

From the Editor

The papers gathered in this issue of the Bulletin represent a sampling of the presentations at the AAPP Annual Meeting last May in Toronto. That meeting was unique in that there was no meeting theme. The papers in this issue consequently show the diversity one would expect from an open meeting.

In “Mental Illness, Freedom, and Development,” Jeffrey Bedrick takes up the epidemiological finding that some mental illnesses, especially depression, are less frequent in less developed countries than in developed ones. This flies in the face of the expectation that mental illness will follow the path of poverty — the more poverty the more illness. He considers many explanatory factors and then suggests that the answer may involve what he describes as the degree of ‘positive freedom’. On the one hand traditional societies may afford less freedom but the social cohesion and support that protect against depression. On the other hand, developed countries allow and promise more freedom of opportunity, but in fact may frustrate that promise through poverty, lack of opportunity, and resultant childhood neglect, all of which can result in depression.

In “Is it Ethical to Change Memories to Treat Post-Traumatic Stress Disorder (PTSD)?,” Miguel Vilaro presents an Aristotelian challenge to the Cartesian dualism that besets official psychiatry. Representatives of the latter would of course retort that they have rejected Cartesianism, but they do so by privileging the materialist side of Descartes’s dualism and leaving the mind as an unembodied ghost in the machine. Building on Aristotle’s notion of the mind as the form of the body, Vilaro directs this position toward a new understanding of posttraumatic stress.

Chandra Kavanagh’s “Accommodation or Cure: A Synthesis of Neurodiverse and Cure Theory Recommen-

President’s Column

In November 2015 the Movement Disorder Society (MDS) revised the diagnostic criteria for Parkinson’s disease (PD) (Postuma et al 2015). In contrast to the publication of DSM-5 in 2013, there was not much fanfare. Parkinson’s disease, like most mental disorders, cannot be definitively diagnosed in living persons. Also like mental disorders, it presents differently across individuals, and symptomatically overlaps with other motor and cognitive impairments (most notably Lewy body disease). The MDS specifies that the new diagnostic criteria are intended to improve research, but that they may be used for clinical purposes as well, just as the DSM diagnostic criteria have multiple purposes.

The new PD criteria depart from DSM in using essential criteria, supportive criteria, “absolute exclusion criteria,” and “red flags” to create tiers of diagnostic confidence. The clinical diagnosis of PD requires all essential criteria (bradykinesia together with resting tremor and/or rigidity). It requires at least 2 of 4 supportive criteria (response to dopamine treatment, presence of levodopa-produced dyskinesia, resting tremor of a limb rather than just the distal extremity, and cardiac sympathetic denervation or olfactory dysfunction). For PD to be “clinically established,” there must be no absolute exclusion criteria, and no red flags. Absolute exclusion criteria are rule-out criteria, those that suggest a different diagnosis, such as cerebellar disease, neurodegenerative disease, or parkinsonism as a side effect of treatment with certain medications.

Red flags are clinical findings that diminish confidence in the diagnosis of PD. These tend to be departures from the typical course of disease progression, physical distribution of symptoms, or severity of symptoms. The presence of red flags does not preclude the diagnosis of PD, as long as there are no more than two. Each red flag requires a supportive criterion to “counterbalance” it. In such a case there is less diagnostic confidence, so the diagnosis is “clinically probable” PD rather than “clinically established” PD.

The MDS paper does not specify how tiered diagnosis is to be applied. Although I am intrigued by the approach, especially the aspect of explicitly balancing supporting and contradictory clinical evidence, I wonder whether this strategy might apply to psychiatry. Psychiatry has always tried to maximize the certainty and precision of diagnosis, which is necessary to justify many psychiatric treatments. Despite efforts in the 1960s and 1970s to make psychiatric diagnosis more reliable, research cohorts comprised only of “clinically established” mental disorders are symptomatically heterogeneous even among unambiguous cases of the same mental illness. Clinically, it is unclear to me what purpose two tiers would serve. Would probable bipolar disorder be less stigmatizing than established bipolar disorder? Would patients with established ADHD be eligible for insurance

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dations for Autism Action” and Robert Kruger’s “Social Epistemology in High-functioning Autism (Asperger’s Disorder)” can be read together, as both address the need for accommodating to autistic difference in a just society. Kavanagh invokes the capability approach of Martha Nussbaum while Kruger invokes the epistemic injustice theory of Miranda Fricker. Despite their different languages, the positions of Nussbaum and Fricker, as well as those of Kavanagh and Kruger, are so similar that it’s difficult to specify the differences. One clue might be their respective attitudes toward Applied Behavioral Analysis (ABA). Kruger is in favor of this treatment modality, while Kavanagh is concerned that it emphasizes treat-

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Mental Illness, Freedom, and Development

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A number of carefully designed and executed studies, most notably those performed by the World Health Organization as part of its Mental Health Surveys project, have found different rates of various psychiatric illnesses in the countries in which the surveys have been done (Kessler et al., 2007, Kessler and Ustun, 2008). This, in itself, was not surprising. What was surprising was that for many disorders, such as major depression, “the estimated lifetime prevalence was higher in high-income (14.6%) than low- to middle-income (11.1%) countries $t=5.7$, $P<0.001$ ” (Bromet et al., 2011). This is surprising as there is much research showing that poverty, which one might suspect to be more common in the low- to middle-income countries, and food insecurity are linked to the development of a number of mental disorders, including major depression (Manseau 2015, Compton 2015, both in Compton and Shim, 2015). How can we explain these seemingly surprising findings?

Findings of this sort are sometimes written off as being due to higher rates of diagnosis in the developed world. If the findings were just based on rates of diagnosis and treatment in the various countries, this might well explain the findings. But the WHO studies were based on community samples, not samples of those seeking treatment, and were carefully designed to try to minimize cultural biases and stigma, though obviously no study can do this completely (Kessler et al., 2007, Kessler and Ustun, 2008).

The finding is sometimes assumed to be an example of so-called “first world Problems,” with the implication that in countries where basic needs are not as easily met, people do not have the “luxury” of having these lesser psychiatric illnesses, which are thought of as the province of the “worried well.” Major depression, however, is ranked by the World Health Organization as the fourth leading cause of disability worldwide, and the World Health Organization projects that it will be

the second leading cause of disability by 2020 (Bromet et al., 2011). This does not seem like a matter of the “worried well.”

Some might argue that there is no problem here, and that just as sickle cell anemia or Tay-Sachs disease are overrepresented in certain populations because of genetic factors, that the genetic vulnerability to major depression, and to certain other psychiatric illness, varies across populations in a way that explains the survey findings. I think we should be careful about accepting such an explanation, however, in the absence of any known genetic factor that is distributed in this way. In fact, what is known about the vulnerabilities to major depression suggests that genetic factors only account for about one-third of the vulnerability, with environmental factors accounting for the other two-thirds (Saveanu and Nemeroff, 2012). Further, there is evidence that the incidence of major depression has been increasing over a time span not consistent with changes in underlying genetic vulnerabilities, and so there is reason to believe that social or environmental factors are playing a role in the increasing incidence of depression (Cross-National Collaborative Group, 1992; Andersen et al., 2011), which at least opens the possibility that they may be playing a role in cross-national and cross-cultural differences as well. One of the studies that examined the changing rate of major depression found that while there was an overall increase in the rates of major depression over time over all countries, the magnitude of the increase varied significantly by country (Cross-National Collaborative Group, 1992). The authors of that study write that this suggests “the rates in these countries may have been affected by differing historical, social, economic, or biological environmental events” (Cross-National Collaborative Group, 1992). They go on to suggest that “linking of demographic, epidemiologic, economic, and social indices by country to these changes may clarify environmental conditions that influence the rates of major depression” (Cross-National Collaborative Group, 1992). Within the United States, studies have shown increasing levels of anxiety over the years from 1952-1993 (Wilkinson and Pickett, 2009 Citing Jean Twenge). Major depression thus

does not seem to be a statistical fluke in this regard.

One factor that has often been thought to be important here is social support, and an associated sense of belonging to a community. Thus a recent study showed lower rates of major depression in rural dwellers versus urban dwellers in Canada, and this was associated with a stronger sense of community belonging among the rural dwellers (Romans, Cohen, and Forte, 2011). (Interestingly, this same study did not show an excess of anxiety disorders in urban dwellers.) It is thought that there might be a greater sense of social support, belonging to a community, and having a defined social role in more traditional societies, and it is suggested that the low- to middle-income countries in the WHO studies tend to be more traditional societies, where there has been less social dislocation by urbanization. Where population mobility has increased, people no longer live in settings where they are known as for themselves, and social status comes to play a larger role in their standing in society (Wilkinson and Pickett, 2009).

Further, there is evidence that within a country mental illness is “more common among the poor than the rich. As a result, it often looks as if the effect of higher incomes and living standards is to lift people out of these problems. However, when we make comparisons between different societies, we find that these social problems have little or no relation to levels of *average* incomes in a society” (Wilkinson and Pickett, 2009). The argument is thus that once a minimal standard of living, which ensures the basic necessities of life, has been achieved that social economic inequality rather than poverty *per se* is what accounts for these effects with people at the lower end of the scale suffering from the inequality. It has been argued that “Greater inequality seems to heighten people’s social evaluation anxieties by increasing the importance of social status” (Wilkinson and Pickett, 2009). It is worth noting, that Wilkinson and Pickett find that inequality has a lesser effect on major depression than it does on anxiety disorders, though it still seems to have a significant effect, according to their data (Wilkinson and Pickett, 2009).

Unfortunately, inequality does not seem an explanation for the WHO survey results. The countries that the WHO surveys, following the World

Bank, classify as less developed actually have very high rates of income inequality, including the countries ranked the second and third most unequal in the world at one point. It is hard to see how to make this consistent with the findings Wilkinson and Pickett (Wilkinson and Pickett, 2009) bring together on the harmful role of inequality in more developed societies.

It may be that we need to view the results from a somewhat different perspective to truly make sense of them, though the perspective I am suggesting is one that is theoretical and speculative at this point. Despite that, I think it has some features that make it worth considering.

In a series of papers that I have delivered at previous AAPP and INPP conferences, I have begun to explore the idea that psychiatric illnesses as *mental illnesses* involve disorders of freedom. How might this conception help us here?

I would suggest that certain psychiatric illnesses are less common in less developed countries than in more developed countries because more developed countries actually offer greater degrees of freedom to individuals than do less developed countries. The social stability that is thought to be more common in less developed countries may offer more social support than is found in the more developed countries, but it may also limit the life choices and trajectories available to the members of those societies. While this lack of choices, of opportunities, is sometimes seen as the negative side of the stability and social cohesion shown by these societies, it may have yet another side to it.

It is, perhaps, worth saying a little more about what I mean by freedom as I use the concept here. While I cannot give a full explication of the concept of freedom, it should be clear that I do not just mean what some have called negative freedom, or freedom from constraint (Berlin, 1958). I am including the notion of positive freedom, broadly construed as the individual's actual capacity to perform a certain act, or bring a particular project to fruition. But freedom also has a broader application. Thus I would argue that societies in which women can serve in the military, same sex couples can marry, a woman can be the political leader, and men can stay home to take care of the children, to give just a few examples, offer more freedom, are freer than soci-

eties in which those things are not possibilities or cannot, perhaps, even be imagined. I have listed a number of examples related to sex and gender roles, as these examples may be easy for us to see. What we might not be able to see are the ways in which our society also restricts freedom to the extent that there are possibilities that it, and we who live in it, cannot even imagine. Hegel wrote that the Owl of Minerva takes flight only at dusk, though he also thought that the nation-state of his time represented the fullest possible flowering of freedom. And it is of course possible, if not probable, that while the developed countries offer many possibilities that less developed countries do not offer, they may have lost the ability to imagine certain possibilities that are clearly seen in those countries that are thought of as less developed.

If we think that depression, and some of the anxiety disorders perhaps, may relate to frustrated desires and expectations, to life projects that have not been successful, we may see that there are more ways for things to go wrong the more opportunities and options you have. Poverty and inequality may come into play here. If your society leads you to believe that certain opportunities ought to be open to you, but in fact because of poverty and inequality they aren't, this might lead to depression - or crime, substance use, or political activism. The factors that might lead to depression rather than political activism remain to be identified and understood. One such factor, though clearly not the only one, might be the effects of childhood neglect, abuse or other trauma, which has been clearly recognized as tied to increased levels of various adult mental illnesses (Kessler et al., 2010; Saveanu and Nemeroff, 2012). While there are no doubt complex psychological and neurochemical factors involved in (mediating) these effects one component of the effect of such trauma or neglect might surely be the effect that it has on the child's perception of basic freedom and capabilities. If early in life you are made to feel that you do not have a choice in what happens to you, and that you have no power to change what is being done to you, that lack of a sense of real freedom might influence how you react to later impediments or setbacks.

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Neurocentrism: Implications for
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Keynote Speaker

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National Institute of Mental Health

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This way of thinking about things might also help to explain why some mental disorders differ in prevalence across societies while others, such as schizophrenia, seem to occur across different societies at nearly equal prevalence rates. While genetics might again be thought of as the answer, it would not explain why the gene for schizophrenia is preserved across societies as John Nash pointed out in a talk to the APA some years ago. He suggested that schizophrenia was linked to creativity, and that creativity offered sufficient survival advantages, that the genes responsible for it, even if linked to a disease like schizophrenia, would themselves survive. Another way of framing the answer is to say that schizophrenia involves a disorder of freedom that is so basic that the freedom involved is present in any human society.

The elites in the less developed countries might well feel that they have, or should have, all of the opportunities open to them that are open to the members of more developed societies, but poverty or inequality are not likely to stand in the way of their accomplishing their goals or projects. The distress caused by the constraints of traditional social roles on the choices, the freedom, of those in elite positions in such less developed countries has long been a plot of novels, plays, and operettas, and I do not mean to minimize these conflicts. But the problems posed are different than those posed by poverty and inequality.

Do the majority of those living in less developed countries really not see the choices available in the developed world as being available to them? While I don't have empirical evidence to answer this, works of literature and film suggest that this is the case.

Higher rates of certain mental illnesses in a society might thus be a mark of greater freedom offered by that society, as well as of societal problems that seem to put that freedom out of reach for some members of the society. If this is the case, the political as well as therapeutic goal is to find a way to maintain the freedoms offered while minimizing the obstacles to the full enjoyment of those freedoms, while recognizing that the expansion of freedom may come with certain risks as well as benefits.

Why should we think that this way of thinking about things adds anything to the more usual ways that these ques-

tions are usually conceptualized and investigated? One central reason are the arguments for generally thinking of mental illness in this way, which I do not have time to repeat here. The other reason, of course, is that adumbrated in this paper, that is, that the usual ways of thinking about these issues have left us with more questions than answers, or with answers that appear to be at odds with each other.

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Accommodation or Cure: A Synthesis of Neurodiverse and Cure Theory Recommendations for Autism Action

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As a result of vocal autism activists pushing against traditional views of autism, there is a bilateral debate that reflects a deeper philosophical divide between medical and social definitions of disability. Both sides seek to determine the manner in which autistics and their communities view autism, and thus influence the manner in which cures or treatments are sought, dispensed and taken up. One side of this debate, which I will call the cure theory approach, seeks treatments that will eradicate or at least minimize autistic symptoms. The philosophical position that lies behind this objective is that autistic differences, particularly disruptive or harmful autistic differences, ought to be removed. The other side of the debate, which I will call the neurodiverse perspective, seeks to explain the suffering associated with autistic difference as relationally determined, rather than a result of defect. The neurodiversity movement recommends educating autistics and their communities regarding how to fully accommodate autistic differences. The underlying philosophical commitment of the neurodiverse perspective is that it is in the best interests of autistics and their communities to accommodate differences, rather than seek treatments that encourage conformity.

I will argue that these two sides are not mutually exclusive. Furthermore, a synthesis of these two viewpoints can address the contentions that both sides raise, while maintaining their assets. The neurodiverse point that a just community ought to accommodate autistic difference makes it possible for cure theory to investigate which aspects of autistic difference need to be cured with medical science, and which aspects can be resolved by relational means. At the same time, if proponents of neurodiversity can accept that it is possible for autistic difference to infringe on the rights of others in a way that accommodation cannot resolve, then cures and minimizing treatments that can prevent such infringement have a place in autism activism. This synthesis garners the maximum capabilities that the expression of autistic differences can offer, and maintains the freedom for all community members to actualize their capabilities.

Given the neurodiverse perspective on autism, and the social model of disability upon which it is founded, the recommendations for action regarding autism are a rejigging of community and relational norms, in order to accommodate autistic difference. From the neurodiverse perspective, the challenges associated with autism largely result from oppressive social norms and the miscommunication and misperception that results from social relations wherein the participants have vastly different and unvoiced expectations of each other. The neurodiversity movement demands accommodation for autistic difference, not just because it has the possibility to be beneficial for both autistics and their communities, but as a basic requirement of a just society.

Martha Nussbaum's capabilities theory can provide a defense of the neurodiversity movement's demands for the accommodation of autistic difference. If, as Nussbaum argues, justice requires the equality of capabilities that would otherwise lead to a deficiency of dignity and self-respect, and the inequality of capabilities that is caused by not accommodating autistic difference results in a deficiency of self-respect, then justice requires the accommodation of autistic difference. In order to proceed with this argument it is necessary to outline three of Nussbaum's concepts, capabilities, human dignity, and just society. In her article "Creating Capabilities" Nussbaum claims that capabilities are "the answers to the

question 'What is this person able to do and to be?'" (Nussbaum 2011, 20) This question is not asking, what *will* a given person or group of people do? Nor is it asking, what possibilities are *theoretically open* to a person or group of people? Rather capabilities are the "substantial freedoms" (Ibid) that it is *feasible* for a person to achieve. While Nussbaum discusses a large number of possible capabilities, she tentatively settles on ten central capabilities that must be ensured to a minimum threshold level in order to preserve human dignity.

Nussbaum's concept of human dignity relies on the premise that "All [people] deserve equal respect from laws and institutions." (Nussbaum 2011,31) For Nussbaum human dignity is founded on the assumption of equal dignity. Ensuring equal treatment from laws and institutions comes as a result of ensuring a minimum threshold of equality of central capabilities. In her article on "The Basic Capabilities of People with Cognitive Disabilities" Nussbaum writes, "Equality of capability is an essential social goal where the absence of equality would be connected with a deficit in dignity and self-respect...it is the *equal dignity* of human beings that demands recognition." (Nussbaum 2009, 335) The minimum threshold of equality of capabilities is defined by ensuring the equality of all capabilities that would otherwise result in the loss of human dignity. Thus, human dignity is protected as a result of ensuring basic capabilities, and the appropriate threshold of basic capabilities is decided based on the requirements of human dignity.

It is the condition of protecting human dignity, in terms of determining and ensuring a threshold level of basic capabilities, which determines whether a society is just. Nussbaum argues that "the political goal for all human beings in a nation ought to be the same: all should get above a certain threshold level of combined capacity, in the sense not of coerced functioning but of substantial freedom to choose and to act." (Nussbaum 2011, 24) If a community is just, then it is the responsibility of that community to work toward ensuring that every citizen has the capacity to meet a threshold level of human dignity. Human dignity is parsed out into 10 central capacities,

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each of which must be ensured to a threshold level in order for a community to be just. These include the capacity for life, bodily health, bodily integrity and so on (Ibid, 33-34).

If it is the case that accommodating autistics maintains a threshold level for one of these central capacities that is not maintained by cure-based treatment, then there is support for the notion that neurodiversity based recommendations for autism action are more just than cure based recommendations.

Proponents of neurodiversity argue that when autistic people are subjected to minimizing treatments in order to cope with their autistic difference instead of being accommodated, then the requirements for human dignity are not being met. The central capacity that is being infringed upon when autistics are subjected to treatments that modify their authentic expressions in order to encourage a more typical expression is what Nussbaum calls the central capacity for senses, imagination and thought. This basic capability, fundamental to human dignity, consists of “being able to use the senses to imagine, think and reason – and to do these things in a truly ‘human’ way, a way informed and cultivated by an adequate education.” (Ibid, 33) The just community must ensure that all of its citizens have the capability to explore their own, unique thoughts. To be educated in such a way that allows access to one’s own thoughts and imagination is a requirement for this capability and minority members of the community have a right not to be indoctrinated into a style of thinking forced on them by the majority.

The just community must ensure that all of its citizens have the capability to explore their own, unique thoughts, and to be educated in such a way that allows access to one’s own thoughts and imagination. Not to be educated in such a way that some citizens are indoctrinated into a style of thinking that is taken up by other citizens. When autistic people are educated using tactics like, for instance ABA therapy, that seek to bring their behavior closer to species-typical behavior, they are educated to deny their own way of thinking, imagining and reacting in the world, and rather they are indoctrinated into a species-typical way of being. An autistic person who has undergone such treatment cannot be said to reach a minimum threshold for thought or imagination, because all of

their access to thought and imagination is mediated by systematic repression of the autistic person’s spontaneous characteristics often from a young age.

Essential to this central capability is “being able to use imagination and thought in connection with experiencing and producing works and events of one’s own choice.” (Ibid) When autistic difference is excluded from the community, or forced into inauthentic “normalcy,” the autistic is prevented from engaging in this requirement of human dignity. While arguably the autistic may retain some capacity for imagination and thought, which has only been minimally coerced by treatment designed to have the autistic fit community expectations, what is produced from those thoughts, namely behavior that displays autistic difference, is considered unacceptable and minimized, even if the behavior is not harmful. On the other hand, the behavior that is produced by typical imagination is largely tolerated, insofar as it is not harmful. Not accommodating autism, and choosing minimizing treatment and the search for a cure as the only course of action, leads to a fundamental inequality in access to using one’s imagination to produce “works and events of one’s own choice.” (Ibid) Unequal access to a central capability is an affront to human dignity, the maintenance of human dignity is a requirement of a just society and thus, the refusal to accommodate autistic difference is unjust.

If we are to meet the essential goal of a just society, to protect equality of capability in cases where inequality connects to a loss of human dignity, then we are required to ensure accommodation for autistic difference. Thus, proponents of neurodiversity argue that maximizing the capabilities of autistic people by creating room for autistic difference through more inclusive social norms and community education “is not a matter of charity but one of entitlement and basic justice.” (Nussbaum 2009, 340)

Despite the virtues of this position it is vulnerable to a significant critique, accommodation can only go so far before other community members face the injustice of having their human dignity infringed upon. Consider an occasion when autistic difference transgresses the central capabilities of the members of his community and

accommodation cannot resolve these challenges. In such a case the proponent of neurodiversity can still claim that the suffering associated with autistic difference is relationally determined, but there is no longer a set of recommendations for action to address this problematic expression of autistic difference. If it is possible to prevent the infringement of the central capabilities of any community member, then it is just for the community to take action in order to ensure the central capabilities of its members. Therefore, if minimizing autistic difference through treatments or a cure prevents the infringement of anyone’s central capabilities, then it would seem to be just to take that action.

So, proponents of neurodiversity argue that the just course of action in coping with autistic difference is to accommodate. However, when accommodation becomes ethically-fraught because it will infringe on the human dignity of others neurodiverse recommendations for action based on a social model of disability fail to provide guidance for taking just action. On the other hand we have the cure theory’s view of autism, and the medical model of disability upon which it relies. The recommendation for action suggested on this view is that autistic difference ought to be homogenized, not accommodated. While this provides a solution to the problem of autistic difference that infringes on the human dignity of other community members the problem associated with said view is that autistic difference is treated as entirely problematic, and thus all autistic difference, even difference that is only problematic as a result of an inflexible community, is minimized.

Proponents of the cure-based theory of autism argue in favor of the search for a cure as the central recommendation for action for autistics, with working toward treatments that minimize autistic behaviours as an auxiliary goal. In 2011 Barnes and McCabe wrote an article that asks, whether “we should welcome a cure” for autism “should one just fall into our laps.” (Barnes and McCabe 2012, 255) Though this article does not adduce an active search for a cure for autism, it illustrates “the quality of life” argument that is frequently used to defend the search for cure or minimizing treatments for autism.

The quality of life argument in favour of welcoming a cure for autism is as follows: if it is the case that autism

decreases quality of life, and the removal of autism through a cure would increase quality of life, then we ought to welcome a cure. Barnes and McCabe exhibit an impressive list of all the ways that the quality of life of autistics is diminished as a result of autistic characteristics. The list can be reduced to two categories: first, social dysfunction and subsequent exclusion or isolation, second, “unique sensory characteristics” (Ibid, 268) that can make some autistics sensitive to stimuli like light and sound. If the removal of autism also removes these challenges, then this provides a good reason to welcome a cure.

Barnes and McCabe argue that the only possible answer to the quality of life argument is if “society is likely to start providing accommodations that will eliminate any negative impact.” (Ibid, 266) While the likelihood of whether society will start providing accommodations for autistics is relevant to the question, “ought we to welcome a cure for autism if one fell into our laps?” the question of likelihood is not relevant to the question what ought to be the central recommendation for coping with autistic difference. In fact, given my question, the quality of life argument supports accommodation just as much as it supports the active search for a cure. Although the challenges listed by Barnes and McCabe, which lower the quality of life of autistics, could all be overcome if a cure to autism was found, many of these challenges can be overcome by creating more inclusive societal norms and expectations. For instance, if a community were to stretch the boundaries of what is now considered socially acceptable, and fully include those whose otherwise harmless behavior is currently considered “social dysfunction,” (Ibid, 267) this eliminates the problem of social exclusion or isolation that would otherwise lower the quality of life of autistics. Even if the boundaries of what constituted social dysfunction remained the same, but a community chose to react to social dysfunction not by excluding the person, or shaming him such that he chose to isolate himself, but rather reacted with education and warmth, this would alleviate the challenges associated with autism such that they lower the autistic’s quality of life.

Similarly, the second category of detrimental autistic characteristics that Barnes and McCabe attribute to autis-

tic people, namely “unique sensory characteristics,” (Ibid, 267.) frequently lower quality of life only insofar as they are not accommodated. There is nothing inherently debilitating about some of these characteristics. For example, imagine there is an autistic person who is unable to accept a job that he is excited about because he is sensitive to the lights and sounds of a bright and busy office, which causes him to display autistic traits in order to cope. Rather than having his autistic difference lower his quality of life, his autistic difference could be a catalyst for change in the office. Said office has a myriad of ways to reasonably accommodate this autistic difference without undue hardship, for instance replacing light bulbs, posting signs about noise level or giving the autistic employee his own space to work. It is even possible to accommodate this worker by educating his fellow workers about their new co-worker’s autistic behavior and why it is happening, allowing the autistic to cope in his own way, without physical changes to the office or his location by ensuring that the autistic employee and his fellow workers are comfortable with his coping mechanisms. Overall, while Barnes and McCabe provide a list of arguments in favor of welcoming a cure, as was their intention, they are unable to provide a good reason to prefer a cure to accommodation. None of these arguments validate the decision to make the search for a cure the central recommendation for action when coping with autism.

It is my contention that both neurodiverse and cure based approaches to autism, and their underlying philosophical positions, can be knitted together, to provide a definition of autism and recommendations for action that engender justice for both autistics and their communities.

Proponents of the neurodiverse perspective have made the compelling case accommodation of autistic difference is justified insofar as it protects the human dignity of the autistic. However, in some ways the neurodiversity movement fails to acknowledge a limit when autistic difference cannot be accommodated, and thus fails to provide tools for coping with autistic difference when accommodation proves impossible or ineffective.

Proponents of cure theory argue that if autistic difference is detrimental, or infringes on the capacities of others, then it ought to be cured or minimized. However they were unsuccessful in delimiting when autistic difference was harmful and when it was not, resorting instead to a definition that painted every aspect of autism as problematic and to be cured.

A synthesis of these two viewpoints solves both of their challenges and retains both their benefits. By accepting the neurodiverse call for action regarding autism, namely that a just community ought to accommodate autistic difference, it is possible for cure theory to investigate, which aspects of autistic difference are actually detrimental and in need of curing, and which aspects are detrimental only as a result of community inflexibility. In the case of the neurodiverse perspective, by accepting that it is possible for accommodation and autistic difference to infringe on the rights of others, cures and even minimizing treatments have a place at the periphery of autism action.

By bringing neurodiverse and cure theories of autism together, what is created is not a sharply defined view of autism, but rather a practical method by which to determine how autistic difference ought to be treated in a just community. As we discussed above, in order to meet the minimum requirements for justice a community is obligated to ensure the equality of capabilities that would otherwise lead to a deficiency of dignity and self-respect. The inequality of capabilities, which is caused by not accommodating autistic difference, results in a deficiency of self-respect; therefore justice requires the accommodation of autistic difference. Thus we have the first step of the method for action:

1. Accommodate autistic difference through stretching social norms in order to ensure a minimum threshold of equality of capabilities, illustrated through equal treatment of autistic people.

By the same token, if community members are forced to accommodate autistic differences that infringe on their own capabilities, then it is unjust to make those accommodations.

2. Refuse only those accommodations that will infringe on the central capabilities of the autistic person or other community members. Given the possibility that autistic difference may be expressed in a way that is detri-

mental to the capacities of the autistic person or other community members, minimizing treatment, and the search for a cure for autism can be justified. But only insofar as both of those tactics work to minimize or remove the aspects of autistic expression or autistic difference that infringe on central capabilities. And only insofar as everything possible has been done to accommodate the autistic differences, short of allowing the transgression of central capabilities.

3. Treatments that minimize autistic difference, or try to eradicate it altogether, ought to be used only in the case that autistic difference is infringing on the capacities of autistics or their communities.

The cure theory approach to autism is built on the foundational assumption that disability is an individual problem to be solved. Thus, cure theory recommendations for action regarding autism depend on replacing autistic difference with species typical functioning, via minimizing treatments or a cure. The neurodiversity movement disrupts the narrative that disability is a problem that afflicts certain individuals, and ought to be righted with cures or treatments. Rather, the goal of neurodiversity is for "autistic people to have their differences recognised as a part of human diversity, and for society to provide better adaptations for autistic citizens." (Owren and Stenhammer 2013, 33) The neurodiverse view of autism presupposes the social model of disability, which, argues that the challenges that come along with disability are relational. As a result of this understanding of disability the recommendations that neurodiversity offers are not solutions for individuals, but rather a call for communities to take steps to accommodate autistic difference. A synthesis of these two viewpoints results in a flexible definition of what it is to be disabled. Furthermore, by accepting the neurodiverse perspective that a just community ought to accommodate autistic difference, it is possible for cure theory to investigate what aspects of autistic difference are actually in need of curing, and which aspects are relational problems. On the other hand, by accepting that it is possible for accommodation and autistic difference to infringe on the rights of others, cures and even minimizing treatments have a place in autism action insofar as they can control or prevent such detrimental behavior. Overall both theories are ca-

pable of informing one another to create a comprehensive plan of action for the just treatment of autistic people.

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Social Epistemology in High-functioning Autism (Asperger's Disorder)

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Autism is a condition characterized primarily by deficits in social perception, social cognition, and social communication. These deficits can vary in a spectrum-like fashion from mild to severe. Individuals with autism can also vary with regard to their intellectual and linguistic capabilities. In the past (prior to DSM-5 that is), persons with average to superior intellectual and language skills but significant deficits in social capacities were identified as having Asperger's Disorder (DSM-IV, ICD-9) which was considered a variant of autism. Currently, individuals with this pattern of social and cognitive functioning are classified as having high-functioning autism of which the key features are often exceptional intellectual capacities but poor social awareness and communication skills.

The question arises whether the problem facing those with autism is one of being a certain kind or person (i.e., a metaphysical problem as the DSM asserts) or of being a person

with limited access to a certain type of knowing (i.e., an epistemological problem, as I will argue here). Of course, those with limited epistemic skills in certain contexts may be said to be persons of a certain kind since the further question then arises as to why those individuals have such limited skills. However, for the moment I will assert that high-functioning autism is a condition of epistemic insufficiency. What type of insufficiency is this?

Long ago, Aristotle (1962) proposed a distinction between *episteme*, or theoretical knowledge, and *techne*, or know-how (i.e., craft). This distinction was revived in modern times by Professor Ryle (1945) in his discrimination between knowing how and knowing that. In high functioning autism (i.e., Asperger's), we find deficits in both types of knowing. Indeed, it is these deficits which comprise the core of the metaphysical distinction between autistics and neurotypicals (as the rest of us are called). It is easy to see these epistemic distinctions in the diagnostic formulation of autism spectrum disorder. Persons with autism appear not to *know how* to engage in social reciprocity with others and *do not know how* to interpret the socio-emotive significance of non-verbal displays, vocal prosodic shifts and patterns, and gestures. In truth, they make very poor social primates and in most non-human primate societies would not survive long as members of a troop. While they are often quite capable of speaking articulately, they frequently do not know that certain verbal expressions are puns, jokes, metaphors, sarcasms, or veiled allusions because they usually interpret the linguistic expressions of others in one way, i.e., literally. An example here will suffice: [NPK on bike riding; "No, Dad. Only one person can ride a bike at a time. *We* cannot ride *my* bike."]

The question arises as to whether all persons who are socially awkward and literal-minded are suffering from autism. The answer is unclear. Usually, individuals with autism also experience a reasonable amount of social anxiety and avoidance of other people, not because they dislike others but because social interaction is often so frustrating and difficult for them that they find it easier to avoid people than to engage in it. This does not necessarily mean that autistic persons aren't lonely. Often they are. Yet the emotional cost of engagement with others is such that it is less noxious not to interact.

What accounts for the lack of social *techné* exhibited by those with autism? A fundamental feature of those with high-functioning autism is that they either lack a theory of mind entirely or possess a very diminished one which prevents them from easily and quickly inferring the mental states of others in the rapid-fire to-and-fro of most social interaction. To put it differently, autistics, even high functioning ones, are very slow in the moment to grasp the significance of nonverbal social behaviors which leaves them at a distinct disadvantage to the rest of us when trying to opine whether someone is joking with them, telling them the truth, or shyly trying to engage them. A common complaint of autistics is that people don't say what they mean and don't mean what they say. This is the case because virtually all spoken verbal content is qualified by nonverbal and vocal accompaniments which can drastically affect how verbal content is interpreted.

Theories of mind develop early in infancy, are usually unarticulated, and are a powerful feature of the way infants interact with caregivers. This sort of theory is actually the ultimate *knowing-how* [or *techné*] and not really a theory at all but a group of skills and underlying propositions (or *knowing-that*) which govern how infants respond to caregivers and other persons in their environments. In this sense, a theory of mind also comprises what Aristotle called *epistémé*, or theoretical knowledge, but perhaps a more accurate term would be inferential knowledge since it consists of propositions or rules-of-thumb gleaned from interactive experience. In this way it forms a bridge between *techné* and *epistémé*.

As a child's theory of mind emerges and evolves through perceptual and sensory experience with the physical and social worlds of other humans (largely through joint action and joint attention), it permits the child to infer and understand the belief and knowledge states of others. In this way, a child is constantly revising what s/he thinks and knows about other people, specifically and in general, particularly the way other persons approach the world including (most importantly) the child him- or herself. This type of social knowledge thus emerges from the child's distillation of its perceptions of the behavior of other agents and its interpretations of their behavior into

discernable actions which can be recognized when repeated. Through the perception of others' behaviors and interpretation of these into aggregates understood as actions, children begin to discern the intentions and motives of others (i.e., their reasons for acting). In this way children develop what might be called *socioepistemic awareness*, i.e., awareness of what others know about one another). It should be noted that a child's tendency to think about the behavior of other humans as motivated by reasons for acting and as intentional (i.e., goal-directed) seems to be innate in all human cultures. Only among autistic children are these tendencies slow to develop, if they develop at all. In my view, this is one reason why applied behavior therapy works so well with these children. They must be taught to think of human behavior (including their own) as *actions*, i.e., as motivated and intentional. Accordingly, epistemological concepts are fundamental to how normal children interpret the world. The degree to which these concepts bear some veridical relationship to what happens in the world (i.e., by allowing the child to interpret and predict the actions of others) is the degree to which the child can make sense of how others behave and can form rational narratives about what the social world is like (i.e., stories about why others do what they do). In this sense, children use Bayesian reasoning to revise hypotheses as they grow older about what other actors think, intend, and are motivated to do. Accordingly, a child's social narratives evolve as her/his abilities to grasp the underlying import and meaning of the actions of other agents also evolves. In this way a typical child's hermeneutic capacities with regard to its own social doings and those of other actors emerges and become more nuanced.

How is this different in those with high-functioning autism? It appears that their social perception is faulty (i.e., they don't *know how* to do this effectively) and, therefore, their interpretations of others' intentions and motives is deficient. Moreover, the narratives they construct in their hermeneutic efforts to parse the social behavior of others are accordingly faulty (i.e., impaired *knowing that* others are intending, thinking, and feeling and *knowing how* to discern

what these intentions, thoughts, and feelings are).

What, then, is the practical impact of these types of socioepistemic deficits for those with autism? That is, what if a person were hermeneutically disadvantaged with regard to the capacity to identify and interpret the mental states of other agents?

Miranda Fricker (2007) describes what she terms a situated hermeneutical inequality which puts one agent in a social interaction at a clear disadvantage with respect to the other parties in that interactive context. The disadvantaged actor consequently suffers from a type of epistemic injustice which results from a hermeneutical gap. This gap creates an asymmetrical cognitive disadvantage which, in turn, results in a collective hermeneutical impoverishment. It's clear that the deficits in theory of mind which are a hallmark of higher functioning autistic persons contribute to a form of epistemic injustice arising from the limited social hermeneutical capacities of those persons. Accordingly, a form of social disadvantage arises not only for the autistic individual but for the community as a whole. As Fricker notes, "Consequently, a group's unequal hermeneutical participation will tend to show up in a localized manner in hermeneutical hotspots - locations in social life where the powerful have no interest in achieving a proper interpretation (Fricker, *Kindle locations 1959-1960*)".

A fundamental aspect of achieving hermeneutical equality in social exchanges is the ability possessed by each participant to judge accurately the epistemic trustworthiness of the other participants in the exchange. Fricker points out that this is often done through the use of the cognitive shorthand of social stereotypes:

We are picturing hearers as confronted with the immediate task of gauging how likely it is that what a speaker has said is true. Barring a wealth of personal knowledge of the speaker as an individual, such a judgment of credibility must reflect some kind of social generalization about the epistemic trustworthiness - the competence and sincerity - of people of the speaker's social type, so that it is inevitable (and desirable) that the hearer should spontaneously avail himself of the relevant generalizations in the shorthand form of (reliable) stereotypes.[Fricker, *Kindle Locations 453-456*, *Kindle Edition*].

What would happen if a social participant lacked the ability to judge the epis-

temic worthiness of other interlocutors? According to Fricker, without the use of social heuristic tools, a social agent "will not be able to achieve the normal spontaneity of credibility judgment that is characteristic of everyday testimonial exchange (Fricker, Kindle Locations 456-457)." Yet this is precisely the position of individuals with high-functioning autism. They always assume other people are telling them the truth.

In contrast to autistic individuals, neurotypicals [i.e., normal persons] use social stereotypes constantly to judge the epistemic worthiness of what they hear from others in social exchanges. As a result, a different type of epistemic injustice can and frequently is perpetrated on those who are socially disabled in the ways characteristic of persons with high functioning autism. Fricker calls this a case of epistemic bad luck since it is not due to prejudice as one would normally think of it, but from the use of social stereotyping which would ordinarily be reliable but happens not to be accurate in some cases. High functioning autism is just such a case and Fricker gives this example: "Imagine that a hearer responsibly judges a speaker to be untrustworthy (because insincere) owing to the fact that the speaker avoids looking her in the eye, frequently looks askance, and pauses self-consciously in mid-sentence as if to work out his story (Fricker, Kindle Locations 573-574)." In this thought experiment, one can see that an individual with high functioning autism, who may also be quite socially anxious, might look untrustworthy to a hearer who has little experience with this form of disability or with that particular individual. As a result, the behavior of the speaker with high functioning autism may be misinterpreted. This leads to a form of hermeneutic injustice which Fricker later discusses. As she notes, "Systematic hermeneutical injustices are part of the broad pattern of a social group's general susceptibility to different sorts of injustice (Fricker, Kindle Locations 2003-2004)". This type of injustice is a hallmark of the inequitable distribution of power within a society. In particular, it is a form of injustice characterized by "having some significant area of one's social experience obscured from collective understanding owing to hermeneutical marginalization (Fricker, Kindle Locations 2032-2033)". This is, indeed, the experience

of many suffering from high functioning autism in Western societies.

Fricker goes on to comment that "hermeneutical injustice sometimes [is] so damaging that it cramps the very development of self... (Fricker, Kindle Locations 2103-2104)." Thus "the primary harm of hermeneutical injustice ... is to be understood not only in terms of the subject's being unfairly disadvantaged by some collective hermeneutical lacuna, but also in terms of the very construction (constitutive and/or causal) of selfhood (Fricker, Kindle Locations 2172-2173)."

As clinicians or simply individuals concerned about living in a just society, what can we do? The answer I would suggest lies less in new types of therapy for those with high functioning autism since we already have some very effective ones which are a combination of cognitive behavioral and psychodynamic approaches. Rather, I would argue that what is necessary to remedy the type of epistemic and hermeneutical injustices described by Fricker from the social exchanges experienced by people with high functioning autism every day is a change in the way we think about what it means to be a community of social actors. I would agree with Fricker that an important step to be taken in assisting those with high functioning autism to be fully participatory members of a society is that there must be some form of hermeneutical justice which becomes commonplace in social exchanges. Moreover, the ways in which those with high functioning autism are misinterpreted and misunderstood must be explored not only in their therapies but must be exposed and discredited in the societies in which they exist. This requires a systematic effort on the part of professionals and the families of those with high functioning autism to undermine inaccurate stereotypes about autistics in the society at large and to replace them with views that are more consistent with the character of most high functioning autistic persons. When engaging in a social exchange with an individual with autism, there must be, as Fricker notes, "an alertness or sensitivity to the possibility that the difficulty one's interlocutor is having as she tries to render something communicatively intelligible is due not to its being nonsense or her being a fool, but rather to

some sort of gap in collective hermeneutical resources (Fricker, Kindle Locations 2189-2191)."

However, while Fricker feels this gap is due to an "an objective difficulty and not a subjective failing (Kindle Location 2191)," my view is that both are present with regard to those with high functioning autism. These individuals *are* less competent in certain socially cognitive ways but *are* also the subjects of hermeneutic injustice which further leads to their social impoverishment and isolation as well as to the diminishing of the affective richness of the societies in which they live. It is only through a communal approach designed to provide corrective social interactions and the experience of being understood by others that such hermeneutic injustice can be corrected. This type of approach is currently being tried in a few locales but it is far from highly developed. Moreover, it must be one component of the successful treatment of those with high functioning autism but not the only one since these individuals are at great risk for a variety of other co-morbid conditions such as attention deficit hyperactivity disorder, anxiety disorders (especially social anxiety), obsessive compulsive disorder, and tics), and depression.

In summary, I believe that those with high functioning autism can flourish within a community that engages them with compassion and sensitivity. In such communities, they can be significant participants and can, in turn, contribute to the flourishing of their wider societies. Alternatively, if those with high functioning autism continue to be the subject of epistemic and hermeneutic injustice, these practices can only serve to diminish the richness of the societies in which they live.

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Is it Ethical to Change Memories to Treat Post-Traumatic Stress Disorder (PTSD)?

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I. Introduction

Articles published in the popular press and the social media during the latter part of last year (Romm 2014) and before (McGowan 2009) have brought back our attention to the controversial issue of changing people's memories- and by extension their feelings, thoughts, and behaviors- by health care professionals during clinical interventions. The concern has centered on changing recollections of traumatic memories in persons deemed vulnerable by their condition when seeking relief from their symptoms and placed in the hands of psychiatrists, psychologist and other psychotherapists. A main focus of their concern has been effecting such changes with psychotropic medication but lately the criticism has been extended to include also those receiving psychotherapeutic interventions administered to children, hospitalized patients suffering from psychosis or otherwise easily suggestible or vulnerable. At the beginning of this year, the controversy escalated with the publishing of a short but critical article to current practices of psychiatric diagnosis and treatment entitled *Redefining Mental Illness* in the New York Times by an academic anthropologist T.M. Luhrmann of Stanford University, where she analyzed a report published by The British Psychological Society entitled *Understanding Psychosis and Schizophrenia: Why people sometimes hear voices, believe things that others find strange, or appear out of touch with reality, and what can help*. These comments draw a quick and sharp reply from Jeffrey Lieberman, the Chairman of Psychiatry of Columbia University College of Physicians and Surgeons and past president of the American Psychiatric Association (APA). Later, Dr. Lieberman and Dr. Thomas Insel, current director of the National Institute of Mental Health (NIMH) issued a joint statement in the hope of clarifying the situation. In a prior response to

these kind of positions, Ronald Pies, a psychiatrist and past editor of the *Psychiatric Times*, had lamented the "wall of separation" or what I call polarization of these controversies. Indeed, there appears to be no attempt to reach a "golden mean" in these conversations.

My interest in the topic was sparked by the fact that I work as a clinical psychiatrist- providing both psychotropic medication as well as psychotherapy -in the Lower East Side of Manhattan where we were traumatized by the tragic events of 9/11 and where we still try to make sense of these events.

II. Ontology and Epistemology: what is it and how do we know it?

Ontology

The question posed is typically asked in a way that privileges what is ethical: Is it ethical? That is the way it is explicitly asked while the rest of the question- what is PTSD, what are memories, and how to treat them -is implicitly assumed to be already well-grounded? But, instead, their importance may be the other way around and the anchors may be dragging. Allow me then to answer the question but in the reverse order in which it was proposed: whether they exist, what are they, how to treat them properly and why would it be good to do so, because the existence of being determines its method of exploration and knowledge (Gilson, 1990). Its ethical application would then follow. This methodology is called **methodological realism**, the proposed adequate method to study objects of reality and can be applied even to the changing meaning of concepts studied by hermeneutics. To that effect, to paraphrase, understanding is never subjective relation to a given 'object' but to the history of its effects; in other words, understanding belongs to the being of that which is understood (see also Gadamer 1996; Giusanni 1997; Hegel 1812/1969).

What, then, is the object of study of psychology in general and medical psychology otherwise known as psychiatry in specific?

Aristotelian view

Aristotle 2500 years ago correctly realized that the mind (the object of psychology and psychiatry) "cannot be a body [but] the form of a

natural body (De Anima 412a20)." Simply stated: the mind is the dynamic actualized form of the human body. Since the brain and the nervous tissue has the specific function within the body to integrate body physiology it would be reasonable-albeit controversial-to assume the substantial unity of the form of the whole body-the mind-and the material tissue that integrates the plenitude of functions of the whole entire body.

Modernist view

The current debate is ontologically polarized between those who make exclusive emphasis on the body (*soma* or *res extensa*) and on the other hand those who exclusively emphasize the mind (*psyche* or *res cogitant*) while everything else is derivative. The National Institute of Health (NIH) and the (NIHMH) seem to have sided with the body as "*res extensa*" and as such had been working on proposals to find solutions to these problems from that perspective.

Dr. Thomas Insel, current director of the NIMH had issued in his NIMH blog dated August 13, 2013 a statement on the nature of Traumatic Brain Injury (TBI) and PTSD. "We recognize TBI and PTSD as brain injuries... [in contrast to most other neuropsychiatric disorders]... but the brain tissue we need to study to understand them is in short supply." I would agree that those conditions are wounds and consequently the result of an experience but I would argue that this attempt to solve the problem only restates and updates the modern dualism that causes the current polarization in our debates. Dr. Insel, elsewhere, in disbelief of other psychiatrist's position who asserts that mental illnesses are real said instead that "there is no reality" in them. And adds that "they are just constructs." (Greenberg, p.340). In my opinion, these comments unnecessarily polarize the concepts of 'real' and "constructs," and imply that ontology has nothing to do with epistemology. But, practicing psychiatrist, like me, live that reality whenever we are in contact and diagnose our patients. Most clinical psychiatrists and other mental health workers are well aware of our epistemological limitations in knowing and discerning (diagnosing) the truth about that reality, but not

knowing that reality in its totality does not take away that it is based and attempts to reach a deeper understanding of reality. "All that exists exists as form." (Pieper). Mental illnesses are specific forms in which the mind—the form of the body—exist at particular times and places. These mental forms are not substances or things per se of any kind in particular, except of that only one thing that it is ("to on" in ancient Greek, *realis* in Latin). They are, indeed, manifestations of what it is as images, impressions or fantasies, that is, new forms of reality that can be relatively differentiated from each other and is the object of study by Systems Theory. Their substantial novelty attracts the attention and exploration of our inquisitive minds. During this process of exploration we construct temporary notions that summarize our knowledge at the time. The generator of this constructive process of knowledge is the encounter between the patient and the clinician. H. S. Sullivan had proposed a long time ago the stance of participant observer as central to the therapeutic relationship. In specific, the attuned activity between these two agents (and even more during a family meeting), allow for a constructive process of knowledge to occur. But, this knowledge is not merely cognitive but includes all the existing organizers of the experience in the body acting in conjunction in order to attune and change, along with the synchronous knowledge that includes the double perspective of the participant observer: an a priori professional knowledge about past knowledge like scientific research and past personal experiences of the clinician as well as those of the patient along with the accumulating knowledge of the present moment that is the source for a posteriori reflection. The codification of that professional knowledge is the realm of scientific research. Whilst in the clinical encounter, like in any interpersonal meeting, the professional and the patient use their prior information along with the present moment and transform it. T. De Chardin has aptly commented on its ontogenetic importance. "The being who is the object of his own reflection, in consequence of very doubling back upon himself becomes in a flash able to raise himself into a new sphere. In reality, another world is born...it is not a matter of change of degree, but a change in nature, resulting from a change of state."

The current debate is polarized between those who make exclusive emphasis on the body (*soma* or *res extensa*) and on the other hand those who exclusively emphasize the mind (*psyche* or *res cogitans*). I advocate not only for a synthesis of cognition but for the synergy (following Blondel) of all the aspects of the body; a synergy that encompasses the natural flow of energy of the encounter in the present moment, as it manifests itself. It is the moral imperative in psychiatry and the mental health field not just of thinking together or talking together but even more of working together. The process of diagnosing, likewise, cannot just be a meeting of two cognitive powers exchanging data during anamnesis. And not just of deliberating by the professional. But, instead, two fully human beings getting to know each other, even as unequal as that exchange could necessarily be. That is also the reason why psychiatrists must be psychotherapists and physicians at large must be at least exposed to that field.

The "metaphysical wager" (Scull 2015) of modernism— that the body could be exclusively studied by experimentation and not by experience did not paid off. It goes without saying that experimentation has been extremely fruitful especially in inorganic sciences. But at this stage of scientific development excluding the experiential methods of clinicians is actually stalling the further development of mental health. Scull asks, "Will 'madness'...be reducible at last...to biology?" Hopefully, we will think out of the box and consider the contributions of psychology, sociology, anthropology and philosophy on the bottom-up side and of chemistry, physics and others on the top-down side of scientific inquiry. From the general to the specific and from the specific to the general has been a noble quest in the philosophy of sciences in contrast with the disjointed method of one dominated by mathematics.

If Dr. Insel had said that TBI and PTSD are both clinical syndromes that are injuries to the body as a whole and that the injury is centered or concentrated in the central nervous system, in my opinion, he would have proposed a solution that could start bringing together both poles and po-

tentially integrate disparities in the arguments. But as things stand now, already neurologists and psychopharmacologists center their concern on the study of nervous tissue primarily while psychologists and psychotherapists in general center their interests on the mind, and the general psychiatrists' practice along with "brain-minded" therapists trying to bridge both approaches are caught in a "no fly zone."

In summary, ongoing dualism characterizes the current divergent opinions about the nature of diagnosing and its outcome. The examples above epitomize the recent controversy, which polarize the systemic differentiation between body and mind. Dualistic tendencies can be identified, within the current discussions, by their ideological opposition between these two categories. Dualism characterizes them as different substances rather than different forms of one substance, of the one body which had been the standard conceptualization in western science until the 1600's. In short, modern science does not have an adequate philosophical framework—an ontology — to define correctly whether it is [*ens*] and then describe what it is [*quid*]. It begins restricting a priori the scope of the definition as a material substance—the brain — only to find it a posteriori. But, methodologically and somewhat inconsistently, it casts a larger net by allowing a broader scope of possible contributions to its definitions. In contrast, critics of modern science espousing the indefinite case-by-case formulation undermine the very foundations of the patterns and principles defined by natural science. To use D.J. Siegel's metaphor: science is caught "between chaos and rigidity." That is, between the relative rigidity of the official science and the amorphous dynamism of opinions.

III. Epistemology and Mathematics

The mind as the 'form of the body' following the Aristotelian dictum should put us in good footing regarding how we go about conceptualizing those mental forms that are the object of our study, that is, defining the method of knowing. And, preeminently, "the soul [mind] is known by its acts." (Aquinas ST I Q87, A1,2, 3; I,Q16).

In specific, the study of integrative nature of this form not only includes the nervous tissue structure but the endocrine system and the stress Hypotha-

lamic Pituitary Adrenal Axis (HPA), as well as its physiology: the cardiac rhythm and vascular baroreceptors regulating the arterial blood pressure. In fact, many of the research domains criteria (RDoC) proposed by NIMH to start solving the problem of defining the object of study are already in peripheral or somatic physiology like Heart Rate Variability HRV), and other psychophysiological measurements without explicitly recognizing the broad spectrum of physiological variables that minding controls. The RDoC constructs are well grounded in the body. Of the eight unit of analysis (genes, molecules, cells, circuits, physiology, behavior, self-reports, paradigms) six are related to the individual's body. Self-reports are subjective appraisals by the person and paradigms are established methods of exploration of those systematized objects of study. But, only few of those methods address the measurement of qualities related to interpersonal relations. For example, only under the negative valence system of the so-called frustrative non-reward and all the self-reports and paradigms of the sub-construct of attachment formation and maintenance have to do with interpersonal relationship measurements among the hundreds of possible areas of study. In family therapy, we are keenly mindful of the ontogenetic potential of interpersonal relations. For example, in the context of a therapeutic stance with an enmeshed family Minuchin (1974) has said that: "the sense of belonging dominates the experience of being, at the expense of a sense of a separate self." As such, acts of being are defined by experiences of belonging to one's own self and others: to be is to belong.

And, finally, as the NIMH reports conclude: "the current diagnostic system is not informed by recent breakthroughs...as it turns out, most genetic findings and neural circuits maps appear either to link to many different currently recognized syndromes or to distinct subgroups within syndromes. If we assume that the clinical syndromes based on subjective symptoms are unique and unitary disorders, we undercut the power of biology to identify illnesses linked to pathophysiology and we limit the development of more specific treatments."

Thereby, the stated focus on the brain by Dr. Insel is conceptually inconsistent with the actual, broader and

potentially richer selection of RDoC. Without an adequate initial philosophical conceptualization of the entire process, would they be able to abstract the broad richness of the results of the incoming research? I believe that they would be limited. The RDoC start from the particular and attempt to generalize. Others, like Karl Menninger and more recently the editor of Current Psychiatry- H.A. Nasrallah -have suggested the opposite, that there is "only one neurobiological psychiatric disorder with different clinical expressions (Nasrallah, 2015)." It is based on an attempt to find "a common neurobiological substrate for mental illness (Goodkin, et al 2015)" or difference "in degree rather than in kind" (Greenberg). While it is truthful and helpful to generalize there is also a peril in overgeneralization. It helps to direct and concentrate our efforts into the exploration of the nervous system in general, but there are also specific circuits with specific genetic interactions with specific types of experiences that merit delimitation and special methods in their research. Overall, these controversies epitomize the current ideological debate on the topic of diagnosis and treatment in psychiatry. They seem overall to pit biology and diagnosis on one side of the debate against personal experiences and social interaction, on the other side of the debate. The way I see it is that what appears to be an ethical, pathological, and diagnosis issue is primarily an ontological and methodological one. The RDoC project in NIMH shows tangible efforts in that direction but the way they conceptualize it, the way they think about it, is more inconsistent than what they themselves realize. A central mistake in conceptualizing psychiatric disorders is the widespread disregard by the natural sciences for the potential contributions that the most general of sciences- philosophy -can and should make in these debates. And philosophy can contribute more to that analysis: it can contribute synthesis and synergy. The severe antithesis— modernism and post-modernism — that we live could possibly be solved by the Blondelian restoration of agency- synergism -through the philosophy of action. Or what Janet (1935) calls realization: "The end

result of therapy leads to a higher level of integrative capacity: "realization." (Ogden 2006).

IV. On Method: Mathematics and Statistics

But in order to resolve the problem of dualism one must tackle the practical reason of how this polarization is maintained. I would say that it is due to the digitalization of natural sciences by mathematics in the form of algebra- measurement has become synonymous with quantification- and especially in research with disregard of the analogy of rhythmic forms.

Is this situation unique to our object of study-the mind -or should we use the very same methods used for other objects of science. For instance, should psychology use the same methods used to study the biology of the human body? The source of qualification-the sensorial analyzers within the eye, ear, etc.- of the body are part of our object of study as well as the subject who studies. This presents the peculiar difficulty in that the objectification of measurement with quantities can in turn help us overcome within the above framework, and then we can still proceed to study it. That is, the object is the subject, but only generally speaking. The same object can hardly be the same subject except in reflection when possibly a part- the prefrontal cortex -has evolved to take certain functions of reflection for the whole. De Chardin along with Minuchin's quote draws our attention to the fact that a person cannot just be seen as an "individual." More than numerical, human beings relate and belong, reflect about themselves and contemplate the world. As such in the field of psychological sciences, in general, we can measure but we can hardly qualify and quantify the way it is done in other sciences. In fact, to measure is to place a thing (*quid*) in relationship to something else (*aliquid*). But this fundamental notion is generally disregarded in the physical sciences opting for rigidly bound conceptualizations seemingly at times to be the sole product of Pythagorean thinking without consciously recognizing its epistemological link with an incommensurable reality.

In psychiatry, part of medicine and part of the general field of psychology, we continue to use the Diagnostic Statistical Manual (DSM) as the method

to base our clinical research rather than the other way around. The diagnosis is taken to be the “independent variable” or the standard by which we measure therapeutic outcomes rather than the outcome of our investigations. Thus, PTSD is an “under-construction” concept that is only temporarily necessary as it is presently designed. But, every time there is a revision of the diagnostic criteria for PTSD the previous research on PTSD becomes somewhat obsolete. And worse, it is a research strategy biased on a circular logic: reducing uncritically ‘what it is’ to ‘what we *think* it is’ corrupts the path for further exploration and the eventual re-construction of the term closer to what it in fact is its true nature.

Medical research designs are mathematically constructed with the Bell Curve in mind among other mathematical procedures. It is a procedure to study populations. Nevertheless, it has been used unwisely to determine the medication dosage, for example, for a specific individual. Medical practice began to switch from the experience of an art during the Medieval Ages (that was very underdeveloped by modern standards) to one increasingly dominated by the experiment that by now is a highly technical enterprise.

If our science is not Pythagorean and we prize the material bases of our objects of study, methodologically speaking, measuring quantities without specifying a natural quality as such is a highly questionable scientific procedure. This process possibly started unwittingly during the XVII century with a great idea, one spearheaded by Descartes, Leibnitz and Newton’s attempt to develop science by making it mathematical. Going too far by keeping the quantity and eliminating the quality leaves us with only numbers and thoughts. “Whole” numbers by definition are integers and disconnected or sharply distinguished from each other. Mathematics, and more precisely Statistics, rather than experience and discernment, became the proof of existence!

Furthermore, ‘what we think it is’ is constructed from mathematical measurements based on statistical quantification. Statistical theory has become the final arbiter to determine what is adequate evidence, thereby evidence-based. But mathematical terms, by definition, are discrete, that is, rigidly bounded. For example we have integers: 1, 2, etc. In contrast, the

material energy flow of the universe is a formal rhythm that can be qualified or conceptually digitalized but there is more than that to its existence. The dialectic movement between quantity and quality is complex. Suffice to say that, the numerical range of a qualification is constrained by the specific form of the existence of its object. The eye is impacted by the whole but only the light is effectively impressed, under normal circumstances, to produce a visual sensation, a visual perception and then a visual memory.

Qualities are natural formations. The anatomy and physiology of sight determines in advance the specific kind of impression that can potentially be caused in the periphery of the optic nerve by the event. But the contingent outcome is due to other casual intervening events. Therefore, every event is unique. These sensual particularities are then processed: reunited or re-integrated and even reorganized along the multiplicity neural paths. Repeated activations along the dynamic tracing of neurons are examples that sometimes epitomize the preferred course from sensation to memory. But preference is not necessity. And, overreliance on statistical quantification without the broader understanding action of the researcher and clinicians severely limit the ability to not only further the understanding of the nature of the problem but even more so it limits the range of action of clinical interventions. In other words, general scientific guidelines in the use of medications dosage are based on population statistics and not on the individual’s genetic, biologic or even psychological makeup.

Thirdly, The problem is not so much the diagnosis: it is the diagnosing by the “diagnoser.” The very action of the psychiatrist at the very moment of diagnosing, the activity itself of the diagnosing is what is at stake. Gadamer, speaking about the nature of science in general, expresses his dissatisfaction with the lack of differentiation between the physical sciences and the applied human sciences. He says: “Our science is not based on the experience of life but on that of making and producing [of tangible goods, not on the experience of equilibrium [restoration of natural rhythms] but on that of projective [artificial] construction. The science is essentially ...a kind of mechan-

ics...the artificial production of effects, which would not come about simply by themselves...that it finally becomes capable of *replacing* the natural by the artificial.” In contrast, “Among all the sciences concerned with nature the science of medicine is the one which can never be understood entirely as a technology, precisely because it invariably experiences its own abilities and skills simply as a *restoration* of what belongs to nature. And that is why medicine represents a peculiar unity of theoretical knowledge and practical know-how...” (p.38-39).

In summary, the starting point of modern-rather than medieval- medical practice is that it defines normality but not health, having given up on its aims or goals-the *telos*-which is restoration of health. The chasm between mathematically driven research and clinical and politically driven diagnostic manuals have become altogether obvious to the inpatient population in need of services.

How is this ontological and epistemological confusion relevant to the ethical dilemma of diagnosing and treatments of PTSD? In specific: What is PTSD, conceptually speaking, in the DSM, how do these traumatic memory transformations happen naturally and therapeutically and finally why would it be igood and even more healthy to do so?

The so-called PTSD could be better characterized psychophysiologicaly: psychologically by the existence of traumatic, explicit or implicit, recollections of memory with a concurrent physiology characterized by a somatic distress syndrome that follows an external event that is determined a posteriori to be the putative agent. What is trauma? Literally it means a wound. But in the reality of the body, it is being traumatized now rather than just having been traumatized at a specific time in the past, that is, a present day activity rather something that just happened in the past and was determined chronologically. It includes the distortion of body timing. The concept of “post-trauma” within the PTSD name is vitiated by the ambiguous construction of that term. If the “trauma” is just the initial traumatic experience and everything else- including the current symptoms-is after or post-trauma, one could easily misunderstand trauma chronologically: that “what happened already happened” and “it is no longer happening.” Nothing is farther from the

truth than this chronological conceptualization based on an external sequence of events. And, therefore, also misunderstood in terms of volition leading some to say "Get over it!" Within this framework of misunderstanding of the concept of "post-trauma" one would logically deduce therapeutic interventions based solely on imaginal (virtual) or real re-exposure to an adverse event and one circumscribed to either the initial traumatic event or one similar to it, until the posterior and persistent classical or operant conditioned emotional part of the mind-mind-the limbic system- is helped to realize with the help of the once off-line prefrontal cortex that "it happened but it is not happening now." An intervention would be based solely on de-conditioning or desensitization of cognition and emotion. But, in fact, the experience of trauma is more than the initial traumatic event and more than the explicit cognition and emotion of the event.

Certainly, PTSD is a stress disorder, physiologically speaking. The physiology of stress and traumatic distress is well documented in the scientific literature (see Goldberg, Kabat-Zinn, Lehrer). And, it is a disorder- a natural healthy biological process going astray- rather than just a disease in the pathophysiological sense of the word, because there is no defined pathogen in the traditional sense of the word (like for instance a specific bacteria). PTSD does not fit modern model of disease. It can be conceptualized both in degree of physiological disturbance (as Menninger did) or as an anatomical "scar" (as James did).

One could ask: Is the trauma the "external" event, i.e., an earthquake, or is it an internal impression on the body-like a visual image, distressing emotion or a disturbing body sensation caused by such external event? Do we need an external event? Or can we conceive of it as solely internally generated? The answer is that we always need an external event to cause an internally regenerated disruption. But, internal and external are relative terms. For example, lack of oxygen on the myocardial cells may lead to chest discomfort and then emotional distress. In this case the heart muscle cells are external to the nerve dendrites and they belong to different systems of the body that are external to each other.

From a unitary perspective like

hylomorphism-dynamic matter-, an explosion of a grenade in the middle of nowhere would be just an event. But, it could be easily become an adverse event to a body in proximity or even at a physical or chronological distance. These are the cases of vicarious and developmental trauma. But, again, it need not be necessarily so. For example, securely attached adult and children may overcome traumatic disorganization spontaneously more readily than those with insecure attachments. If the body is wounded the following question emerges: did the impact wound the body in its totality of parts or forms or only did it hurt some of them? Those particular wounds then, a posteriori- after the event-, would be called traumatic events that could possibly lead to traumatic distress. A priori, there is no one-to-one correspondence between the event and the necessity of a wound. Nevertheless, once the wound is inflicted to the body, that is, a posteriori, the event can be called an adverse event and the wound can be called "post-traumatic." That is, only with the initiation and persistence of symptoms indicating the temporal and somatic persistence of the initial wounding event one could in a restricted temporal sense call for an initial traumatic event followed by a persistent "post-traumatic series of events" in the body.

Nevertheless, the term "post-traumatic" is incorrectly used to refer to the impact or to the external event. The DSM 5 A1 (p. 271) *criteria to decide* if to diagnose PTSD, is stated as "directly experiencing the traumatic event." Here the meaning of the term "exposure" and "traumatic event" are blurred. In other words, in trying to determine if trauma exists or not, one must assume that trauma already exists. This is a Kantian tautology. It would be clearer to say "directly (but also witnessing, learning, or be vicariously or persistently) exposed to a potentially traumatic event." In spite of being a good guess, jumping into conclusion at this early stage of the exploration is a premature determination. The adequate action would be to withhold judgment into deciding what it is (*to on*) until the phenomena unfolds in the fullness of its dimension if possible. Tracking the natural history of the body's symptoms is a wise activi-

ty to help link the effects of the adversity on the body. For this the additional criteria (B-H) related to the internal effects as dependent variables on criteria A provide a necessary linkage to core organizers of this experience.

While without a doubt, the adverse external event and the wound are inextricably related as a sequence of events, the common use of the term "post-traumatic" implies inevitability, a fixed determinism between an external and an internal sequence of events. In fact, in the sequence there are degrees of freedom, or contingency.

In summary, an experience like trauma is contingent upon several conjoint processes and it is not unequivocally or solely determined by the adversity of the external event. Experiences are undetermined a priori and only determined a posteriori. The action of the will as well as prior learning, for example, sometimes plays a key role in its definition.

Overall, it is difficult to explore a natural condition that has been inadequately conceptualized. PTSD is best thought as a work in progress. For example, the proposed diagnosis of Developmental Trauma encompasses symptoms that do not qualify for PTSD. Nevertheless, it may include more severe and chronic pathology than PTSD. Unfortunately, it is the obligatory standard of measurement used by researchers and clinicians to quantify progress in therapy and (tautologically) delimit the very same concept it is trying to define.

The core of the trauma is not in the genes but rather it is the traumatic experience, that is, the persistence of memory in the form of recollections that activate or deactivate the body into unhealthy dynamics. Being initially in "the faculty of sense-perception" it spreads into association areas of the brain and the rest of the body. Top-down and bottom-up flows of energy disrupt the synergy of the body rhythms and disjoin them into increasingly dystonic bouts of fragmentation and dyssynchronicity. These eventually lead to additional memories of all kinds (implicit, somatic, emotional, sensorial, proprioceptive, interoceptive, etc.) that dissociate from healthy integrated rhythms and could lead to additional dis-ease and general unhealthy somatic or mental states. These dis-eased rhythms become conditioned and liable to be triggered at a later occasion or

activated autonomously without the company of the explicit memory of the initial trauma. These dysrhythmic disruptions can be easily measured objectively by psychophysiological measurements. Among these, Heart Rate Variability and electroencephalography have become increasingly popular among clinicians.

Event and experiences are intimately related but wounds [trauma] are overwhelming experiences that the body [*soma*] suffers [*pathos*] and deforms [*morphe*] it from achieving its end [*telos*] which is health [*holos*] even if sometimes we learn from it [*emperias*].

After all, the so-called PTSD along with the other trauma spectrum disorders is a disturbance of traumatic recollection of memories again not of the initial impact or initial wound but of the persistence and re-elaboration (also called reinstatement already by Aristotle) of the traumatic stress. The naturally occurring recollected memory is part of a sequence of events starting with sensation and ending with the consolidated memory as the outcome.

IV.a An example of integrated research in action

An interesting occurrence was recently reported in a recent blog that exemplify the integrative relationship between clinical acumen and experimental research. Dr. Murray A. Raskind described the pendular movement between the information he obtained from his clinical observation using the FDA approved but weak hypertensive drug prazosin for PTSD nighttime terror and the further experimentation that it suggested to delineate the specific population it could help. Initially some PTSD soldiers with hypertension and using beta blockers had more vivid dreams as noted by the manufacturer. Knowing that beta and alpha blockers (also used for hypertension) had sometimes opposite “side effects,” he started using the alpha 1 blocker prazosin for nighttime terror. This clinical experience led to the experiment that proved that prazosin is indeed a good treatment for it. In contrast with the closed circular logic typically used in modern science, his open circular, or better spiraling, logic solved the problems. It went from observation to initial conceptualization to personal clinical intervention experi-

ence, to a re-conceptualization based on known abstract scientific concept without research, to an experience, to a re-conceptualization, new intervention and clarification of the population, and so on and so forth. This process suggested that the antihypertensive turned hypnotic as not only treating the episodic labile hypertension (as approved by the FDA) but also the traumatic related nighttime terror (as a “side effect”) maybe due to a tonic arousal resetting that may be proposed to be the common denominator to both symptoms of hypertension and nighttime terror.

A slow, ponderous way out is recurring only to mathematical and mechanical methods by studying proximal causes. For example, a recent article (Tsai et al 2015) challenging the fitness of the 3, 4 and 5-factors models based on the confirmatory factor analysis (CFA) showed a better fit with the 6-factor analysis which would include not only the re-experiencing, avoidance, emotional numbing, externalizing behavior, anxious arousal but the sixth, the dysphoric arousal as well. The reasoning behind this proposal are all subjective: self-reports by the participants, only chosen from the military and mathematically analyzed by the CFA. More objective data like clinical observation of signs as well as psychophysiological measurements were not included. Also, other types of populations like the developmentally traumatized civilian population were not included. Gadamer (1996) insists in the importance of the particular (art) within the general (science) endeavors: “once science has provided doctors with the general laws, causal mechanisms, and principles, they must still discover, what is the right thing to do in each particular case, and this is something which hardly seems to be predictable or knowable in advance.”

V. Memory and PTSD:

Memory as mental forms & traumatic memories as stress, wounds and scars

What is memory? The word memory comes from Mnemosyne, the name of the Greek goddess of memory who was the mother of the Muses, matrons of the arts: literature, music, theater, etc. Long before the

establishment of written language, the words had to be kept in mind or be memorized. Homer, the blind Greek poet had to keep in mind the lengthy poems of the Iliad and the Odyssey. Memory, expressing itself in recalls couched in language is, in a very important way, self-reports of the present state of the body’s experiencing and not mere expressions of the past. Any performing actor as well as the audience could attest to it. Thereby, any philosophy, wisdom or scientific endeavor must take into account the wisdom of the body-its immediacy and its dynamics- and not just take into consideration cognition and the abstractions that language expresses.

Aristotle’s classical synthesis of natural philosophy was preserved and transmitted to us through books. From sensation to perception to memory, thereafter becoming recollections and associations or linkages between different memories that appear to be of the similar kind and then finally, the hylomorphic definition of the mind as ‘the form of the body,’ this philosophical understanding of biology was heavily dependent on the construction and meaning of words. Blondel criticizes the heavy dependence of philosophy on the limitations of concepts and mathematics. Instead, he proposes a philosophy of action centered in life’s dynamism where he finds the *apeiron* or the Aristotelian undefined or undetermined as the missing and yet the lynchpin between the determinism of science and the contingency of life. The central concept of his philosophy of action is synergy. Such inclusive and integrative philosophical perspective can embrace the psychology of action proposed by Pierre Janet. This psychology of action is centered on the concept of fixed action patterns during the consolidation of the memory of the experience. What’s important here is that the memory is not only the usual visual image that we usually take to mean memory: Not even the explicit semantic or autobiographical episodic memories! Moreover, memory involves all the core components of the experience that include the visual but also auditory “images” along with the other senses like taste, smell, touch, but also and somewhat unexpectedly to the mind accustomed to think of memory as either explicit or sensorial, it also include implicit memories like skills, habits, and conditioned respons-

es of all kinds learned during our development. Even genes could be conceived as the ultimately evolutionary implicit memory. These are the contributions from current neuroscience.

VI: Neurodynamics of memory

Adding to the classical definition of memory the Tulvig distinction between explicit and implicit memories enriches our understanding of this traumatic pathophysiology.

Later, E. Kandel, finding the neural processes and catalogue of the different types of known memories, anchors again the psychology of trauma back to the body.

Siegel's outstanding integration of our understanding of memory within the development of the person and within society reaffirms not only the determining importance of the imprinting of family relations through the development of attachment but the ongoing importance of a clear understanding of experience in the causation of the disorganization of the mind. He has pointed out some popular misconceptions about the notion of memory. To paraphrase, it is usual for the general public to believe that we are conscious of the fullness of our experience, that those experiences are stored in our minds as a sort of videotape, and what we learned in the past is clearly labeled as memory. In contrast, neuroscience has clearly shown otherwise: explicit memories are the mere tip of the iceberg, most of our memories are implicit memories of which we are unaware as we experience them, and all those recollections are confluences or at times even distortions of the actual experiences. According to Siegel, "memory is the way the past events affect future functions" (Siegel, p.46). Or rather, how the body's impressions of those events in the form of a mind affect how we integrate those inputs when activated and then we take action.

More recently, the field of memory research has emphasized the importance of reconsolidation of memories in contrast with the short-term working memory and the long-term consolidation of memory. These researchers highlight the importance of activating all the components of the experience, especially those subconscious elements that are mostly somatic in nature and that while remaining

hidden interrupt the natural process of healing.

Thereby, in general, trauma is an injury to the body. All traumas disrupt healthy processes of the body. In other words, the anatomy and the physiology of the whole body and not just of the brain or even the nervous system is potentially injured in traumatic stress disorders. From the disruptive impressions of reality into the body's sensorium, through the disrupted limbic system and on to the disrupted engrams of codified memory, traumatic distress wrecks havoc in the healthy processes of the body top-down to bottom up.

Autonoesis or in Tulvig's terms "mental time travel," which is the sense of having a recollection of the self throughout time, may well be the neurophysiological bases for the concepts of "true" and "false" as these recollections are the self that provides us with the sense of accuracy out of our life experiences. The process of reactivation of explicit memories regarding the self can be associated with a sense of being involved, that is called an "ecphoric sensation" which may or not be accurate. R. Bjork has called the process of retrieval the "memory modifier."

Siegel talks about the impact that the amygdala activation under the influence of stress has on the construction of the memory engrams. "Trauma may have a differential impact on explicit as well as implicit memory." These are value-laden memories. William James has called our attention to the impact that these may have: "almost leave a scar on the cerebral tissue" (quoted in Siegel). Siegel also speaks of the vulnerability of some people while engaged in changing memories with some techniques: "individuals can experience traumatic events and be unable to recall them explicitly later on." There is also 'delayed recall'; "the human mind is highly suggestible throughout life, and the accuracy of memory can be distorted by a number of factors including drug states, hypnosis, and intense and repeated questioning within certain forms of interrogations." "Memory is sociable and suggestible." He adds that "actual events can be forgotten, and non-experienced 'recollections' can be deeply felt to be true memories" (P.80).

VI.a Reconsolidation of memory

A review of classical notions of memories dating back thousands of years and an excursion into the current notions of memory in neurosciences in general do not appear to contradict each other. But popular notions of what is memory do appear to diverge from philosophical and scientific notions. Siegel has addressed some of these divergences with clear ethical connotations. An important new notion in the neuroscience of memory is the notion of reconsolidation of memory in contrast to the notion of extinction. Since Pavlov, who coined the term only to find out its fallacy, we have been under the impression that memories can be extinguished. But, as Pavlov saw his dogs during the bombing of St. Petersburg and later Greg Quirk in his rats in Puerto Rico, the extinguished memories return under stress. It appeared then that Freud was right in calling them defense mechanisms of "repression, suppression, etc." That is, learning in the form of explicit or implicit memories remains underneath conscious awareness only to reappear under certain circumstances. Only recently with studies of Hector Maldonado in Argentina and others researchers have we become aware that it is possible to destabilize memories to the point of making them likely to change permanently.

These laboratory procedures have been carried out in animals and in human and they are called memory reconsolidation. Clinicians have been adapting these ideas and implementing them in the work with their patients. They have claimed beneficial results (Ecker 2012).

VII. Therapeutic Action as an Ethical Method: Aquinas, Blondel and Janet

Finally, is it ethical to change memories when we are based in reality and knowing as much as we can about the object of our exploration at a given moment?

The answer is not to opt for subjectivity or objectivity but for integration. We are in a climate of scientific polarization- subjectivism and objectivism -where the bonds that used to unite them are broken. The reason behind it is the fragmentation in science achieved by the unlinking of the two legitimate processes of technology

(favored by modern science) and art (favored by many clinicians). The severe antithesis — modernism and post-modernism — that we live with could possibly be solved by the Blondelian restoration of agency- synergism - through the philosophy of action which is integrative, and by Pierre Janet's psychology of action which pays attention to the core organizers of personal experience. As such, to incorporate into medical technology the mission of the physician "to touch carefully and responsively feeling the patient's body so it can detect strains and tensions which can perhaps help to confirm or correct the patient's own subjective localization, that is the patient's experience of pain" (Gadamer). He continues, "What is important is to recognize the other in their otherness, as opposed, for example, to the tendency towards standardization promoted by modern technology..." (p.108). Finally, "the goal of the art of medicine is to heal the patient and it is clear that healing does not lie within the jurisdiction of the doctor but rather of nature. Doctors know that they are only in a position to provide ancillary help to nature...*therapeia*, meaning service. (p 128)." Gadamer examines the mixed position of medicine: both a natural science and an art impossible to fit in a modern world. In family therapy we follow the wisdom of S. Minuchin when he says: "the sense of belonging dominates the experience of being." In other words, to be is to belong.

Morality and the science of ethics is the tip of the iceberg-so to speak- of philosophy. Even with its own general principles, ethics basically deals with the concrete and particular situations of the daily life of people. But ethics' general principles depend, in turn, on the object and its knowledge, that is, on those two philosophical realms of ontology and epistemology that leads us to establish the existence and knowledge of the object. Furthermore, the philosophy of action and the psychology of action provide the general foundations for a dynamic understanding of the study of the concrete and the particular by those professionals who practice the mixed art and science of health care (see Gadamer). That is the case because they both require an integrated methodology that includes not only the abstract and cognitive elements of interaction- so unfortunately typical of philosophy and modernist sciences, but also the personal involvement, the individual

interaction of the psychiatrist and psychotherapist as both the preeminent source and the outcome of reflection and not the other way around: action is the propeller of this activity and not thinking. We are used to Aristotle's dictum: "Moral purpose is the origin of action. (NE 6.2.1139a31-32)" But the purpose of the will is already a movement- a previous setting in motion- by an earlier external material cause.

The medieval study of acts by Aquinas helps clarify these points. Aquinas' transcendentals clarify the object of study by defining the general ground on which to base our study of reality. The transcendentals are being [*ens*], thing [*res*], oneness [*unum*], identity [*aliquid*], truth [*verum*], and goodness [*bonum*] (Aquinas 1994). The first three are considered absolute while the last three are relative to each other. The latter are not only relative but also have the utmost importance to ethics. Of foremost importance is the definition of truth about reality. It is defined elsewhere (Aquinas 1948) as '*adequation rei et intellectus*' "the equation of thought and thing" and also translated as "correspondence between the object and self-consciousness (Giussani). Pieper explicates the term *aliquid* that "implies an essential relatedness of every being to another being. A specific kind of relatedness, in fact, is stated by the two principles of the truth and the goodness of all things, namely, the very being is oriented towards a knowing and loving (that is, willing) mind."

The process of deliberation or *consilium* needs to be based on such anchoring at the risk of an unending stream of opinions (*doxa*) by the self or others or by linear mechanical dialectic. In the natural world we observe such substantiation. In contrast with the mere cognitive process of deliberation aiming at the satisfaction and arrival of the end, the multiple perspectives of the transcendentals anchor and tame the wild dynamism of linear deliberation [*consilium*].

Hegel's dialectical method contributes to the clarification of how the process of reconsolidation of memories unfolds in the psychotherapeutic session and in specific during the deliberative process and especially

during the activation of the mismatching of experiences.

The polarized dialectics seen in traumatic stress is usually described by those afflicted by it as a general sense of "being stuck" in the past experience and unable to be free to move into the present moment. This realization leads me to believe that we need to reexamine our ideas about time. Subjective time, that is, the way we agree to measure time is chronological time. In contrast, objective time is the way objects of reality change and has been called by the ancient Greeks by the name of *kairos*. For the traumatized person, but especially for those with profound forms of dissociation, time not only stops but also is moving in the virtual reality of the different mental states within the individual body. During the clinical session to treat traumatic memories, we continually observe a process of spiraling up or down of the dialectics- of somatic, emotional, cognitive, among others- during the reconsolidation of memories. While they spiral exclusively up to further polarization the result is a tendency towards unhealthier solutions. In general, waves of spiraling up and down became increasingly attenuated while tending towards healthier solutions. This is the nature of the psychopathology while uncovering or activating the repressed memory.

Psychophysiological recording attests to the correct application of this philosophical principle in the natural sciences. For example, during a session of heart rate variability (HRV) biofeedback in a patient suffering from traumatic stress we can ascertain periods of relative calmness where the "coherence" (otherwise known as power, integration or synergism) is high. But during an intrusion of traumatic memory the synergism is disrupted and the relative contributions of the autonomic nervous system are thrown out of synchrony and spread wide. The goal of the biofeedback session is to restore the healthy synchrony of the different physiological processes. Overall, the patient may end up experiencing a sense of wholeness with decreased dissociations, a sense of personal goodness and well-being, a sense of correspondence to true self, as well as a sense of interpersonal belonging.

In conclusion, the synergistic activity- restoring bonds -between sciences and with arts, along the classification of the clarification of the onto-

logical and epistemological status of the field of mental health could be beneficial to our inpatients. But sciences, and even the arts, with their emphasis on personal experiencing, address by necessity only general concerns, while on the contrary, moral activity is a deeply personal and occurring in the present moment for both the wounded and the healer who most of the time is the same person. Can we integrate the modern need for mathematical certainty along with trust for the wisdom our bodies? Without a doubt: because wounds can be healed. But a question still remains; do we actually know how to touch these wounds?

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The Logic of the Broken

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Some people attribute illogical thinking to those who suffer from depression, when depression is understood as a mental illness. It is not difficult to understand why illogical thinking is attributed to such persons. A person suffering from depression may believe that she has failed in her obligations to her family and friends, for example, even when there is no or little evidence for this belief. Moreover, such a depressed person may hold onto her belief that she has failed in her obligations to others, even when confronted with evidence to the contrary. As Aaron T. Beck and Brad A. Alford (2009) explained, there is "an astonishing contrast between the depressed person's image of him- or herself and the objective facts" (p. 3). They continued to explain that depressed persons "are not readily swayed by objective evidence or by logical demonstration

of the unreasonable nature of" certain ideas (Ibid.). David D. Burns takes the attribution of illogical thinking in depressed persons a step further. In Burns' book *Feeling Good: The New Mood Therapy* (1999), Burns writes:

because depression has been viewed as an emotional disorder throughout the history of psychiatry, therapists from most schools of thought place a strong emphasis on "getting in touch" with your feelings. Our research reveals the unexpected: Depression is not an emotional disorder at all! The sudden change in the way you feel is of no more causal relevance than a runny nose is when you have a cold. Every bad feeling you have is the result of your distorted negative thinking. pessimistic attitudes play the central role in the development and continuation of all your symptoms. (p. 28)

It seems as though the success of Cognitive Behavior Therapy has helped to reinforce the claim that persons who suffer from depression also suffer from illogical thinking, since this attribution is still prevalent. For example, in 2010, Michael W. Austin, a professor of philosophy at Eastern Kentucky University, wrote in an online post for *Psychology Today* that "there is at least good philosophical evidence that sound critical thinking belongs in the toolbox of the person who is dealing with depression, as well as the toolbox of those who are seeking to help such an individual." Since sound critical thinking ought to be something everyone should strive to maintain, one might wonder why Professor Austin singles out those suffering from depression and their care providers. Austin explains that his "claim is *not* that unsound or illogical thinking is the cause of depression, or that the depressed person is blameworthy for how she thinks, but rather that the thinking that is characteristic of someone suffering from depression is sometimes illogical thinking" (2010). In sum, Austin suggests that philosophy (as a discipline) may be a 'part of the cure' for depression through the exercise of one's critical thinking skills. Like Austin, I believe that the discipline of philosophy does

have an important contribution to make with respect to understanding and, possibly, to treating depression. But, unlike Austin, I do not believe that philosophy's contribution is rooted in one's toolbox of critical thinking skills. Rather, I wish to challenge the claim that persons with depression engage in illogical thinking by focusing upon how agency may be impaired through depression. I will begin by briefly examining a definition of "illogical" before proceeding to offer an account of how the stated beliefs and observed actions of persons suffering from depression may *appear* to be illogical. I will conclude by highlighting a couple of the implications that follow if, in fact, the charge of illogical thinking among depressed persons is found wanting.

The charge of thinking illogically implies either that one has failed to apply the rules of logic, or that one has misapplied the rules of logic in a particular situation. Typically, it seems as though more attention is paid to what a depressed person counts as evidence for forming beliefs rather than how such a person reasons, given her respective beliefs. If feelings of worthlessness are grounded in a depressed person's false belief that she has failed in her obligations to family and friends, for instance, then one might say that she is committing the fallacy of suppressed evidence. Now, for the sake of argument, I will jettison any idea of a causal relation between suppressing evidence and feelings of worthlessness. Even Austin acknowledges that illogical thinking is *not* the cause of depression, as noted above. Furthermore, the charge of illogical thinking does *not* imply that simply changing one's thought patterns will treat her depression effectively. Rather, the idea here is that, for all practical purposes, it appears as though she is thinking illogically about matters concerning her life.

What I find particularly troubling with the charge that those suffering from depression engage in illogical thinking is that it is a descriptive claim that describes the phenomenon of depression inaccurately. I believe that such a charge of illogical thinking fails in at least two ways. First, there are certain prerequisites to thinking logically that are being overlooked when the charge of illogical thinking is attributed to the rational agency of a depressed person. Second, even when

these prerequisites are accounted for, the charge of illogical thinking also fails to consider the complex interplay of desires, beliefs, emotions, and thoughts, as well as the possible role of second-order desires, in particular, with respect to rational agency. I will begin by noting just one of the prerequisites to logical thinking.

Philosopher David Hume famously wrote in his work *A Treatise of Human Nature* (in Book II, Part III, Section III) that “reason is, and ought only to be, a slave of the passions, and can never pretend to any other office than to serve and obey them” (1965, p. 179). Hume’s point was that the rules of logic do not themselves determine what is (or even what should be) the objects or ends about which we reason. Whether Hume was correct to note that reason is submissive to one’s passions, however, is a topic for a different project. The point that I wish to make here is simply that, even if logical thinking is not based upon one’s passions, desires, or values, thinking logically is based upon a coherent, integrated, and relatively stable self-concept. To reason according to the rules of logic implies the ability to reflect upon potential consequences as well as to have a conception of a future self – indeed, to reason logically implies the ability to view oneself as an ‘other.’

Yet it is significant that those who suffer from depression seem to lack a future self-conception. For instance, Fredrik Svenaeus – a professor at the Centre for Studies in Practical Knowledge in Sweden – notes that “depression ... alienates the self from the world of others and also from the future as something providing a meaningful set of possibilities for the depressed person” (2014, p. 15). More specifically, philosopher Julia Driver explains that depressed persons “lack the ability to properly or accurately predict their own future affective states with respect to relevant alternative courses of action” (2014, p. 134). The ability to make such predictions is referred to as affective forecasting. Driver continues to explain that failures in affective forecasting have “[serious] negative implications for an agent’s ability to [plan effectively]” (Ibid.). In short, the ability to assess consequences and to consider relevant options is an ability presupposed when determining logical courses of action. But if an agent lacks the ability to predict his

future affective states across a range of possibilities, then (regardless of what he does) it is inaccurate to describe his selected course of action by suggesting that he has failed to apply (or that he has misapplied) the rules of logic. Actions, after all, have a given end or goal – and determining whether and which goals to pursue depends not upon the rules of logic but, rather, upon reliably predicting how one will feel about them in the future.

At this point, someone who maintains that illogical thinking is a characteristic of depression may object. The issue, he might claim, resides at a more fundamental level. Consider the example I noted earlier of someone who sincerely believes that she has failed in her obligations to her family and friends even when there is no or little evidence for this belief. What is deemed as illogical is not an action – nor is it how well this person might predict her future affective states. What is deemed illogical in this example is that the agent appears to be committing the fallacy of suppressed evidence. That is, she appears to be failing to acknowledge relevant evidence that is available to her. She is (in a significant way) disengaged from what Beck and Alford would call “objective facts” about the world. Yet there is at least another way to describe why the depressed person might believe that she has failed others despite available evidence to the contrary. Rather than focusing upon how, or even whether, she is engaged with relevant objective facts about the world, I wish to focus upon the degree in which she is internally integrated – or how well she is engaged in a unified self-concept. To illustrate what I have in mind, consider a rather common way in which someone may lack internal integration. Suppose, for instance, that a person smokes cigarettes. He smokes to relieve tension and he continues to smoke out of habit. In short, he has a first-order desire to smoke. But, when he reflects upon his first-order desire, he desires that he did not have that desire. His second-order desire is, therefore, inconsistent with his first-order desire.

From the reflective standpoint, he knows that smoking is bad for his health. His knowledge of the negative effects of smoking and his desire

not to desire smoking might prompt him to invest in programs designed to help him quit smoking. In this way, his knowledge of the negative effects of smoking becomes motivational. But the extent to which his second-order desire succeeds in becoming the overriding motivation upon which he acts is, in part, determined by how well he is internally integrated – or, how well his first and second-order desires align.

If he continues to smoke, then he is not simply suppressing evidence that smoking has negative effects on his health but, more accurately, he is not sufficiently motivated by this knowledge. With respect to nicotine (or other addicting substances), not being sufficiently motivated to quit does not mean that he lacks willpower since his voluntary choice to smoke is nevertheless unfree. Again, I wish to suggest here that the claim that illogical thinking is characteristic of depressed persons in virtue of their depression is misguided. The alternative description that I propose does not focus upon a person’s thought processes or affective states – but, rather, upon what motivates a person to form particular beliefs. So, let’s return to the example of the depressed person who appears to be committing the fallacy of suppressed evidence. One way to describe her belief that she has failed others is that she is aware of the relevant objective facts to the contrary but that she suppresses such evidence in her belief formation. Indeed, *prima facie*, it appears as though her false belief is the result of a confirmation bias – that is, a defect in the way in which she processes ‘objective facts.’ Somewhat ironically, Beck and Alford’s observation that depressed persons “are not readily swayed by objective evidence” may suggest another way to describe her false-belief formation. That is, being unmotivated by particular evidence might occur not only as a result of a cognitive bias (which may impair one’s reasoning processes) but also as a result of lacking internal integration. As in the example of the smoker as I have described above, it would be inaccurate to claim that such a smoker is engaged in illogical thinking when he smokes. After all, he is aware of the objective facts regarding the potential, negative consequences of continued smoking, and he has some motivation to change his first-order desire to continue to smoke. But his first and second-order

desires do not align. His will is divided.

It is interesting that depressed persons also have been characterized as having a divided will. For example, a study published in the Proceedings of the National Academy of the Sciences found that depressed persons had much more difficulty in sustaining positive emotions when presented with positive images than what they were sustaining negative emotions when presented with negative images (Heller et al, 2009). The authors of that study explain a rather humbling but commonsensical point – namely, that

in everyday life, individuals do not generally encounter uninterrupted positive stimuli. Negative experiences often intermix with positive ones, and the ability of individuals to heighten and maintain positive affect in the face of negative stimuli is vitally important for health and well-being. (p. 22449)

To which I would add that, more specifically, the ability to maintain positive affect plays a vitally important role in a person's belief formation. Citing the same study, Julia Driver further explains that depressed persons “realize that there is something wrong with their responses, and often feel motivated to do something about it” (2014, p. 131). Hence, for such persons, their wills are divided insofar as their motivational states do not align.

Still, someone might wonder about the significance of attuning more to a depressed person's motivational states rather than to her thought processes. After all, suppose that a non-depressed person is presented with objective facts that her husband is having an affair. For the sake of argument, let's further suppose that she suppresses such evidence because she is unable to accept and, hence, does not desire to acknowledge such evidence. Might we say that she is unmotivated to account for these objective facts in the same way that a depressed person may be unmotivated to account for the objective facts that count against her belief that she has failed others? Aren't both instances glaring examples of cognitive biases at play?

My answer to these questions is a resounding ‘no.’ There is an element of self-deception that is present in the case

of the wife's belief formation, which is absent in the depressed person's belief formation. Unlike the wife, when the depressed person believes that she has failed in her obligations to others, it is inaccurate to describe her as suppressing evidence to the contrary. Rather, it seems as though the lingering negative affect that she suffers upon experiencing negative stimuli influences her motivational states and, thereby, makes her belief that she has failed others feel *stronger* than the belief that she has not. It is unsurprising, then, that she is “not readily swayed ... by logical demonstration,” as Beck and Alford observed above, since motivational states may precede the employment of the rules of logic.

In this respect, I believe that attention to studies about the nature of autism may provide a helpful analogy here. *Prima facie* those who suffer from moderately severe instances of autism appear to lack empathy. More boldly, someone either uneducated or unfamiliar with autism might believe that a person with autism is being cold-hearted, or simply that he does not know how to act around others when he, for example, fails to comfort another person when able to do so. But describing persons with autism as characteristically cold-hearted or even as simply lacking in empathy is inaccurate. The description is inaccurate because the social impairment that is characteristic of those with autism interferes with the way in which they experience situations. Philosopher Elenore Stump explains:

what ... researchers [of autism] are struggling to describe is one person's knowledge of another and of that other's mental states when the knowledge in question shares features ... of certain kinds of perception. Like the perception of color, for example, the knowledge at issue here is direct, intuitive, and hard to translate For in stance, John knows *that* Mary is going to give him a flower because he first knows Mary, her action, her emotion, and her intention – but these are things which he knows by, as it were, seeing them, and not by cognizing them” (2010, pp. 70-71).

In short, the ability to read social cues impacts one's ability to respond to others in ways deemed to be socially appropriate. Appreciation of this impact is central to understanding autism. The recognition that those with autism are not characteristically lacking in empathy has not only advanced a more accurate understanding of what those with autism are experiencing but, I believe, that it has also helped to advance more compassionate ways of treating those with autism. Similarly, the recognition that those who suffer from depression are not somehow more prone to illogical thinking than the rest of the population is deserving of attention.

So, in conclusion, I briefly wish to mention why I believe that both studies in psychiatry and contemporary philosophical works – particularly in motivation and in agency – should be combined to put forth a more accurate description of how beliefs are formed among those who suffer from depression. Firstly, because the same word “depression” is used to describe both a mental illness as well as a natural and healthy reaction to life's disappointments (which everyone who is fortunate to live long enough will experience), describing a depressed person's belief-formation process in an accurate way may help to provide the much-needed grounds for differentiating among these experiences. In other words, I am not denying that perhaps someone who experiences a disappointment in life, and who subsequently feels *depressed* might be thinking illogically. I only wish to deny that this is true when depression is understood as a mental illness. Secondly, as in the contemporary understanding of autism, a refined notion of a depressed person's belief states might help to reduce the social stigma against those who are living with depression. Thirdly, there might be implications for the treatment of depression by focusing attention on a depressed person's motivational states and their potential need for a unified self-conception. For all of these reasons, I believe that it is important to challenge the attribution of illogical thinking as a characteristic of those who suffer from depression.

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coverage of stimulants while those with probable ADHD are denied? In psychiatry we talk about subclinical presentations of disorders, such as the patient with anorexia whose weight is 87% of her ideal body weight, rather than the DSM threshold of 85% of ideal body weight. It seems counterintuitive to diagnose this person with "probable anorexia" if she meets the other criteria for anorexia diagnosis. It is also counterproductive if the probable diagnosis prevents the patient from accessing entitlements or services provided to the "established" sick.

I will be interested to follow what happens with the tiered diagnosis of PD. Will there be a flurry of productive research if cohorts consist of patients with more homogeneous presentations? Will services be offered or withheld based on the the diagnostic tier? Will probable PD serve any purpose at all?

Claire Pouncey, M.D., Ph.D.

(continued from page 1, Editor)

ment over accommodation. Kavanagh emphasizes the conflict between 'cure' and accommodation (while also recognizing possible collaboration), while Kruger, who spends much of his article describing the particular deficits in autism, is less concerned about conflict and emphasizes that the high-functioning Asperger's individual needs both treatment and societal accommodation.

Finally, in "The Logic of the Broken," Robyn Gaier challenges the notion that depression should be described as a failure of rational thinking, as in the theory of Cognitive Behavioral Therapy (CBT). She argues that the depressive doesn't suffer from irrational thinking so much as from a lack of self-integration and conflicted and unintegrated motivations. At the end of her article she joins the discussion of autism, pointing out that just as the depressed might incur less stigma if not viewed as irrational, so also autistics might incur less stigma if viewed as suffering from a social impairment as opposed to simply lacking in empathy.

If there is a common element in these papers, it is an effort to propose alternative viewpoints on psychiatric disorders. Bedrick suggests looking at epidemiological differences in depression from the perspective of positive freedom. Vilaro proposes seeing post-traumatic stress from the angle of Aristotelian form. Kavanaugh and Kruger put forward another understanding of high-functioning autism if addressed from concerns about social justice. And finally Gaier suggests another understanding of depression than that of irrational thinking.

JP

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