental health, as it prevents many everyday methods of managing mental health from being seen as 'real' therapeutic techniques. By taking an 'ecological turn', therefore, psychiatric science can avail itself to a wider array of therapeutic techniques to investigate and assess.

Throughout this paper, I will argue for two general claims. First, that a broadly ecological picture of the mind provides a better explanatory framework from which to understand both what has gone wrong in cases of mental illness, and how successful therapeutic interventions generate improvement. Second, that this explanatory fit in turn gives us new reasons to prefer ecological views over more orthodox views of the mind. An ecological perspective provides unique insights that can help teach us how to be better, mentally. Given the substantial impact of mental suffering worldwide, this is no mean feat.

My defense of these claims will first involve spelling out what the traditional and ecological pictures are, and how they relate to each other. Once this has been done, in section two I will develop an ecological account of psychiatric therapy which casts human agents as stewards of their own—and often others'—cognitive ecology.[3] From this ecological

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[2] Illustrated not just by individual clinicians, but by the methodology of dominant research trends such as pharmacology and behavioral genetics.

[3] In some sense, managing mental health can be thought of as a collective endeavor, mutually enforced through our social relations. This prospect is included in the stewardship picture.

perspective, therapeutic techniques are best conceived of as a species of what I will call *agential technologies*: a set of often non-obvious methods and strategies of control supporting goal directed cognition and behavior, whose pathway of influence over behavior and psychological functioning often loops outside the boundaries of the skin and skull. Agential technologies facilitate agency in situations where our internal resources may not be enough, intervening on psychological features which underlie mental illness, and thereby supporting goal directed change. Finally in section three, I will turn to a number of contemporary proposals for improving psychological well-being from the philosophical and psychological literature. I will show that, in successful cases, goal-directed change is mediated ecologically—that is, becoming mentally healthy is about managing one's cognitive ecology in the right way.[4]

In the remainder of section one, then, it is my task to set out the relevant philosophical picture. I begin in section 1.1 by drawing together several contemporary analyses of the human mind as traditionally conceived, followed in section 1.2 by reviewing arguments for rejecting this picture in favor of a broadly ecological one. In section 1.3 I will elaborate the ecological picture using several recent philosophical projects which apply this perspective to more concrete domains of human cognition.

1.1 The Traditional Picture

From a historical perspective, it is generally agreed that Descartes' conception of the mind as 'seated' in the body and, since the 20th century, the 'computer metaphor' for thought have been the defining influences in thinking about the mind in the West. We might understand these metaphors as underscoring a conception of the mind as being *internal* in some way. Thus, though there is no customary or standard view of the mind to which most Western philosophers refer, what I am conceiving of as the traditional picture might be distinguished by the idea that human cognition—whatever it is that humans do when they think, which leads then to action—is a thing that happens inside human brains and nowhere else. It is principally grounded in structures bound by the skin and skull.

[4] The term 'cognitive ecology' is owed to work by philosopher of cognitive science Edwin Hutchins.

Rob Wilson (2004) helpfully lays out two theses that formalize the assumptions of the traditional picture. As he states, for any psychological function or ability, X,[5] it is thought that,

> "*Internal Richness Thesis*: Structures and processes internal to the individual that are important to the acquisition and development of X are rich; and
>
> *External Minimalism Thesis*: Structures and processes external to an individual play at best a secondary causal role in the acquisition and development of X" (p. 15).

As Wilson argues, these theses guide inquiry into human cognition on the traditional picture, and restrict both what kinds of explanations of our psychological capacities count as legitimate and where and how it is assumed that we can intervene on them.[6] To see how this works, it is helpful to consider how the traditional picture, while generally taken for granted, has been foregrounded in recent years by efforts to reject the internalist paradigm.

For example in his 2015 book, *Talking to Ourselves,* John Doris surveys a large portion of the philosophical literature on agency and action, drawing out what he argues is an implicitly relied on picture he calls *reflectivism*. As he writes,

> "[t]he exercise of human agency consists in judgment and behavior ordered by self-conscious reflection about what to think and do. In an exercise of agency, as construed by reflectivism, a person correctly divines the beliefs, desires, and other psychological states relevant to her decision, makes her decision in light of these states (sometimes called her reasons), and acts accordingly" (p. *x*, 2015).

As Doris points out, we traditionally think of ourselves as guided by internal psychological states such as beliefs and desires, to which we have a special kind of first-personal access. Similarly, in his 2011 book on externalism and moral psychology, Andrew Sneddon characterizes what he calls the 'general view', that "[a]ction production mechanisms

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[5] For example, perception, language use, moral cognition, etc.

[6] Exactly how 'rich' our internal architecture is, or how 'secondary' our external environments are, of course, varies from theory to theory.

function in regular pattered ways with substantial independence from contextual contingencies" and that "[t]hat these mechanisms are in principle accessible to agents introspectively" (p. 184). Here, Sneddon makes explicit a corollary to this internalist paradigm, that 'contextual contingencies' such as features of our social and physical environments do not guide our behavior except in a contingent or accidental way. There is also an underappreciated normative dimension to the concept of human agency, that to be a rational agent, one *ought* to reason by inspecting the contents of one's mind and using internal principles to make decisions based on these contents. For example, in their (2004) paper on rationality Richard Samuels and Stephen Stich remark that,

> "[t]hough researchers in this area rarely offer an explicit and general normative theory of rationality, we think that most authors tacitly adopt some version of what Edward Stein has called the "Standard Picture" of rationality: According to this picture, to be rational is to reason in accordance with principles of reasoning that are based on rules of logic, probability theory and so forth... [these] are the principles we ought to reason in accordance with (Stein 1996, 4)".

Questioning the internal richness and external minimalism theses, as we will see that Wilson himself does, has been a large part of the work of philosophers like Doris, and Sneddon. Influenced by the rapid growth of the sciences of the mind and human behavior in the past few decades, this 'ecological turn' takes many forms, but the common thread is a rejection of the skin and skull as essential boundaries of the mind, along with, to a lesser orgreater extent depending on the theorist, a rejection of broadly 'nativist' claims about cognition.[7] These arguments are the focus of the next section.

1.2 Making the Ecological Turn

[7] I have in mind here a wide swath of views, including not only the semantic externalism of Putnam (1975), Burge (1979), and Fodor (1987, 1994), and Clark & Chalmers' (1998) more radical extended mind thesis, but the development of other 'externalist' ideas in philosophy of mind in Dennett (2003), Wilson, (2004), Clark (2007), Shapiro (2007) and Ismael (2007). Other thinkers take cues from evolutionary anthropology, emphasizing the importance of social learning and cultural information for human cognition, such as Sterelny's (2003, 2012) niche construction theory, and gene culture co-evolutionary theory as presented in Richerson and Boyd (2005), Boyd and Richerson (2005), and Henrich (2011). A third strain of thought looks at the effects of situational features and environmental structures on moral cognition in particular, for example see Doris (1998, 2002), Merritt (2000), and Vargas (2013). For a fuller review of the literature see Hutchins (2010).

Arguments for rejecting the traditional picture in favor of one that sees human cognition as intimately integrated into our bodies and worlds have appeared in many different forms. Here, I will focus on a few that will help us get a better grasp on just what the ecological picture is, and what it means for thinking about the capabilities and limits of the mind. To start, the arguments I am interested in can be usefully sorted into three distinct flavors. First, there are evolutionary arguments that examine the anthropological record and evolutionary theory as a source of evidence for thinking of human cognition as essentially environmentally situated. Next, there are insightful arguments in philosophy of mind that question some of the metaphysical commitments of traditional views. These arguments may, in fact, underlie much ecologically-minded thinking. Finally, there are arguments that use recent empirical work in social psychology and applied cognitive science to show that the traditional picture is incompatible with facts about how humans think and act.

After examining each of these arguments in turn, I will spell out the ecological picture in more detail, and go on to show how it has influenced recent theorizing about human cognition.

1.2.1 Evolutionary Arguments

A recurrent puzzle in the behavioral sciences concerns the question of human uniqueness—explaining how we exhibit complex social features such as large scale cooperation and language use, and how we, unlike other species, have been able to adapt to such diverse environments worldwide. As more and more of our internal cognitive endowments are revealed to be shared in common with non-human animals, many long standing theories purporting to explain human uniqueness have fallen out of favor, such as the proposal that non-human animals lack sentience (Low, 2012). Still, the idea that there are some features of our psychological nature that are distinctively human has remained. Which, if any, are they?

In their influential defense of the gene-culture coevolutionary hypothesis, Robert Boyd and Peter Richerson suggest that the right answer to this puzzle involves thinking not just about how we have evolved as biological organisms, but how our cultural environments have evolved with us, and how these two evolutionary processes have mutually influenced

each other. In their book *Not by Genes Alone,* Boyd and Richerson argue that culture[8] is part of biology, an essential human adaptation subject to similar evolutionary processes as our genes (2005). Three theses comprise this view. First, that our capacity to generate cumulative cultures across generations is itself an adaptation; in other words, as Boyd and Richerson show, it was at some point advantageous for us to acquire the capacity to transmit and store cultural information, both in our brains and environments. Second, that culture itself evolves; our tools, norms, and customs change in response to selective pressures. Third, that genes and culture coevolve; they mutually and inextricably influencing each other over time (Boyd & Richerson, 2005).

According to the gene-culture coevolutionary view, then, what is unique to human psychological nature is not merely an excess of the kind of sophisticated intelligence that underlies abstract reasoning and problem solving in individuals, as this is insufficient to explain our species' success. Rather, it is the accumulation of information in human cultures which has allowed us to thrive. By way of example, Boyd and Richerson, along with Joe Henrich, have this to say about difficulties humans face in the Central Arctic:

> "To stay warm and get enough to eat, you have to know how to make and use clothes, snow houses, lamps, harpoons, leisters, and bows. We have omitted other crucial tools like kayaks, dog sleds, and sun goggles, and of course, we have had to omit most of the details necessary to make and use the tools we did mention. Moreover, there is still much more you have to know to stay alive. Predicting storms, understanding the habits of game species, making baskets, building sledges, and managing dogs—all require extensive knowledge. Traveling on ice is essential, but also treacherous, and there is much to know about how the current temperature, recent weather, and the color and texture of the ice tell you where and when it is safe to travel..." (p. 3, 2011).

Even given 'superior' abstract intelligence, Boyd et al. show, no individual could plausibly acquire all of the knowledge necessary to survive these conditions without culture and high-

[8] In Boyd and Richersons' sense, 'culture' is "information capable of affecting individual's behavior that they acquire from other members of their species through teaching, imitation, and other forms of social transmission" (p. 5, 2005). I will follow their use of the term here.

fidelity cultural learning to rely on (2011). Indeed, many of the tools mentioned above could only be perfected by the accumulation of small improvements over generations. As Boyd et al. write, "[e]ven experts lack a detailed causal understanding of the tools and techniques that permit them to survive" (p. 7, 2011). If there is anything unique about human psychological nature, those mechanisms that drive cultural learning undergird it.

Boyd, Richerson, and Henrich themselves are explicitly ecologically minded, in that they understand this view as an alternative to views of the evolution of human cognition with more nativist and modular tendencies, like those held by John Tooby, Leda Cosmides, Steven Pinker and others.[9] The 'cognitive niche', Boyd et al. claim, is more usefully thought of as a *cultural* niche (p. 2, 2011). If they are right, and human minds are deeply reliant on human culture, the internal richness and external minimalism theses are immediately called into question—the acquisition and development of many of our cognitive capacities relies on external structures. Looking outside the skin and skull, at how human cultures differentially affect human beings worldwide, is necessary to fully explain uniquely human psychological abilities, and how they have evolved.

Kim Sterelny is another thinker with even more radical anti-nativist and anti-modular views. According to his *scaffolded mind hypothesis*, "[h]uman cognitive capacities both depend on and have been transformed by environmental resources" (Sterelny, p. 472, 2010). While Boyd and Richerson suggest that some domain-specific modules[10] might be required for individuals to exercise cultural learning, Sterelny's view proposes a more bare-bones picture of our innate endowment that employs mostly domain-general mechanisms. The scaffolding which structures our learning environments and epistemic niches supplies the cognitive structure which our innate endowment lacks.

In his 2003 book, *Thought in a Hostile World*, Sterelny argues that cultural learning itself is a result of the unusual confluence of several evolutionary mechanisms that themselves have an ecological character. These are *cooperation*, or mutually beneficial group actions with conspecifics, *cumulative niche construction*, the active structuring of the physical, social, and epistemic environment both for intra and intergenerational benefit,

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[9] Of course, these thinkers do not deny the importance of cultural learning, just as Boyd et al. do not deny the importance of abstract thinking (2011). The dispute is over how much each mechanism can explain human variation.

[10] Like, perhaps, a 'theory of mind' module for interpreting the behavior of others (Boyd & Richerson, 2005).

and *phenotypic plasticity*, particularly our capacity to absorb the vastly different psychological processes traits, or capacities depending on varying developmental environments (Sterelny 2003; 2010). While none of these traits are unique to humans, together they have bootstrapped human evolution in such a way that has produced our distinctively human psychological nature. As hominids evolved to become more cooperative, the story goes, this increased the benefit of both niche construction and plasticity, and so on. Each mechanism in turn compounds the fitness of the other mechanisms, creating a positive feedback loop that has reduced the role of our genetic endowment (2003). The scaffolded mind hypothesis thus implies that a profound shift should be taken away from the traditional picture of the human mind by walking further away than Boyd and Richerson from the notion that internal structures must be 'rich' or external ones 'secondary' (Sterelny, 2010). Our innately specified structures are simply not enough to explain our cognitive capacities.

1.2.2 Arguments by Metaphysical Hypothesis

Of course, one can take many evolutionary insights onboard without giving up on the traditional picture. It might be maintained—rejecting the letter of Boyd et al. and Sterelny's views about what psychological components are native to the human mind, if not the taste of their evolutionary perspective—that when these theories make recourse to things 'outside the individual', such as our bodies, niches, or cultures, they should be interpreted as making claims about the proximate causes of human behavior rather than about how cognition is constituted. This shifts the debate to a question about the boundaries of the mind. Culture is important, the thought goes, but that's just not where minds are realized; minds are realized in brains. If this case can be made, then accepting the gene-culture coevolutionary hypothesis or the scaffolded mind hypothesis need not entail that one reject the internal richness and external minimalism theses. This move is reminiscent of the now familiar *coupling-constitution fallacy* in philosophy of mind (Adams & Aizawa, 2008).[11]

In his book, *Boundaries of the Mind,* Wilson notes that many theorists do indeed view cognition in this way. As he argues, this is because both individuals and their study are

[11] According to this fallacy, ecologically minded thinkers are prone to jumping from the claim that two systems x and y are coupled to each other, to the claim that x and y are parts of a larger system, z.

disciplined in the Foucauldian sense by *smallism* in Western science, the idea that good explanations of complex phenomena appeal to the proper parts they can be divided into.[12] (p. 25, 2004). As he writes,

> "[t]he governing assumption... is that the psychological abilities of interest are those that can be assessed by probing an individual in abstraction from not only her real life, social environment, but from any substantial social environment... underwritten by the search for heritable biological factors governing cognition... One reason... sometimes offered by psychologists themselves in conversation, is *that is just what psychological abilities are*: they are dispositions that individuals carry around with them from situation to situation" (Wilson, p. 44, 2004; italics added).

Because psychological states are thought to supervene on physical states of the brain, then, brain states are thought to exhaustively constitute cognitive phenomena. In other words, a foundational part of the traditional picture concerns *methodological individualism*, the thesis that psychological states should be understood "without reference to anything beyond the boundary of the individual who has those states" (p. 10, 2004).[13]

Obviously, that the sciences of the mind trend this way by custom is no argument in support of individualism. We might well think, like Boyd et al., Sterelny, Wilson, and others, that at least some interesting psychological abilities, even when they belong to individuals, are not bounded by them. This would be a more ecologically-minded move. Ultimately, then, the traditional and ecological pictures make irreconcilable metaphysical claims about where the mind is located and how its parts should be taxonomized. Either cognitive systems reach into the body and world, or they are restricted to the brain, but not both. This suggests a way in which we can discriminate between the two possibilities, namely by assessing which metaphysical commitments are most plausible. If the metaphysical assumptions of the traditional view are for some reason suspect, this would provide reasons to favor an ecological picture.

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[12] Wilson defines smallism as "discrimination in favor of the small", as for example, cells can be explained by their chemical substances, chemicals by their atoms, atoms by their subatomic particles and so on.
[13] In Wilson's terminology, those who deny individualism are *externalists* (p. 10, 2004).

Larry Shapiro, in his book *The Mind Incarnate,* questions two such traditional metaphysical commitments; the *separability thesis* and the *multiple realizability thesis* (2004). According to the separability thesis, the mind is a fairly self-contained organ that can basically be understood without reference to the body. According to the multiple realizability thesis, minds can be realized in many different kinds of brains, as whatever constitutes a brain also constitutes a mind. Each of these claims stem from a functional conception of the mind, where what makes something a mental state depends on its functional role in the system of which it is a part.[14] While one could easily make functionalist claims about the mind without restricting themselves to the brain, these theses are traditional in character because they do just that, seeing the mind as a sort of resident of the skull.

In questioning separability and multiple realizability, Shapiro marshals evidence from a number of roboticists and neuroscientists engaged in understanding and replicating actual human cognitive mechanisms. As these researchers show, much of our complex cognition, such as vision and bipedal motion[15], is significantly *embodied*; it crucially relies on the body to process information. Because it provides constraints on the shape of cognition, Shapiro argues, the human body is more thoroughly integrated with the mind than would make sense if separability were true. The actual physical arrangement of the body and its connections to the brain are necessary elements of the information processing system. Multiple realizability, in turn, is significantly less likely because the shape of the physical brain at a neural level provides similar constraints (2004). If the embodiment hypothesis is correct, then contrary to the external minimalism thesis, structures and processes external to the skull indeed play a primary causal role for many psychological abilities. We must make reference to things outside the skull in order to even understand

[14] As it is with many other ecologically-minded arenas, the debate between classic computationalism and the embodiment hypothesis in philosophy of mind, uses slightly different terminology than I use here. As I summarize Shapiro and others I will continue to use the terms 'traditional' and 'ecological' in order to help situate different views with respect to each other, and with respect to the traditional and ecological pictures.
[15] Unfortunately there is little time to examine this research here. For more see Shapiro (2004), especially his discussions of David Marr's theory of vision, and Rodney Brooks' work with passive-dynamic walkers.

what human psychological abilities are.[16] That is to say, the traditional view makes dubious ontological commitments based on the evidence Shaprio presents.

Wilson makes a similar point, in his discussion of what it means for something to be realized. To put it simply, for a system S to realize a property P, the state of S we refer to must be metaphysically sufficient for producing or sustaining P. Viewed in this way, human cognition is 'widely' realized; the computational systems under investigation in the cognitive sciences extend beyond the boundaries of the body, as the components internal to the skull are insufficient to produce P (2001; 2003; 2004).[17] Because they are so located, Wilson argues, the boundaries we draw around cognition should reflect this[18]—unless there can be found "a plausible, non-question-begging way to individuate mental states independent of their total realizations" (p. 179, 2004).[19]

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[16] Wilson provides a nice example of this way of thinking in his discussion of enactive representation, saying, "[r]epresentation is not something implanted in individuals but something that individuals do by exploiting the rich structures of their environments in cycles of perception and action" (p. 178, 2004). For an excellent treatise on taking this dynamic stance in cognitive science, see Chemero (2009).

[17] Zach Murphy has recently posited a novel and rigorous method for drawing boundaries around the mind which plausibly extend beyond the body (Murphy, 2015). According to his Extended Scaffolded Mind (ESM) thesis, scaffolding (understood as a more general notion than Sterelny's above) "is the relationship holding between two processes p1 and p2 such that when p1 scaffolds p2, p1 eases p2's processing demands" (Murphy, p. 35, 2015). Using graph theory, we can chart the density scaffolding between any two processes. Murphy then proposes that a process should be understood as part of a cognitive system "if the scaffolding it contributes is not significantly divergent from the average [density of the system] being considered before its inclusion" (p. 41, 2015). Murphy argues that, using his method, tools such as neuroprostheses are proper parts of individual minds (2015).

[18] For an intermediary view, see Rupert (2009).

[19] The mistake the traditional picture seems to make here is in thinking that because cognitive systems are widely realized, individuals must be as well. But this misses an important distinction between subjects and systems. Systems, like of digestion or cognition, should be construed widely, as parts of these processes 'extend into the world.' Subjects on the other hand—the bearers or loci of the properties or processes—need not be construed widely. Writes Wilson, "[i]n both species of externalism that I have discussed, the individual remains the subject or bearer of psychological states even if she no longer serves as a boundary demarcating the entities of a respectable psychological science" (p. 212, 2004).

1.2.3 Empirical Arguments

Leaving aside both theory and the ancestral environment, how do contemporary human beings actually think and act? Does anything about our observable behavior suggest that the internal richness and external minimalism theses might be true? Some of the most suggestive evidence for making the ecological turn comes from a flood of behavioral studies investigating what is known as 'dual process' theories of cognition, according to which our behavior is guided by two separate and often conflicting systems of cognition known by the somewhat tongue-in-check names System 1 and System 2. On the dual process picture, System 1 is fast, tacit, automatic, intuitive and unreflective, generating quick judgments and actions based on heuristics and expert skills, while System 2 is slow, deliberate, and controlled, producing the kinds of judgments associated with abstract reasoning (Kahneman, 2011).

Of course, it seems perfectly reasonable, and not at all inconsistent with the traditional picture that we should rely on System 1 at times. If we froze up and slowly reasoned through the process of tying our shoes or choosing from all 60 kinds of breakfast cereal at the supermarket, we would not be very effective creatures. But people rely on System 1 much more often than might be expected. According to many philosophers, the dual process literature reveals that humans do not generally behave in ways reflective of deliberate, self-conscious, and principled reasoning. Quite the opposite is true. Minor situational factors, priming effects, and implicit biases in perception and evaluation seem to order much of our behavior. This creates trouble for the traditional picture, because behaviors representative of agency are supposed to be those guided by conscious internal reflection on our psychological states.

Worse, when it comes to tacit, quick thinking decisions procedures, we can harbor implicit irrationalities as easily as we can harbor justified heuristics and decision procedures.[20] In fact, System 1 cognition often guides action in strange, dissociative ways that come apart from explicitly endorsed beliefs. The Name Letter Effect, for example, makes more likely that 'Georgina' moves to Georgia, and 'Dennis' becomes a dentist, than anyone else (Nuttin, 1987), the Watching Eyes Effect makes it more likely that people do

[20] For an extended treatment of this idea, see Brownstein (*ms*).

the right thing, even when they know for a fact that they are not being observed, by the blatant placement of images of eyes (Haley & Fessler, 2005), and Implicit Racial Bias influences even avowed egalitarians to judge resumes headed by 'black-sounding' names much harsher than those headed by 'white-sounding' names (Bertrand & Mullainathan, 2003).[21] Subjects in these studies do not cite these effects as causal influences on their behavior, but rather give explanations that make recourse to traditional, internal decision making procedures. (Doris, 2002).

As Doris puts it, "[t]he empirical literature indicates that evidence of incongruence is readily obtained across a wide variety of experimental protocols... taken together, these observations make plausible the supposition that incongruence is widespread in everyday life" (p. 61, 2015). He argues that this incongruence, the conflict between how we explain our behavior and its actual causal antecedents, undermines the exercise of agency. Again, as Sneddon argues, the pervasive influence of external features of our environments "does not imply that beliefs, desires, and other proattitudes do not produce actions, but it does imply that they alone do not produce actions" (p. 186, 2011). Indeed, it is hard to reconcile this picture with the internal richness and external minimalism theses, as it suggests that our cognition is *for the most part* driven by things outside the skull. One radical response to this would be to conclude, as some do, that human beings just aren't (or maybe are hardly ever) agents in the traditional sense.[22] But this is hardly necessary. Instead, as both Doris and Sneddon argue, we should be motivated to endorse an approach to cognition and agency that fits comfortably with the ecological picture.

1.3 The Ecological Picture

Though it runs under various names like Embodied, Embedded, Enactive, Extended, and Affective (4ae) cognition, 'externalism' with respect to the mind, or as Wilson calls it the Temporally Extended, Scaffolded, and Embodied and Embedded (TESSE) view, ecological thinking has influenced recent theories of human cognition in many domains. And as is perhaps already clear, it has enjoyed an increasing influence in philosophy of

[21] This literature is huge. For an excellent summary, see Doris (2002; 2015).
[22] For example see Merritt (2000) or Ross (2002).

mind. The most eloquent summation of the ecological picture, in my view, comes from the work of philosopher Andy Clark. In his 2007 paper, "Soft-Selves and Ecological Control", he writes:

> "[h]umans belong to the interesting class of what I'd like to call open-ended ecological controllers. These are systems that seem to be specifically designed so as to constantly search for opportunities to make the most of body and world, checking for what is available, and then (at various time-scales and with varying degrees of difficulty) integrating it deeply, creating whole new unified systems of distributed problem-solving... in fact, human agents seem highly engineered so as to be able quite generally to learn to make maximal problem-simplifying use of an open-ended variety of internal, bodily, or external sources of order. For example, we can learn to use tools, sports racquets, and musical instruments in ways that exploit the intrinsic dynamics of those material structures" (p. 103, 2007).

In other words, human beings are ecological agents. Ecological control is the kind of control we exert, according to Clark, that,

> "allows much of our skill at walking to reside in the linkages and elastic properties of muscles and tendons. And it allows (I claim) much of our prowess at thought and reason to depend upon the robust and reliable operation, often (but not always) in dense brain-involving loops, of a variety of non-biological problem-solving resources spread throughout our social and technological surround" (p. 101, 2007).

Rather than micro-managing every detail of our action, our minds are uniquely suited to create, calibrate, and exploit these loops of influence through our bodies and worlds in the service of achieving personal goals, even though ecological control "is devolved, distributed, diffuse, decentralized, often smeared out over time, and typically not accompanied by the kind of rich consciousness awareness characteristic of higher level and reflective cognition" (Holroyd & Kelly, *forthcoming*). It is agency in the realest sense. *To be a well-functioning agent is to successfully manage one's cognitive ecology.*

In the remainder of section one I would like to briefly illustrate and elaborate on the ecological picture using several recent philosophical projects that apply this perspective to more specific areas of human cognition. The key idea will be to highlight three domains over which ecological action of the type that Clark emphasizes is crucial to our psychological well-functioning: our bodies, our social environments, and our physical worlds. Taking ecological action to manipulate these arenas facilitates fluent and flexible goal pursuit. This will prepare us for understanding actual therapeutic techniques in ecological terms.

(1) *We are embodied agents.*—Ecological control over the body perhaps needs the least elaboration, as much that is important to this domain is discussed alongside the embodiment hypothesis. One thing that has not yet been mentioned, however, is how we might deliberately shape our bodies, for example as basketball players train to offload deliberate thinking about their jump shots, or nearsighted people may elect to surgically reshape the lenses of their eyes to see more clearly. Fringe cases of this may include the additions to our bodies, such as cochlear implants, deep-brain stimulation devices, or even implants which extend our sensory perception to, for example, parts of the non-visible light spectrum, or magnetic fields.

(2) *We are mindshapers.*—In *Mindshaping: A New Framework for Understanding Human Social Cognition,* Tad Zawidzki argues that one of the 'lynchpins' underlying humans' unique sociocognitive nature is our array of mindshaping mechanisms; those mechanisms which drive imitation, pedagogy, irresistible conformism, norm institution, enforcement, and narrative and self-constitution. On his picture, "[a]ny mechanism the proper functioning of which is getting a target mind to match a model in certain respects counts as mindshaping" (p. *xvi*, 2013). We are constantly aiming to get ourselves and others to think and act in desirable ways.

The idea that individuals are continuously involved in mindshaping has many interesting implications. For one, as Sneddon notes, there is an important sense in which we literally share psychological processes with other people, insofar as we participate in wide cognitive systems (p. 23, 2011). These scaffolding systems establish norms of behavior in our social niches, by simultaneously interpreting and regulating

how others act (Zawidzki, p. *xiii,* 2013). But they do not do so uniformly. For an individual to exert ecological control in their social niches, then, may be as simple as teaching a young child the rules of sharing toys. On the other hand, it may be as complex as dealing with a traffic violation while travelling abroad. As Sneddon puts it, "[o]ur moral minds are psychologically heterogeneous in part because they are significantly widely realized and the world in which we operate is heterogeneous" (p. 204, 2011).

(3) *We are environmental scaffolders.*—In developing his scaffolded mind view, Sterelny has much to say about how developmental environments are engineered by preceding generations (2012). Everything from the stories we tell, to the toys we make available, to the playgrounds and schools we design contains a wealth of information for our children to absorb on their way to adulthood. But there are also everyday ways that individuals manage their environments to reduce epistemic burdens and improve cognitive performance. The ways we organize our kitchens (knives below the counter, cups above the sink), media (my albums are grouped by genre *then* alphabetized by artist name), and tools (ever wonder why keyboards are arranged 'qwerty'-wise?) all significantly reduce the costs of routine tasks. Imagine what life would be like if streets weren't numbered sequentially, if clocks weren't synchronized, if pharmacies weren't reliably marked, or if you had to wander through the grocery store looking item by item for the location of the Macintosh apples. Of course, many of these systems are already in place in the environments young humans are born into, but many others have emerged recently as solutions to novel problems (I am sure we all remember a time before we could seek information on trending news topics by using 'hashtags').Thinking of ecological control over the environment as cultural scaffolding is important, then, as many of the systems we employ are replications of or improvements on systems used by our ancestors (How long, for instance, have we been using some version of the decimal counting system?).

2. Stewards of the Mind

As anyone who has ever tried to kick a habit or start a new routine already knows, changing oneself for the better is more complicated than popular Western self-help ideologies would

have you believe.[23] Taking an ecological perspective on human cognition and agency is revelatory as to why: both the tools at one's disposal and the object of ones efforts are part of a complex cognitive system that extends beyond the boundaries of the individual. Using your mind to change your mind is not necessarily—or even principally—an inwardly focused process. Viewed this way, the kind of control individuals have over their own minds is 'indirect'; it is a process of managing cognitive ecology in the right way, shaping cognitive resources beyond those internal to the skin and skull, shaping our bodies, our social environments, and our physical worlds. Especially in a therapeutic context, then, it is useful to see an individual's role in managing her mental health as one of stewardship, a responsible planning and management of cognitive ecology that benefits her mental well-being.

Before elaborating on this idea it will be beneficial to lay some groundwork. First, in 2.1 I will briefly situate the ecological perspective in the literature on philosophy of psychiatry by saying a little about what is meant by terms like 'mental health' and 'mental illness'. In 2.2, I will articulate how an ecological perspective can inform the 'recipe for change' in psychiatric therapy, by demonstrating how various therapeutic techniques can be understood as tools of ecological control. I will introduce a key piece of terminology, *agential technology*, to refer to these kinds of tools. Finally, in 2.3 I will consider one potential objection to my view, which questions whether psychiatric therapy as it is practiced in the real world really needs an ecological reorientation.

2.1 An Ecological Understanding of Therapy

To start with a practical definition, the World Health Organization calls mental health "a state of complete mental well-being, and not merely the absence of disease… related to the promotion of well-being, the prevention of mental disorders, and the treatment and rehabilitation of people affected by mental disorders" (WHO, 2015). Of

[23] My favorite critique of this phenomenon comes from comedian Dave Chappelle on the popular self-help book *The Secret,* which apparently claims that the one solution to getting what you want from life is 'positive thinking'. "Fly to Africa and try telling one of them starving children that…" Chappelle jokes, "What you need to do is visualize some roast beef and some mashed potatoes and gravy… the problem is you have a bad attitude about starving to death!" (Chappelle, 2007). By relying on the traditional picture, these views can focus too narrowly on what's inside the skin and skull, severely limiting their ability to help make people better.

course, 'complete mental well-being' might be setting the bar a little high for most, but this definition at least makes sense of the idea that even those not suffering from a particular mental disorder might improve upon their psychological well-being. Promoting mental health is as much about managing day-to-day stress as it is about preventing psychosis—one can be healthy, and still might be healthier. I mean 'being mentally ill', then, to describe a condition in which an individual's flourishing significantly impaired or limited by some features of their psychology irrespective of what those features are.[24]

Therapeutic intervention in psychiatry is any measure taken to intervene on an individual's cognitive system and improve their well-being. Psychiatric therapy is ecological in nature because the boundary of the mentally ill subject's cognitive system goes beyond the individual—changes to the physical body, and the social and environmental niches are all ways to effect that cognitive system.[25] Still, we need not worry that we might be applying terms like 'mental illness' in strange and objectionable ways, as long as mental illness remains a property of individuals and not of cognitive systems. That is to say, the mentally ill subject is the person I can point to on the therapist's couch, because they are the locus of the mental illness. There is no making sense of pointing to, say, a broken educational system or despotic government and saying 'there's mental illness here'. Further, determining the health of someone's mental condition should be done with respect to that individual's well-being and nothing else.

2.2 Agential Technologies

From an ecological perspective on psychiatric therapy, therapeutic techniques are best conceived of as a species of *agential technologies*; a set of often non-obvious methods and strategies of control, whose pathway of influence over behavior and psychological functioning often loops outside the boundaries of the skin and skull. In what follows I will first say more about agential technologies in general, following Jules Holroyd and Dan Kelly's discussion of forms of ecological control in their forthcoming paper, "Implicit Bias, Character, and Control". I will then explain how therapeutic interventions specifically are

[24] For a detailed discussion on how these terms are used here and in the literature, see previous chapters.
[25] As will be demonstrated in great detail in section 3.

of this kind—*technologies of mental health*—by surveying some contemporary methods for improving psychological well-being.

2.2.1 The General Picture

In their insightful elaboration of Clark's concept of ecological control, Holroyd and Kelly note that there is an ambiguity in the idea of exerting ecological control that has not yet been explored. Exerting ecological control might mean *taking* ecological control by, for instance, purposefully organizing the files on your desktop. This puts a tool into place that you can rely on at a later date in an *exercise* of ecological control (Holroyd & Kelly, *forthcoming*). In the first case, you are co-opting your environment, using your lauded system 2 skills in abstract reasoning and planning to structure your ecological niche. In the second case, you are relying on previously deployed structure in order to bring your behavior in line with your goals without the need for system 2 effort. As Holroyd and Kelly put it, "[u]ltimately, a person can calibrate sub-systems that guide behavior until eventually they operate, on their own, in precisely the way she wants them to operate, even when she is not consciously and explicitly attending to them" (*forthcoming*).

These tools, structures, or subsystems which human beings create in *taking* ecological control, and use in *exercising* it, are those previously mentioned 'brain-involving loops of influence'. They may recruit social, biological, or non-biological resources. They can be as transparent to the user as a well-organized file system, but they may also work in opaque and non-obvious ways—like an expert golf swing learned through imitation, or a solution to a problem like implicit bias that must be discovered by careful empirical research. Resources which exploit these loops are technologies of agency, supporting goal directed cognition and behavior in situations where our internal resources may not be enough.

Elaborating on their taking/exercising distinction, Holroyd and Kelly describe three noteworthy kinds of agential technologies. First, there are 'environmental props consciously employed for guiding cognitive control' (hereafter, *environmental props*). Deploying environmental props is a way to take ecological control from the outside in, by making use of environmental scaffolding and mindshaping. For example one can significantly weaken

implicit racial biases by surrounding oneself with images of admired exemplars of the stigmatized group, such as Billie Holiday and Malcom X (Dasgupta & Greenwald, 2001). The images are environmental props. Next, there are 'cognitive props consciously employed for guiding cognitive processes' (hereafter, *embodied props*). Embodied props are a way of taking ecological control by shaping one's own mind to indirectly guide behavior at a later time from the inside out. To take the case of implicit prejudice again, the use of implementation intentions has recently been shown to be an effective strategy for managing the effects of implicit bias. As Holroyd and Kelly summarize, an individual "might deliberately repeat to herself 'if I see a Black face, I will think 'safe,'' practising this line of thought enough that it becomes routine and automatic, thus defeating her implicit racial bias" (see also: Webb, Sheeran, & Pepper 2010). An implementation intention is an embodied prop. Finally there are 'automatic processes as props unconsciously employed for guiding cognitive processes' (hereafter, *embodied habits*). Embodied habits are those internal processes that allow one to guide behavior without having to *actively take* ecological control. For instance, it has been shown that one's commitment to egalitarian goals, thankfully, mitigates the influence of implicit bias at least somewhat (see also: Moskowitz & Li 2011). Egalitarian goals themselves, as automatically activated structures in one's cognitive ecology, can be thought of as an agential technologies as well (Holroyd & Kelly, *forthcoming*).

To these three kinds, environmental props, embodied props, and embodied habits, I would like to add a fourth kind of agential technology that might be usefully employed in guiding behavior. What I'll call *cultural customs* are ways we automatically guide our behavior from the outside in using extant structures in our social environments and physical worlds. We are born into niches with all kinds of useful scaffolding, both for developing into competent adults, and for remaining competent through our lifetimes. To take a rather tired example, consider all of the infrastructure in the United States that supports driving on the right side of the road. Of course, there is no reason why the entire citizenry of the state of Illinois couldn't agree tomorrow that left-sided driving suits them better. As long as everyone was doing it, left-sided driving would be no better or worse efficiency and safety wise than right-sided driving... except for one thing. All of the road paint, traffic signs, and other signals we rely on to direct us—especially when we are perhaps

not being completely attentive—are engineered for driving on the right. The sheer scale of effort it would take to reorganize all of this infrastructure makes the switch infeasible. This infrastructure is an important agential technology, a method of controlling our behavior that relies on things external to the skin and skull.

With the addition of cultural customs, it becomes clear how agential technologies can be categorized simultaneously by domain and by the taking/exercising distinction. In figure 1, I have organized the four types of agential technologies in a matrix. Along the x-axis, they are categorized by instances of consciously taking versus automatically exercising ecological control. Along the y-axis, they are categorized by the domain of ecological action; action over the body, or 'inside out', and over the non-bodily, physical or social environment, or 'outside in'. In what follows, I will examine how a number of contemporary therapeutic techniques fit into this matrix.

	taking EC	exercising EC
body	embodied props	embodied habits
non-body	environmental props	cultural customs

Figure 1: Agential Technologies

2.2.1 Technologies of Mental Health

The goal of this section is to motivate the stewardship picture by interpreting contemporary therapeutic techniques as agential technologies. The categories are meant merely as helpful partitions in the current landscape.

(1) *Villages*—One longstanding method of mental health management and care involves finding habitats and social circles that facilitate well-being, whether by fostering solitude or community, eliminating risks or dangers, reducing or increasing stimulation, or providing specialized care. For the treatment of mental and developmental disorders in

particular, the tradition of relocation to a better suited environment goes back at least as far as 700 years ago, when the town of Geel in Belgium began taking in 'boarders' from across Europe. Simply living in a safe and caring home significantly improved sufferers' symptoms compared with those left in the charge of the prisons and institutions of the time (Jay, 2014). Hospitals, rehab facilities, and specialized schools are modern examples of these spaces; each institution is ideally intended to provide particular environmental props and customs designed for therapeutic change. In addition, some interested in long-term care for sufferers of Alzheimer's and dementia have recently begun planning and implementing enclosed 'villages' and other infrastructures to maximize safety and independence. For example, there is a bus stop outside Benrath Senior Center in Düsseldorf where no busses ever stop in order to help calm potential wanderers (de Quetteville, 2008), and a 'dementia-focused living center' in Weesp, Holland where the apartments and shops are designed to reflect familiar times and the caretakers wear 'street clothes' (Campbell-Dollaghan, 2014). These facilities combine many different cultural customs in order to facilitate the well-being and self-sufficiency of their residents, making the village a technology of mental health.

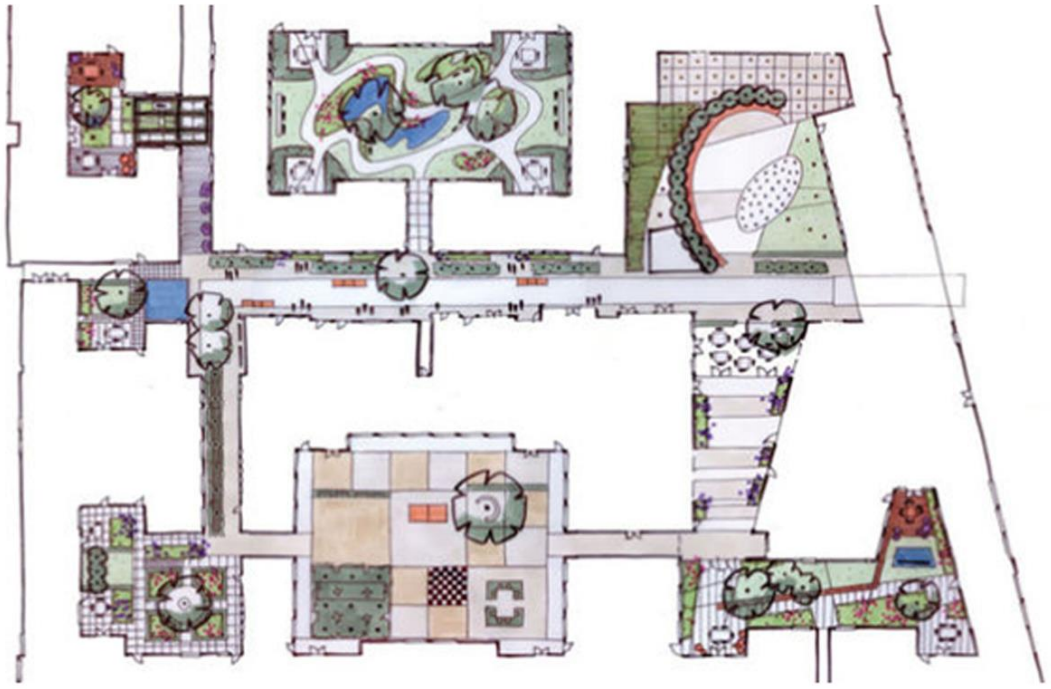

Figure 2: “Outdoor space plan for nursing home De Hogeweyk”, by Niek Roozen

(2) *Self-help organizations*—Sometimes known as '12 step programs', self-help organizations are a source of controversy, especially in the United States, where programs like Alcoholics Anonymous can be religious in nature, and are often the only affordable option for those negotiating court-ordered treatment for substance abuse (Ruiz, 2014; Glaser, 2015). Research suggests that AA is not the only, or even the most effective treatment for addiction. Still, there are those who undeniably claim that it has helped them (Singal, 2015). There are likely several explanations for this. First, regardless of the specific program, choosing to join a social circle where members are committed to specific goals, like remaining sober, is an effective mindshaping technique. This is because having trusted mentors and sponsors, as well as having community members with shared experiences, are effective environmental props. Indeed, sociality is, in general, a powerful influence on mental health (Alexander, 2001). Second, in addition to structuring the social environment, those in self-help organizations are often engaged in a kind of restructuring of their values and commitments, using certain creeds and rituals as embodied props to control behavior. Understood, on a traditional view, as a mere use of 'willpower' it would be mysterious as to why not all addicts who strive to curb their addiction are not equally successful.

(3) *Psychotherapy*—Behavioral therapy, cognitive-behavioral therapy, emotion-focused and psychodynamic psychotherapy all follow a familiar cultural trope in the West: patient and therapist sit across from each other in a comfortable room, and discuss the patient's mental well-being. Depending on the particular modality, there are different theoretical reasons for engaging in this process—discovering repressed memories and feelings and forging new emotional associations are just two.[26] However, as Doris puts it, "[t]herapists' theoretical predilections have relatively little to do with client outcomes, and the means by which therapy works are imperfectly understood" (p. 124, 2015). This may not come as welcome news for those seeking a 'sure-fire cure'. From an ecological perspective, however, the idea that patient-therapist relationships facilitate positive change while not providing complete or permanent 'cures' for mental

[26] While there is confusion as to why, the current consensus seems to be that 'talk therapy', regardless of particular modality, works. For more see Lane et al. (2015), Lambert and Ogles (2004), Cozolino (2002), Luborsky et al. (1985), and Seligman (1993).

disorders is obvious. Psychotherapy does not instantaneously remove the underlying cause of any symptoms, but is rather one more tool in a steward of the mind's arsenal, an environmental prop which may provide crucial social support. Indeed, there is good evidence that "a 'positive alliance' between therapist and client is associated with positive outcomes" across modalities (p. 124, Doris, 2015). Further, a therapist may make specific recommendations for a patient to restructure their work and home lives, providing additional technologies of mental health to combat particular illnesses.

(4) *Psychoactive drugs*[27]—Modifying ones neurochemistry is an effective tool of ecological control for many people. As a deliberate method of reorganizing body chemistry, psychoactive drugs are a kind of embodied prop. Another, more recently rediscovered dimension to the therapeutic use of psychoactive drugs involves the guided use of psychedelics like LSD and psilocybin. Professor of psychiatry Rolland Griffiths describes this kind of therapy as a kind of "inverse PTSD"; these drugs generate increased connectivity in brain regions which do not normally connect for a discrete period of time, during which the rigid patterns of thinking that characterize addiction and compulsions may be disrupted and replaced (Pollan, 2015). Electing to take such a 'trip treatment' is a clear way of managing cognitive ecology from the inside out. In the right circumstances, psychedelics are embodied props. Finally, recent research indicates that probiotics targeting your gut are significantly psychoactive. Not only does early development of the microbiome play a role in mental health, but changing gut bacteria in adults can significantly change behavior (Arnold, 2013). It is conceivable that there will be an increase in the use of probiotics as technologies of mental health in the future.

(5) *Recent innovations*—With recent advances in surgical techniques, robotic engineering, and even graphics engines, a number of unconventional psychiatric interventions have

[27] I don't wish to wade too deeply into the controversy surrounding the use of prescription medications, and the influence of the pharmaceutical industry. Elsewhere I have written about the problematic effects of industry on prescription practices (Washington & Morar, *forthcoming*). Suffice it to say that, while the impact of money on medicine is complex and deeply entrenched, there is no reason to think that the use of drugs like anti-depressants, stimulants, mood stabilizers, or even pain medications have no place in psychiatric therapy. In a both crude and eloquent response to a particularly virulent strain of *anti*-anti-depressant discourse in US politics, blogger John Dolan opines that, "[d]rugs in contemporary America are like prostitutes in Victorian Europe: Life could not go on without them, everyone depends on them one way or another, but no one ever thanks them. They don't fit in with the global lie we tell about this life" (2014).

> developed over the past few decades which are worth highlighting. To start, brain stimulation therapies have evolved far beyond so-called 'electroshock' therapy.[28] Vagus nerve stimulation devices are currently used to treat epilepsy and mood disorders, electrodes placed within the brain to treat Parkinson's disease are being studied as treatments for depression and obsessive compulsive disorder, and transcranial magnetic stimulation is also being studied for depression and psychosis (NIMH, 2015). Perhaps more remarkable are the number of videogames in development as potential treatments for everything from post-traumatic stress to attention deficit disorders and age related-cognitive decline (Brooks, 2013; Bluestein, 2014; Couch, 2015).

One thing to note about the therapeutic techniques listed so far, is that they often have a social or relational dimension. Perhaps you can be relied upon to take your medications by yourself and on schedule, but there is no therapy without a therapist, no deep brain stimulation without a surgeon, and no rehab facility without caretakers or supporters. This introduces an interesting dimension of other-directedness to therapeutic intervention. Sometimes we act so as to manage our own mental health but sometimes we act for others. Even when not actively occupying a social role like that of a clinician, human beings can have a substantial impact on the cognitive ecology of our fellows.

The implication of social engineering does not strike me as particularly problematic. In the context of raising children for instance, such engineering is not only uncontroversial, but expected. The number of choices parents must make in arranging their child's developmental environment for optimal mental health is astonishing, and it only grows as we learn more about the mind and brain. It is now speculated for instance that frequent school moves increase the risk for psychiatric symptoms (Singh, 2014), that strong adult relationships are a key ingredient in resilience (Walsh, 2015), that music lessons aid emotional intelligence while bilingualism reduces essentialist intuitions (Nutt,

[28] It is perhaps not well known that ectroconvulsive therapy today is still widely used, and considered a safe and effective treatment method for medication resistant depression, bipolar disorder, and schizophrenia (NIMH, 2015)

2015; Byers-Heinlein & Garcia, 2014), and that frequent use of handheld devices like cellphones may delay development (Lin et al., 2012; Rowan, 2015).[29]

The point is well taken, however, that there is risk in conceiving of some other-directed tools of ecological control as technologies of mental health. It is quite possible that any attempt to order another person, or group of peoples' behavior may be detrimental because it is paternalist. But this should not stop us from promoting any particular therapeutic techniques.[30] In my view, no process is therapeutic unless it succeeds at bettering its target. What is meant by 'better' is a fascinating topic for another time.[31]

2.3 Theory vs. Reality

So far, I have argued that an ecological perspective on the human mind is crucial for understanding the recipe for therapeutic change in clinical psychiatry. It explains that change occurs when one's cognitive ecology is suitably altered. Managing cognitive ecology is best understood as a process of ecological control. As stewards of the mind, we manage and intervene on mental well-being using technologies of mental health, causally and functionally integrated chains of resources through which human beings act as agents in the management of mental health.

When one steps away from theory and examines clinicians in the real world, however, there is a certain, perfectly understandable objection, not to the specific details of my view, but to its novelty. *Of course psychiatric therapy is ecological in character,* the thought goes, *diet, exercise, work and home life are all normally addressed in many different therapeutic contexts. Mental health practitioners have known for years that an attempt to ameliorate the suffering of mental illness without also addressing these things is fruitless. This is already how it's done.*

Is contemporary psychiatric therapy, in general or in part, ecologically-minded? This is a difficult determination to make, given the wide variety of contexts in which psychiatric therapies are practiced. I am doubtful that clinicians across contexts—including

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[29] These studies are all extremely new and shouldn't be accepted at face value, but I take it that the point remains that childrearing in a rapidly changing world is immensely complex.

[30] For interesting perspectives on how government agencies and aid organizations can support psychological well-being see Coster (2014) and SAMHSA (2015). For a more conservative view see Evans (2013).

[31] See previous chapters.

social workers, psychiatrists, clinical psychologists and others—are of one mind on this, given how often particular interventions are emphasized as a 'one true cure' for all. Additionally, it is important to remember just how pervasive the traditional picture of the mind is in the West.[32]

In any case, a review of the literature makes plain that psychiatric researchers, who often focus on mechanistic explanation for one particular diagnosis, have a kind of traditionalist bias. As philosophers Kari Theuer and Daniel Hartner put it,

> "[a] central aim of some current empirical research on psychiatric disorders is to link the clusters of symptoms listed in diagnostic manuals with the underlying neurobiological mechanisms that sustain the symptom clusters characteristic of the disorder. For example, much of the research on autism is directed toward uncovering the genetic, developmental, and neuroanatomical mechanisms *that underlie the disorder in all autism cases or in relevant subgroups* Autism is by no means unique in this regard: research on anxiety disorders, depressive disorders, schizophrenia, and many others can be similarly characterized" (Theuer & Hartner, 2015; italics added).

In other words, much current research proceeds under the assumption that one causal pathway realized inside the brain is the all things considered underlying explanation for a particular kind of illness. Taking into account the significant influence that variations in an individual's cognitive ecology can have casts doubt on this idea. I do not want to argue that intervention on a particular causal pathway without regard for others is never the best avenue for treatment for a particular individual, but again, this cannot be determined in abstraction from an individual's context. To fully understand what the options even are, in any particular case, research must proceed with a wide enough focus to take the entire cognitive ecology into account. When searching for therapeutic interventions, it is crucial to keep this in mind, or else risk severe limitations on our basic understanding of what it is to

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[32] In his book *Trying Not to Try,* Edward Slingerland makes a persuasive argument on ecological grounds that, when it comes to the difficulties of self-improvement, "[a] growing literature suggests that Chinese thinkers living more than 2000 years ago has a much more accurate picture of how people really think and behave than we find in recent Western philosophy or religious thought" (p. 10, 2014).

be mentally ill, and what to do about it.[33] We should be wary of narrowly focused, 'cure all' therapies, as well as those which misconstrue human agency. I will expand on this idea in the next section of this paper.

3. Learning to Be Better

The ecological picture of the mind gives us new tools to explain the success or failure of prescriptions for improving psychological well-being, and to generate new and improved therapies. Successful prescriptions tend to add to our repertoire as stewards of the mind, rather than draw boundaries around it. They take into account individual's uniquely human nature as embodied, and socially situated creatures. Successful prescriptions are compatible with the empirical findings of the sciences of the mind and human behavior.[34] On the contrary, I am optimistic that broadening our understanding of psychiatry and psychiatric therapy along ecological lines will afford promising breakthroughs in the fight to alleviate suffering caused by mental illness. In 3.1 I hope to take one small step toward validating that optimism by showing how a number of proposals from the philosophical and psychological literature fare on ecological grounds. Then in 3.2, I will demonstrate how the stewardship view manifests itself as practical guidance and advice for individuals.

3.1 Avenues toward Mental Well-Being

Universal solutions can be as attractive as unifying explanations. In a forthcoming article in *Behavioral and Brain Sciences*, for example, Raffael Kalisch, Marianne B. Müller, and Oliver Tüscher propose that mental health ultimately depends on a single unifying mechanism which protects against stress and mediates resilience, namely, the style in which someone evaluates and reacts to a challenge. Healthy organisms 'make the best of things' or 'bounce back'. Kalisch et al. call this the positive appraisal style theory of resilience (PASTOR) account. As I have argued elsewhere, one plausible reading of PASTOR that remains consistent with an ecological view of cognition construes 'positive appraisal' as

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[33] This is yet another place, it seems, to push a critique of contemporary research as exemplified by the DSM. See Hacking (2013) for a similar view.

[34] I reject, in other words, the worry Sneddon expresses at the end of his book, that a 'wide' view of human cognition has little practical promise for therapy.

positive affective or psychophysiological response relative to stressor load, normalized to individuals' actual performance in the face of various stimuli; a resilient organism makes the best of its circumstances, whether challenging or routine (Washington, 2015). For example, a resilient human being can shrug off negative feelings after a difficult workday, remain optimistic after a disappointing election result, or move on after a personal loss. Strengthening one's ability to 'make the best of it', then, is the shape that therapy takes on this view.

It is perhaps already clear how limiting this view might be in a therapeutic context. While it seems uncontroversial that you might be a bit more stressed out when making a life-altering decision such as whether or not to get married or quit your job than you would choosing between busy checkout lines in a crowded store, these are not the only, or even conceivably the most important dimensions along which stressor load varies. To put it plainly, not all human beings are out there making the best of the same kinds of circumstances. There are systemic disparities in the dangers we face, and the resources we have to face them. Regardless of how resilient an individual might be, it is possible that resilience mechanisms inevitably will collapse in some difficult, but commonplace environments (Washington, 2015).[35]

What Kalisch et al. seem to miss, other than the gravity of economic inequality, is the degree to which mental health depends on a widely realized cognitive ecology. Indeed, by claiming that socioenvironmental factors are merely distant influences on mental health, they buy into a version of the traditional picture, and blind themselves to the limits of positive appraisal. PASTOR, so far, has little to say about how things like environmental props and cultural customs can mitigate suffering caused by mental illness.

Not all reject the therapeutic significance of social and environmental scaffolding however. Ulman Lindenberger and Ulrich Mayr, for instance, are two psychologists interested in the value of technologies designed to assist aging individuals, such as smartphones and 'smart kitchens' (2014). Noting that reliance on environmental cues increases as human beings age, they argue that there is a "dark side" to environmental

[35] In marginalized populations for whom mental health is a crucial concern, systemic inequality raises the magnitude of everyday environmental stressors, and limits many social support based stress-aversion strategies (Satcher, 2001). The most serene and resilient among us may be making the best possible lemonade out of life's lemons, and still be suffering

support—that "this shift also comes at a cost, as the affordances of the environment increasingly dominate the structure and content of thought and behavior" (p. 7, 2014) and that "[older adults are] less capable of directing behavior in a top-down, internally regulated manner" (p. 12, 2014). Interestingly, Lindenberger and Mayr seem to conclude that environmental scaffolding is a danger that can hinder goal pursuit and engender loss of autonomy, by distracting older individuals from the details of a particular task (2014). Maintaining mental health, on their picture, is largely a matter of maintaining internal control.

Of course, by proceeding under the traditionally-minded assumption that only internal, top-down, deliberative, reasoning results in 'proper' control, Lindenberger and Mayr overlook the fact that exercising ecological control can and does advance goal pursuit. From an ecological perspective, it should be no surprise that humans rely more on environmental cues in situations of compromised top-down control. This is exactly the kind of flexibility that allows fluent goal pursuit across a variety of circumstances. For example, as someone who often forgets about mundane tasks of day-to-day living (especially under the stress of deadline pressure!) I am very grateful for the to-do list capabilities of my phone. It gives me greater ability to pursue the goals I value, like taking a daily medication. When I respond to the notification charm by getting up from my desk and pouring a glass of water, I am exercising ecological control. Of course, if this task isn't one that is personally important to you, you shouldn't be following my phone reminders.

Thus, while alarm over the negative influence of assistive technologies is unwarranted, Linendberger and Mayr do well to point out the need for caution as regards their design. Much, careful, empirical research and system 2 thinking is required to create technologies of mental health which correspond to the needs and goals of individuals, rather than sidetracking them. This idea highlights a feature common to many ecologically-minded therapeutic proposals: that psychiatric therapy is, ideally, as highly individualized as the needs and goals of the agents who engage in it. Individual variation, especially variation

in cognitive ecology, entails variation in the ways we achieve, maintain, and improve mental health.[36] As philosopher Dan Haybron puts it in his book *The Pursuit of Unhappiness,*

> "[o]ur propensities for being happy or unhappy in various ways of living are important to who we are. This matters, I argue, because it seems important to live in accordance with who we are: well-being consists partly in fulfilling our emotional natures" (p. 22, 2008).[37]

While not concerned with mental illness specifically, philosopher Valerie Tiberius also grapples with the complexities of individual variation in the process of changing oneself for the better in her account of living well (2008). According to her Reflective Wisdom Account, a well-lived life is guided by the values which stand up to appropriate, first-personal reflection. Of course, these values will not necessarily be the same for every human being. Part of the difficulty then, which Tiberius recognizes, is not just deciding how to behave unreflectively according to ones values, but knowing whether or not those values are legitimate, or tell the whole story. To combat this, Tiberius suggests that we cultivate certain virtues—we must be flexible, self-aware, optimistic, and have perspective on our lives in order to be sure what we really value (2008).

This argument can be easily modified to provide a recipe for therapeutic change, of another kind. Taking an active role in the management of one's own mental health requires a similar kind of wisdom. As stewards of the mind, some knowledge of the lay of our cognitive ecology is critical to understanding what therapeutic techniques will have the greatest impact. Investigating what we should ideally know in this regard is an important avenue for future research, both as members of the human species, and as individuals embedded in locally specific cultural contexts. Some of the specifics, of course, will evolve over time, as our environments change and our knowledge of them expands. In the next section, I will take a brief look at some of the best, current advice.

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[36] I make a similar points about variation in both ways of being ill and ways of being healthy in previous chapters.

[37] Interestingly, Haybron goes on to argue that there are fewer ways for human beings to live happily than one might intuitively think (2008).

3.2 Your Mental Health Niche

From a traditional perspective, it can sometimes seem as if mentally healthy individuals are benefiting from equal parts wisdom and providence. Whether or not someone has or develops a mental disorder is often thought of as bad genes, bad karma, or bad luck. Dealing with misfortunes like these has also traditionally been an inward-focused process—deep reflection, will power, and perhaps the occasional pharmaceutical drug tend to be the recognizable tools at hand (Saks, 2013). This is somewhat unfortunate for those with a practical interest in managing mental health, as it prevents many everyday methods uncovered by recent research from being seen as 'real' therapeutic techniques.

Psychiatrist Elyn R. Saks agrees. Diagnosed with schizophrenia as a young college student, and frequently hospitalized for a number of subsequent years, Saks was given a grave prognosis. Doctors told her that she should expect not to hold a steady job. Today, Saks is a chaired professor at the University of Southern California Gould School of Law, an adjunct in the Department of Psychiatry at the University of California San Diego, a faculty member of the New Center for Psychoanalysis, and a MacArthur genius. Interested in what separates high-functioning schizophrenics like her from others, Saks gathered and interviewed twenty subjects of diverse backgrounds, who were all educated professionals living with the diagnosis (Saks, 2013). In an essay called 'Successful and Schizophrenic', Saks describes these interviews in a passage worth quoting at length:

> "How had these people with schizophrenia managed to succeed in their studies and at such high-level jobs? We learned that, in addition to medication and therapy, all the participants had developed techniques to keep their schizophrenia at bay. For some, these techniques were cognitive. An educator with a master's degree said he had learned to face his hallucinations and ask, 'What's the evidence for that? Or is it just a perception problem?' Another participant said, 'I hear derogatory voices all the time... you just gotta blow them off.'
>
> Part of vigilance about symptoms was 'identifying triggers' to 'prevent a fuller blown experience of symptoms', said a participant who works as a coordinator for a nonprofit group. For instance, if being with

people in close quarters for too long can set off symptoms, build in some alone time when you travel with friends.

Other techniques that our participants cited included controlling sensory inputs. For some, this meant keeping their living space simple (bare walls, no TV, only quiet music), while for others it meant distracting music. 'I'll listen to loud music if I don't want to hear things,' said a participant who is a certified nurse's assistant. Still others mentioned exercise, a healthy diet, avoiding alcohol and getting enough sleep. A belief in God and prayer also played a role for some.

One of the most frequently mentioned techniques that helped our research participants manage their symptoms was work. 'Work has been an important part of who I am,' said an educator in our group. 'When you become useful to an organization, there's a certain value in belonging there.' This person works on the weekends too because of 'the distraction factor'. In other words, by engaging in work, the crazy stuff often recedes to the sidelines.

Personally, I reach out to my doctors, friends, and family whenever I start slipping, and I get great support from them. I eat comfort food (for me, cereal) and listen to quite music. I minimize all stimulation. Usually these techniques, combined with more medication and therapy, will make the symptoms pass. But the work piece—using my mind—is my best defense. It keeps my demons at bay. My mind, I have come to say, is both my worst enemy and my best friend.

That is why it is so distressing when doctors tell their patients not to expect or pursue fulfilling careers. Far too often, the conventional psychiatric approach to mental illness is to see clusters of symptoms that characterize people. Accordingly, many psychiatrists hold the view that treating symptoms with medication is treating mental illness. But this fails to take into account individuals' strengths and capabilities, leading mental health professionals to underestimate what their patients can hope to achieve in the world" (Saks, 2013).

To my mind, a tacit acceptance of the traditional picture, especially the external minimalism thesis, is largely to blame for this problem. Recall that, according to this thesis, structures and processes external to an individual play at best a secondary causal role in the development of a strong, healthy mind. Perhaps the most immediate benefit of taking an ecological perspective on therapy, then, is in taking advantage of its much wider set of practical tools and techniques. Not all of these will necessarily be effective for all individuals, but they apply generally enough that adding them to the common lexicon should be a great advantage.

By way of demonstration, consider first the ways in which we take care of our physical bodies that affect our psychological well-being. It is more or less common knowledge that one of the best things you can do for yourself to manage stress and be more effective is to eat well, sleep well, exercise, and meditate (for more, see: Babyak et al., 2000; Dweck, 2007; De Brigard, 2015). As has already been mentioned, diet is about more than nutrition; it is also the way you care for the bacteria living in your gut. Recently, however, it has been noted that over-sterilization and use of anti-bacterial products, especially in the US, has had a negative effect on microbiota, and contributed to anxiety, obesity, and depression (Rosenberg, 2014). Cutting back on use of hand-sanitizer, perhaps counterintuitively, has become an important part of being mentally healthy. Equally counterintuitive is the insight that smiles and laughter aren't just expressions of happiness, but ways of cultivating it. Even if forced, the mechanical action of smiling is a way of elevating mood, from the outside in (Strack et al., 1988).

There are also a number of techniques for shaping minds and social spaces that can benefit mental health. Again, beginning with the obvious, human beings generally benefit from listening well, conversing deeply, giving to others, and staying in touch with friends (Dunn et al., 2008; Mehl & Vazire, 2010; Baumeister et al., 2013). It is less widely known that cynicism, a quality sometimes celebrated as an asset, has been linked to both heart disease and dementia (Tolppanen, 2014), or that the kind of deep rumination about negative feelings often advised in popular self-help books in fact makes depressive symptoms worse (Rottenberg, 2014). On the other hand, expressions of positivity and self-expressive acts, even when routinized, can be a great benefit to mental stability. Repeating three things you are grateful for, or doing a 'random act of kindness' each day, for example,

can have a lasting positive effect (Emmons & McCullough, 2003; Lyubomirsky et al., 2005), as can journaling and other kinds of self-expressive writing (Gortner et al., 2006).

Finally, where possible, it is beneficial to arrange your physical environment in certain ways. For one, it is now thought that chronic stress causes long-term changes in the brain, which can predispose one to anxiety and mood disorders (Chetty, 2014). Regulating noise, temperature, and crowding in the workplace are everyday ways to combat this. Spending time outside and listening to music are also effective ways of reducing stress (Ryan et al., 2010; Sherman et al., 2010). And reducing the time spent in front of screens, especially before bed, is also becoming an increasingly urgent issue in our modern, nocturnal, media-saturated lives (Lin et al., 2012).

For many, implementing all these therapeutic techniques at once will not be enough to ameliorate their symptoms, without perhaps therapy or medication. Sometimes, there is no known solution whatsoever. Still, for many others, ecological solutions are not known or trusted as methods of psychiatric care—and it is this latter problem that most concerns me here. Whether attending therapy or starting a regimen of probiotics, bettering oneself is an ecological process. It requires attending to a wide cognitive system, deeply integrated with the outside world, often via methods that do not look much like the work of Rodin's thinker. As a philosopher this is welcome news; my reflective skills are probably of better use elsewhere anyway!

4. Concluding Remarks: Better Than Well, and Smarter Than We Think

Not everyone reflexively resists the idea that there is more to the mind than the contents of the skin and skull.[38] One public defender of ecological ideas worth mentioning is science writer Clive Thompson. In his recent book *Smarter than You Think,* Thompson defends the idea that integrating advanced technologies like movie preference algorithms and search engines into our cognitive landscapes is not only acceptable or natural, but in many ways an improvement on our abilities and selves (Thompson, 2013). There are also those who are sympathetic to the idea that human enhancement, of which the process of

[38] For example, some philosophers of psychiatry worry that psychiatric therapies somehow change our human nature by making us "technological beings" (Phillips, 2013).

psychiatric therapy is often an example, is no less natural or immoral than any other kind of change. In his book, *Better than Well,* Carl Elliott argues that in fact, at least in contemporary discourse in the United States, people are actually surprisingly open to the idea of enhancement. As he puts it,

> "...our ambivalence about so many enhancement technologies is often ambivalence about the kinds of people we want to be. The question is not just whether there is any moral cost to the quest to become *better,* but whether there is any moral cost to the quest to become *different.* If we have mixed feelings about accent-reduction clinics, cosmetic surgery, or Prozac, this is partly because we have mixed feelings about the visions of the good life these technologies serve" (p. 17, 2003, italics in original).

This complicated intersection of ideas—between agency, and wellness, and human nature—often gets cached out in terms of *values*, in the philosophical literature. We have taken for granted until now that there is inherent value in reducing or eliminating the burden of mental illness, which is what makes psychiatric therapy an easy case. But figuring out *how* therapy is best realized often involves negotiating a wider landscape of valuing—and values can conflict.

At a first gloss, one is a successful agent when one is in some sense self-directed, or acting in line with ones values. Perhaps, if those values stand up to some appropriate standards, and an individual succeeds in realizing them, then 'mentally healthy' is just a way to describe that individual.[39] This is something I would like to investigate in the future. For now, it is important to note one thing that we as humans cannot do. We cannot simply stop being ecological agents. According to the ecological picture, what I have called a 'special kind of opportunity' or ability to change in a goal-directed manner, is not just an interesting quirk of human cognition, but characteristic of it. As Clark writes, we are 'soft-selves' which,

> "set long-term goals, pursue some slow deliberative reasoning, and gently nudge the larger system in certain directions, all the while actively creating

[39] For more on agency and valuing see Doris (2015) and Tiberius (2008).

> and maintaining the kinds of conditions in which the overall distributed cognitive economy performs at its best," (p. 110, 2007).

Sometimes, that process of stewardship involves annexing different elements, biological and non-biological, into the machinery of our minds. Sometimes we do this because we are sick. Sometimes we do this because we are well.

5. OPEN QUESTIONS

In this project I have closely examined the nature of good clinical reasoning in clinical psychiatry, thinking about mental illness and mental health which:

(1) is consilient with the other sciences of the mind/brain, and
(2) employs a normative theory with properly justified evaluative standards for psychiatric diagnosis.

Over the course of my three primary chapters, I gave three criteria for good clinical reasoning in psychiatry. Clinical psychiatry should:

(1) strictly separate its descriptive and evaluative projects into two stages, such that notions of typicality do not delimit the class of mental disorders,
(2) respect variation in what makes individuals flourish by locating mental health in the concerns of individual patients, and
(3) take advantage of the unique insights of an ecological perspective of the mind in order to help teach us how to be better, mentally.

In the space that remains, I would like to gesture at some open questions surrounding my arguments and highlight avenues for future research. Ultimately, I hope that extending this project will help shape future discussions on the nature of mental illness.

1. Why Well-Being?

In chapter two I argued that the kind of normative theory of mental illness a two-stage methodology requires would not need information about what psychological features and

processes are typical or atypical for human beings or any subset thereof, and further, that a completely descriptive taxonomy of cognitive mechanisms would be sufficient for theorists and clinicians at stage two. Though not stated explicitly, I take these claims to be substantiated by my arguments in chapter three. Since a theory which differentiates mental health from mental illness must be grounded in the concerns of individuals, the very notion of typicality with respect to a group loses its explanatory power. One might imagine that examining a patient's symptoms in a clinical context will reveal both whether they are flourishing on their own terms, and if not, whether any typical psychological deviation underlies that condition. This process is of course nothing like how diagnosis is conducted using the DSM. As Kathryn Tabb has recently put it, the integration of psychiatric knowledge into therapeutics will need to be re-imagined" (Tabb, *ms*).

At the end of chapter three I intimated that exactly what the right normative theory is for mental illness has yet to be established. As per my references to concepts like flourishing and well-being, I am in agreement with those theorists who believe that health is properly located among these and other concepts of the good life. I am interested in well-being in particular, because of the recent successes in psychology of measuring it objectively. Thus a further step to make is to engage with thinkers like Dan Haybron (2008), Valerie Tiberius (2008; 2014), Erik Angner (2009), Anna Alexandrova (2013; 2015) and Michael Bishop (2015), to determine whether these measures are valid, and what they have to reveal about mental health.

As measures of well-being are tied closely with values satisfaction, I believe that a theory of mental health can be established along the same lines as Tiberius and Plakias' values-based theory of well-being (2010). If a person is flourishing with respect to their values, then they are healthy, or something to that effect. The notion of values I have in mind here has much in common with Tiberius' (2008), and also with John Doris' notion in his recent work on agency (2015). As Doris puts it, values are "associated with desires that exhibit some degree of strength, duration, ultimacy, and non-fungibility, while playing a determinative-justificatory role in planning" (think, *friendship, family, independence, safety, creativity*) (p. 28, 2015).

One upshot of a view like this, if it can be substantiated, is its synchronicity with an up and coming technique in clinical psychiatry called *values-based practice* (Fulford & Van

Staden, 2013). Values-based practice is "a new skills based approach to working with complex and conflicting values in health care that is proving to be a fast growing force at the practical cutting edge of the philosophy of psychiatry" (p. 385, 2013). This method is individualist in that it recognizes and accepts difference in individuals' preferences and concerns, and that these differences will underscore differences in ways of being mentally ill (2013). Of course, the convergence of these concepts—well-being and values—suggests that one way to mediate mental health is by changing individuals' interests themselves. I hinted at this possibility at the end of the second chapter, and further argument is needed concerning the possibility (or objectionable consequence) of a brave new world.

2. Pathological Agency

Another sticking point about the identification of mental health with a values-based notion of well-being concerns the possibility of ill-chosen values. Recall how, at the end of chapter two, I considered what the consequences might be for 'less than fully rational' people like successful psychopaths and schizophrenics. I dismissed these cases as unproblematic for two reasons: one, that we should allow the possibility that unconventional values truly facilitate well-being in some cases, and two that when it comes down to it, it is always possible that peoples explicitly stated values do not actually fill that role. I expect objective measures of well-being to substantiate this.

Still, there is another kind of case in the neighborhood of this issue that may pose problems. What if it is not a person's values which are in doubt, but their *agency* or perhaps very capacity for autonomy? Can we fail to be agents in such a way that our individual concerns are no longer a guide to our mental health?[1] When does a patient fail to be competent? Self-reports of patients with depression and compulsions seem to support this possibility. Some think of depression as characterized by a "diminished experience of free will" (Ratcliffe, p. 574, 2013). Others note how "[r]easons for actions, recognized as valid from the agent's perspective, get overridden or suspended because of depression and this seems idiotic to the agent herself" (Radoilska, p.1167, 2013). What is it about illnesses like depression and compulsion that makes them challenges to decisional

[1] Many thanks to John Doris and Chapman Davis Waters for interesting discussions on this issue.

capacity and autonomy? A passing comment from Doris in his book on agency is illuminating here. As he writes,

> "[t]here are frequently obvious differences between clinical and healthy populations, and some of the most important differences, it seems to me, are appropriately marked as differences in self-direction: healthy people control their behavior and order their lives in ways that many suffers of mental illness cannot... If that's right, normal and pathological psychologies can sometimes be distinguished along dimensions of agency (Buss 2012: 667–78), and it becomes tempting to suppose that the many people fortunate enough to enjoy some measure of mental health also enjoy, in some measure, the exercise of agency" (p. 34-35, 2015).

I am of a mind to think that differences like these are compatible with an individualist conception of mental illness. But arguing for that claim will involve deeper engagement with the literature on agency itself. The question of whether mental illness and its treatment can be understood in terms of departures from and restorations of agency is another worth pursuing.

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Washington, N. (2015). Do we know how stressed we are? Commentary on Raffael Kalisch, Marianne B. Müller and Oliver Tüscher, A conceptual framework for the neurobiological study of resilience. *Behavioral and Brain Sciences.* 38. e127.

Washington, N. & Morar, N. (*forthcoming*). Implicit cognition and gifts: How does social psychology help us think differently about medical practice? *Hastings Center Report.*

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(Fall 2015)

Education

- Ph.D. Philosophy, Purdue University, 2015
- B.A., Philosophy, with honors, University of Wisconsin - Madison, 2010

Academic Employment

- McDonnell Postdoctoral Scholar, Philosophy, Neuroscience, and Psychology Program, Washington University, Saint Louis, Fall 2015-present

Areas of Specialization

- Philosophy of Mind, Philosophy of Cognitive Science

Areas of Competence

- Philosophy of Psychiatry, Philosophy of Psychology, Moral Psychology, Bioethics, Logic

Dissertation

- 'Mental Health and Human Minds: Some Theoretical Criteria for Clinical Psychiatry'
- Committee: Prof. Daniel Kelly (chair), Prof. Daniel Smith, Prof. Dana Tulodziecki, Prof. Edouard Machery

Publications

Refereed Journal Articles

1. Washington, N. and Morar, N. (forthcoming). "Implicit Cognition and Gifts: How does social psychology help us think differently about medical practice?" *Hastings Center Report.*

Invited Articles

1. Washington, N., and Kelly, D. (forthcoming). "Who's Responsible for This? Moral Responsibility, Externalism, and Knowledge about Implicit Bias," *Implicit Bias and Philosophy*, Eds. M. Brownstein and J. Saul. New York: Oxford University Press.

Reviews and Commentaries

1. Washington, N. (2015) "Do We Know How Stressed We Are?" commentary on Kalisch et al. "A Conceptual Framework for the Neurobiological Study of Resilience" *Behavioral and Brain Sciences,* 38 e127.
2. Washington, N., and Kelly, D. (2014). 'Should an Individual Composed of Selfish Goals be Held Responsible for Her Actions?' commentary on Julie Y. Huang and John A. Bargh "The Selfish Goal: Autonomously Operating Motivational Structures as the Proximate Cause of Human Judgment and Behavior," *Behavioral and Brain Sciences*, 37(2): 158-159.

Works in Progress

1. Washington, N. "Culturally Unbound: How Cross-Cultural Cognitive Diversity Affects Methodology in Clinical Psychiatry"
2. Washington, N. "Individualism as a Solution to Paternalism in Psychiatric Practice"
3. Washington, N. "Stewardship of the Mind: How an Ecological Perspective Can Help Us Better Understand Psychiatric Therapy"
4. Washington, N. and Buhlmann, P. "Racism and Criminality in *The New Jim Crow*"

5. Washington, N. "The Value of Diagnosis: Understanding Good Clinical Reasoning in Scientific Clinical Psychiatry"
6. Washington, N. and Waters, C. "What is Love? An Empirical Investigation of the Folk Concept"

Presentations

1. 'What's a Diagnoses? The Value of the Individual in Scientific Psychiatry', Invited talk for the Philosophy Neuroscience and Psychology Club at Washington University in Saint Louis, September 15th, 2015
2. 'Individualism as a Solution to Paternalism in Psychiatric Practice', organized session, New Dimensions in the Philosophy of Psychiatry at ISHPSSB in Montreal, Canada, July 8th, 2015
3. 'Agential Technologies and Implicitly Biases Behaviors', part of organized session, The Ethical Dimensions of Philosophy of Race at ISHPSSB in Montreal, Canada, July 6th, 2015
4. 'Moral Technologies: Responsibility and Implicit Bias', Invited talk for the George Washington University Philosophy Department Brownbag Seminar, January 23rd, 2015
5. 'Culturally Unbound: Scientific Psychiatry, Norms, and Human Nature', Invited talk for the George Washington University Seminar in the History and Future of Mental Wellbeing, January 23rd, 2015
6. 'Individualism as a Solution to Paternalism in Psychiatric Practice', Early Career Scholars Philosophy of Psychiatry Conference at the University of Pittsburgh, November 21st and 22nd, 2014 [Poster Presentation]
7. 'Engineering Agency and the Technology of Mental Health', The Moral Psychology Research Group, Tulane University, November 8th, 2014
8. 'Racism and Criminality in *The New Jim Crow*', Panel at Philosophy Born of Struggle, Paine College, October 31st, 2014 [with Pierre Buhlmann]
9. 'Responsibility from the Outside In: Shaping the Moral Ecology Around Implicit Bias', Invited talk for the philosophy department at Purdue University, September 23rd, 2014 [with Daniel Kelly]

10. 'Implicit Bias and Responsibility: From the Outside In' PUF workshop, University of Paris Nanterre, June 27th, 2014
11. 'Culturally Unbound: Scientific Psychiatry and Cross-Cultural Cognitive Diversity', Session on Mental States at the Society for Philosophy and Psychology, June 20th, 2014.
12. 'Culturally Unbound' Cross-Cultural perspectives on Moral Psychology, Korea University, Seoul, South Korea, March 21st, 2014 [Poster Presentation]
13. 'Culturally Unbound: Scientific Psychiatry and Cross-Cultural Cognitive Diversity', Panel on the Ethical Problems of Diagnosis at The University of Memphis Graduate Student Conference on Mental Illness and Power, February 22nd, 2014.
14. 'Culturally Unbound: Scientific Psychiatry and Cross-Cultural Cognitive Diversity', Session on the Philosophy of Psychology at Philogica III, Universidad de los Andes in Bogota, Colombia, February 12th, 2014.
15. 'Culturally Unbound: Scientific Psychiatry and Cross-Cultural Cognitive Diversity', Session on the Philosophy of Psychology at the Southern Society for Philosophy and Psychology, February 8th, 2014.
16. 'Culturally Unbound: Scientific Psychiatry and Cross-Cultural Cognitive Diversity', The Moral Psychology Research Group, Washington University in St. Louis, November 17th 2013.
17. 'Responsibility for Implicit Bias,' Invited contributor to Imperfect Cognitions Blog, posted July 31st 2013 (http://imperfectcognitions.blogspot.com/2013/07/responsibility-for-implicit-bias.html)
18. 'Who's Responsible for This? Moral Responsibility, Externalism, and Knowledge about Implicit Bias', Symposium on Implicit Bias at the Southern Society for Philosophy and Psychology, March 1st 2013 [with Daniel Kelly].
19. 'Who's Responsible for This? Implicit Bias and Social Externalism about Moral Responsibility', Invited talk for the Filosofiska Föreningen, Lund University, February 13th, 2013 [with Daniel Kelly].

20. 'Who's Responsible for This? Implicit Bias and Social Externalism about Moral Responsibility', The Moral Psychology Research Group, Ohio State University, November 18th 2012.
21. 'Implicit Bias and the Epistemology of Moral Responsibility', Implicit Bias and Philosophy Workshop 2, University of Sheffield, April 20th 2012 [with Daniel Kelly].
22. 'Who's Responsible for This? Implicit Bias and Moral Responsibility', Spring Brownbag Lecture Series, Purdue University Psychology Department, December 2nd 2011 [with Daniel Kelly].

Fellowships and Awards

- McDonnel Postdoctoral Fellowship, Fall 2015-present
- Partner University Fund Scholarship for the "Theoretical Toolkit Summer School" exchange program (Purdue University and University of Paris Nanterre), 2014
- Purdue Graduate Fellowship in Philosophy for Diversity and Inclusion, 2014-2015
- Purdue University Teaching Academy 2013-2014 Graduate Teaching Award
- McBride Graduate Student International Travel Grant, 2012-201, 2013-2014
- Purdue Doctoral Fellowship, Purdue University Graduate School, 2010-2012
- UW Alumni Association Rothschild Study Abroad Scholarship, 2010
- College of Letters & Science Smith Scholarship, University of Wisconsin–Madison, 2009
- Chancellor's Scholarship, University of Wisconsin – Madison, 2007-2010
- Congressional Black Caucus Scholarship, 2007, 2008
- Rainbow PUSH Scholarship, 2007
- National Achievement Scholar, 2007

Professional Activities

- Purdue Philosophy Department Diversity and Inclusion Workshop and Colloquium Organizer, 14/15 academic year
- Coalition for Racial Diversity in Philosophy, invited member, 2014- present

- Networking and Mentoring Workshop for Graduate Student Women in Philosophy, Princeton University, August 2014
- Minorities and Philosophy Graduate Mentor, Spring 2014–present
- Member and Contributor to the Moral Psychology Research Group, Spring 2013–present
- Purdue Philosophy Department Graduate Representative, Fall 2012–Spring 2014
- Implicit Bias and Philosophy International Research Project Contributor, Spring 2012–present

Referee and Review Work

- Philosophy, Psychiatry, & Psychology, Summer 2015–present
- Synthese, Summer 2015–present
- Philosophical Psychology, Summer 2014–present
- Consciousness and Cognition, Spring 2014–present

Teaching Experience

- Instructor, Inquiry in the Cognitive Sciences, Fall 2015 (WUStL)
- Instructor, Principles of Logic, Spring 2014 (Purdue)
- Instructor, Critical Thinking, Fall 2013 (Purdue)
- Teaching Assistant, Introduction to Philosophy, Spring 2013 (Purdue)
- Teaching Assistant, Ethics and Animals, Fall 2012 (Purdue)

Graduate Coursework

Philosophy of Mind

- Studies in Philosophy of Mind: The Many Sides of Madness, Philosophy of Psychiatry, Professors Daniel Kelly and Daniel Smith [audit]
- Studies in Philosophy of Mind: Agents, Persons, Selves, Professor Daniel Kelly
- Interdisciplinary Reading Seminar on Norms and Informal Institutions, Professors Ann Marie Clark, Leigh Raymond, S. Laurel Weldon, and Daniel Kelly
- Minds and Morals, Professor Daniel Kelly

Philosophy of Logic, Language, and Science

- Philosophy of the Natural Sciences: Space and Time, Professor Martin Curd [audit]
- Seminar on the Philosophy of Language, Professor Rod Bertolet
- Symbolic Logic, Professor Dolph Ulrich

History of Philosophy

- Twentieth Century Analytic Philosophy, Professor Rod Bertolet
- Contemporary Ethical Theory, Professor Patrick Kain
- Studies in Eastern Philosophy on Chinese Philosophy, Professor Donald Mitchell
- Seminar on Kant's Critique of Pure Reason, Professor Jacqueline Marina
- Existentialism survey, Professor William McBride
- Studies in Modern Philosophy on Spinoza, Professor Michael Jacovides
- Studies in Eastern Philosophy on Indian Philosophy, Professor Donald Mitchell