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Autism's anatomy

Verhoeff, Berend

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8 | Conclusion: Searching for autism in a sea of flux

We are not so presumptuous as to pretend to renovate medicine by incorporating a metaphysics into it. If medicine is to be renovated, it is up to physicians to do so at their risk and to their credit. (Canguilhem, 1966/1991: 34)

Is autism a single disease? Is it a spectrum of different disorders? Are its causes genetic, environmental, social, or a mixture of these? Is it a disorder of social cognition, social motivation, or of processing and integrating perceptual information? These are questions that continue to concern those who try to solve the autism puzzle. With this dissertation I did not aim to add a piece to this puzzle but, instead, I have tried to understand what it is that makes these questions possible to ask and to determine what type of puzzle needs to be solved. I have investigated how it is possible to continue diagnosing autism, to continue doing fundamental research on autism, and to continue perceiving clear cases of autism, despite the fact that historical and conceptual perspectives reveal that the idea of autism is notoriously elusive, heterogeneous, socially-inflected and variable in the way it is and has been conceptualized. I began this dissertation with an exploration of these issues, which provided important insight into the development of psychiatric knowledge. In this conclusion I will not restate the separate conclusions of each chapter, but I will briefly return to some of the Fleckian analyses and look at a couple of broader implications for the field of psychiatry.

A brief return to Fleck

In tracing the philosophies that are operative in the field of autism today, particularly in Chapter 2, I did not run into any confident reductions of autism to well-delineated neural substrates or clear-cut genetic variations. Similar to what Fitzgerald (2012) concludes after multiple interviews with autism

neuroscientists in the UK, I found high degrees of uncertainty and ambiguity regarding the nature of autism. Among autism researchers and clinicians, one of the few certainties is that autism is a very complex and heterogeneous disorder that resists any straightforward neuro-reduction. The search for autism is no longer a search for a neatly delimited entity. It is a search for something more spread out, dynamic, and continuously affected by personal and environmental circumstances. Autism researchers are not looking for a single brain area, a brain lesion or a genetic mutation that is supposed to underlie and explain autistic behavior. Partly due to developments in the basic neurosciences, autism research has moved beyond the classical localizationism that became widespread in nineteenth-century medical thought towards an ‘extended localizationism’ that involves different brain areas, neural pathways and molecular mechanisms that underpin and sustain the capacities for human social interaction. The entire brain and its seemingly boundless potential for opening up new scales of investigating sociality has become the ‘extended’ space in which the puzzle of autism is supposed to be solved. Environmental and cultural factors might matter as well, as long as they affect the brain.

In short, the ‘autism puzzle’ is particularly tricky. To be honest, this finding is hardly remarkable. It would be somewhat incredible to conclude that autism researchers think of autism as a simple disease with a well-detectable pathophysiology and a clear etiology, course, prognosis and treatment. If that were the case, then what would explain the lack of convincing etiological factors or valuable biomarkers of autism? Certainly, this lack is not due to a lack of fundamental autism research. Instead, a convincing account of autism’s neurobiology needs to account for complex epigenetic processes; hundreds of possibly-involved genes; pleiotropy; neuroplasticity; gene-gene interactions; gene-environment interactions; multiple functional brain networks; neurodevelopmental processes; variable manifestations of autism (in time, place and person); and many contradictory findings.

Chapter 4 explained how these complexities and ambiguities played a role in the reframing of autism as a neurodevelopmental spectrum disorder. What is more, with the rise of a neurodevelopmental autism spectrum disorder, autism’s complexity and ubiquitous heterogeneity – covered by the ‘spectrum’ idea of autism – transformed into an inherent aspect of the syndrome. This new object of investigation ensured and facilitated further research and new hypotheses regarding the neurobiological specificity of autism. I argued that understanding

autism as a neurodevelopmental spectrum disorder is not a sign of explanatory success. Rather, it is a sign of explanatory quandary.

More precisely, my inquiry into the development of knowledge of autism exposed a particular dynamic. Rather than a progressive understanding of autism as a stable and discoverable object, which is the implicit message in many histories of autism (see Chapter 3), a reshaping of the idea of autism and the search for autism's essence go hand in hand. Ambiguous and heterogeneous research findings required researchers to make conceptual changes, create new categories, and construct new hypotheses regarding autism's core features in order for autism to remain a legitimate object of scientific scrutiny. A recurrent pattern in the development of knowledge of autism can be discerned. This pattern involves a search for common ground (specificity), problems with heterogeneous findings and doing adequate justice to the complexity of the clinical picture, and shifting emphasis toward new potential common ground at phenotypical – but also cognitive and biological – levels.

However, as I described in Chapter 6, the search for autism's neurobiological foundations has an underestimated downside. The connected processes of reshaping the idea of autism and searching for autism's essence resulted in increasingly complex neurobiological accounts of autism, while on the clinical side of the divide, autism has become a common, broad, heterogeneous, and clinically unspecific category. Contrary to what basic autism researchers proclaim, this development does not give much hope for future clinically valuable translations from the neurosciences.

To be clear, I do not consider basic autism research invalid or mindless due to its attempts to reduce the normativity and complexity of autism or social behavior to a neural substrate. In Chapter 2 I criticized the overall neglect of autism research of cultural norms inherent in assessing social interaction, the context-dependency of impairments, and the historical transformations and fluctuating boundaries of the category of autism. Initially, I considered the 'natural kind approach' in autism research to be misguided. In the process of writing later chapters, I came to understand this neglect not so much as misguided, but as a form of resistance to anything that might contradict the perception of autism as a distinct disease (see Chapters 4 and 5). As I have argued throughout this dissertation, in both the 'esoteric' and 'exoteric' autism communities, the tendency to objectivize and reify autism is strong. Autism

creates impairments, causes disabilities, makes people suffer, and produces special needs. But it can also come with talents and exceptional qualities. Despite the still unknown neurodevelopmental nature of autism, autism has a life of its own and is thought to cause and explain all sorts of experiences.

As Chapters 4 and 5 argued, an ‘ontological understanding of disease’ is a central element of contemporary psychiatric research and practice. This concept of disease is important insofar as it fulfills a particular role in the field of psychiatry. It is not just an abstract idea, but an idea used in different places with all sorts of material, institutional, technological, ethical and rhetorical implications and functions. The idea that autism exists independently of its particular manifestations in individual patients affects diagnostic tests and decisions, patient-physician interactions, treatment options, decisions regarding special services, the interpretation of symptoms, the organization of mental health care, research designs, research goals, biographical narratives, identity formation, senses of responsibility and accountability, and so on. Without this idea, which is an explicit reification, these practices and ethical and societal connotations become rather unintelligible. Claiming that the diagnostic category of autism is merely based on conventions and nothing more than a convenient category for clinicians or researchers misses this point and ignores the historical connections that legitimize the ‘existence’ of autism in the first place. The ontological understanding of disease is such a historical connection and a condition of possibility for almost anything that happens in the field of autism today.

In sum, numerous factors including a particular medical tradition, the medically-educated and DSM-trained clinical gaze of psychiatrists and other mental health professionals, the clinical and scientific utility of disease categories, the bureaucratic needs of health administration, and the practices of autism-oriented advocacy groups all create a dense social, material and cognitive network in which autism achieves a seemingly inevitable stability. Autism has become a form to be directly perceived. This ‘*readiness for stylized (that is, directed and restricted) perception*’ (Fleck, 1979: 84) of autism makes it possible to continue to perceive a variable mixture of seemingly independent signs and symptoms as expressions of a specific, identifiable disease. The persistent search for autism’s neurobiological basis can be regarded as an almost inevitable part of the contemporary style of psychiatric thought. Current, increasingly complex neurobiological accounts of autism are neither mindless reductions of reality,

nor products of an original and creative ‘free unfolding of ideas’ (ibid.: 84). Rather, they can be understood as solutions that follow from highly stylized ‘signals of resistance’ in thinking.

Even though the stability of the very idea of autism requires conceptual adjustments and consequently, a shifting image of autism, the dense, interconnected system of knowledge about autism resists major changes. Autism research develops as it does because of the history it has; because of the historically and socially preconditioned ways of seeing and thinking about autism and psychiatric ailments in general. As Ludwik Fleck argued with regard to syphilis, ‘it is not possible to legitimize the “existence” of syphilis in any other than a historical way’ (ibid.: 23). Like syphilis, the concept of autism ‘could not be attained without the consideration of particular historical connections’ (ibid.).

Furthermore, the tenacity of the system of ‘facts’ about autism causes the things that do not fit into the system to remain unnoticed or, in Fleck’s terms, ‘laborious efforts are made to explain an exception in terms that do not contradict the system’ (ibid.: 27). For instance, the current fact that autism is a lifelong neurodevelopmental disorder challenges the experience that some children diagnosed with autism recover at an older age. This experience is sometimes ignored and other times contested – either the patient did not fully recover, or she did not have autism in the first place. Similarly, someone diagnosed with autism for the first time at an older age must have had autism as a child, even though it might have been latent due to favorable circumstances. These findings do not neatly fit into the system of factual knowledge of autism. Another type of active resistance to contradictory data is demonstrated in Chapter 3. This chapter argued that in many histories of autism, practitioner-historians tend to see, describe, recreate and focus upon earlier facts and descriptions of autism which corroborate current perspectives and thereby give them substance. Moreover, the reification of autism enabled other social and psychological phenomena, such as autism neurodiversity and self-advocacy movements and autistic subjectivities, which, in turn, have the capacity to further solidify the idea of autism.

It is important to note that the rigid and constraining structure of views on autism is not an obstacle to the production of knowledge. Quite the contrary; in fact, true statements can *only* emerge out of such a dense network of social, historical, material and cognitive connections – Fleck’s active and passive

linkages – that direct what can be seen, thought and done. Furthermore, in the dense network of autism knowledge, in which an avalanche of autism research creates countless and highly detailed and specialized (neurobiological) scientific findings about autism, the active connections – those that are explicable in terms of history, culture or psychology (both individual and collective) – tend to become invisible. This is an additional explanation for the strong tendency to reify autism. As a result of education, training and active participation in a scientific field, the corresponding thought style will appear imperative. Fleck argues that:

A universally interconnected system of facts is thus formed, maintaining its balance through continuous interaction. This interwoven texture bestows solidity and tenacity upon the ‘world of facts’ and creates a feeling both of fixed reality and of the independent existence of the universe. The less interconnected the system of knowledge, the more magical it appears and the less stable and more miracle-prone is its reality, always in accordance with the thought style of the collective. (ibid.: 102, quoted in Klaassen, 2014: 45)

Thus, the more active you are in a relatively closed (scientific) field of autism research, the more definite and independent some sort of idea of autism becomes. For example, the more you know, learn and talk about the genes, molecules and brain activities that are correlated with autism, and the more you know about autism’s prevalence and the neurocognitive distinctions with ADHD, the more you will probably neglect autism’s relation to cultural norms of social behavior, the arbitrary boundaries of clinical significance and the contextual aspects of typical autism impairments.

However, as basic autism research continues to fail to become clinically relevant, and as the extending boundaries of autism and mental ‘abnormality’ gain clinical, societal and economic concern (see Chapter 6), more interaction between relatively autonomous groups (for instance, between autism neuroscientists, clinicians, epidemiologists and health policymakers) will probably take place. At these moments of intercollective communication, the ‘active connections’ are likely to resurface. To quote Fleck again, ‘communication never occurs without a transformation, and indeed always involves a stylized remodeling, which intracollectively achieves corroboration

and which intercollectively yields fundamental alteration' (Fleck, 1979: 111). In the final section which discusses some implications of this study for psychiatry, I will not argue for further intracollective corroboration of current ways of thinking about autism, but for intercollective communication which might start and accelerate the development of new styles of psychiatric thought.

It will be clear that Fleck's epistemology does not contain the idea of universal and eternal truths. There is no neutral position outside history or a social context (a thought collective) from which autism can be identified. However, this does not imply a relativistic view of autism or truth:

Truth is not 'relative' and certainly not 'subjective' in the popular sense of the word. It is always, or almost always, completely determined within a thought style. One can never say that the same thought is true for A and false for B. If A and B belong to the same thought collective, the thought will be either true or false for both. But if they belong to different thought collectives, it will just *not* be *the same* thought! It must either be unclear to, or be understood differently by, one of them. Truth is not a convention, *but rather (1) in historical perspective, an event in the history of thought, (2) in its contemporary context, stylized thought constraint*'. (ibid.: 100)

With Fleck, truth is always relational due to its necessary place in a complex network of linkages that constitutes a thought style. Klaassen (2014: 44) uses the concept of 'relationism' to stress that 'the notion of "truth" can be of value, even if truth is (only) an event taking place in a network that is always in the process of change'. And as truth changes in an advanced scientific field, 'each new fact harmoniously – though ever so slightly – changes all earlier facts. Here every discovery is actually a recreation of the whole world as construed by a thought collective' (Fleck, 1979: 102). Chapters 3, 4 and 5 explored some of the earlier facts about autism, and they explored how these facts changed as new facts about autism involved a rewriting of the history of autism.

Fleck's 'relationist' epistemology turned out to be a fruitful framework for understanding developments in the field of autism. It can account for the observation that, from a historical perspective, autism is notoriously elusive, socially-inflected and variable. In the past seventy years, many facts about autism have been established and discarded, while in its contemporary context,

autism has an undeniable reality. Fleck's notion of thought styles allows autism to be both continuously in flux *and* a seemingly stable – albeit unknown – object with many true representations and consequences.

Thinking beyond autism

The above-mentioned insights into the structure and development of a psychiatric concept lead to a supplementary question. How should psychiatry, as a more or less autonomous, medical specialty dedicated to the care of mental ailments, respond to the developments towards increasingly technical and specialized neurobiological research into psychiatric disease entities? Despite the passionate efforts of thousands of scientists, millions of dollars for fundamental research and confident promises regarding clinical applicability of basic research findings, psychiatric disorders are notoriously hard to get a grip on. Autism research, like psychiatric research in general, persistently fails to translate laboratory findings – for instance from brain imaging experiments or genetic studies – into real-world situations (see Chapter 6).

Of course, it is problematic to speak of psychiatry as a uniform whole. Despite the general dominance of neurobiological explanatory frameworks, clinical psychiatry is rather pluralistic. There are, at least in the Netherlands, many traditions and influences that range from psychoanalysis, social psychiatry, cognitive behavioral therapy, narrative psychiatry, phenomenology, existential psychotherapy, and more. Furthermore, one specific setting or clinical focus draws more from particular traditions than another setting does. For instance, people diagnosed with a personality disorder are likely to be approached from a psychoanalytical framework, while someone diagnosed with an anxiety disorder will probably receive a cognitive-behavioral approach. Mental health professionals who work with children diagnosed with autism also use behavioral techniques (for example, applied behavioral analysis or ABA) and ecological perspectives. More often, clinical practice draws from a mixture of approaches in a way that makes disentangling the different perspectives rather artificial.

Nevertheless, despite my limited focus on autism, I think it is safe to consider the brain sciences as the fundamental sciences in contemporary psychiatry (see Chapter 4). When it comes to what type of research receives the

most funding and what type of research has the most scientific impact, status and authority, the neurosciences head the lists. True explanations of mental ailments somehow have to pass through the brain. In this sense, psychiatry is influenced by and also an important part of the broader ‘neurofication’ of human life (Rose and Abi-Rached, 2013). Furthermore, and maybe most importantly for psychiatry, the prominence of the brain sciences in psychiatric research ensures psychiatry’s medical status and the link with other medical specialties.

Thus, despite a clinical pluralism, it is hard to deny the importance of the brain sciences for the reputation, self-image and legitimacy of psychiatry. But, it is also hard to deny that the medical identity of psychiatry, and the legitimacy of psychiatry in general, is under pressure. As I mentioned in the introduction, more than forty years after Charles Rosenberg’s lecture – *The crisis in psychiatric legitimacy: Reflections on psychiatry, medicine, and public policy* – his observations are still valid (Rosenberg, 1975). Rosenberg noticed a gap between the performance of psychiatry as a medical specialty and the expectations from society and psychiatry itself regarding successful psychiatric care, treatments, and (brain-based) explanations of deviant behavior. Psychiatry’s objectives to cure and illuminate mental disorders contrasted with the sparse technical means and the lack of insight into the pathophysiological processes of these particular clinical burdens. For Rosenberg, the crisis in psychiatric legitimacy was exactly this gap ‘between the demands of medical exclusivity and the inability of psychiatry to provide either understanding or relief consistent with the pretentiousness of such demands’ (ibid.: 250).

As Rosenberg cleverly analyzed, it was not psychiatry’s ability to cure, prevent, predict and diagnose that justified the legitimacy of psychiatry as a medical specialty. Instead, its legitimacy lied in ‘the very gravity and scale of the responsibility it must undertake’ (ibid.: 255). Society shaped a particular role and assigned responsibilities to the psychiatrist, namely to treat those who are considered and consider themselves to be mentally ill, consistent with ‘the needs of an urban, rationalistic society unwilling to tolerate certain kinds of deviance’ (ibid.). A ‘medical’ psychiatry profited from the status and authority society grants physicians, and it incorporated, authenticated and reinforced social norms and values through a particular medical framework. According to Rosenberg, it was not effectiveness, but orientations, values, and responsibility that were the basis of psychiatry’s legitimacy.

Of course, psychiatric practice and research has changed a lot since the early 1970s. To recognize this, one only needs to think of the publication and widespread impact of the ‘neo-Kraepelinian’ third edition of the Diagnostic and Statistical Manual of Mental Disorders (*DSM-III*, APA, 1980); of the development and popularity of new psychotropic drugs such as Prozac and Risperidone in the 1990s; of the rise and emancipatory role of patient movements; of increasing deinstitutionalization and new types of community-based treatment for severe mental illness; and, equally important, of the major developments in neuroimaging, molecular genetics and the cognitive neurosciences in general that profoundly affected the way we think about the nature of mental ailments. However, many of these developments were still shaped by decisions made outside the medical profession of psychiatry. Furthermore, if we are allowed to generalize the aims of autism research, direct links between understandings of pathological mechanisms and successful therapeutic interventions remain among the highest goals for psychiatry. Ideally, insights into pathophysiological processes structure and define the boundaries within which clinical decisions are being made. Currently, this is not the case.

The *DSM-III* (APA, 1980) and the rise and dominance of a ‘biological psychiatry’ can be seen as responses to the crisis described by Rosenberg. They represented the promises and hopes for productive and direct interactions between biomedical research and clinical practice, and consequently, what should justify psychiatry’s relationship with medicine. As this dissertation has demonstrated for autism, these promises and hopes have not yet been fulfilled, and current responses to the ‘crisis of psychiatric legitimacy’ and the disappointments that surround the publication of the barely innovative *DSM-5* (APA, 2013) come from various directions. The most influential response is probably the Research Domain Criteria (RDoC) initiative of the American National Institute of Mental Health (NIMH), which ‘attempts to bring the power of modern research approaches in genetics, neuroscience, and behavioral science to the problems of mental illness, studied independently from the classification systems by which patients are currently grouped’.⁸⁶ In the Netherlands, Borsboom (2013) argues for a network approach to psychopathology in which disorders result from the causal interplay between

⁸⁶ See: <http://www.nimh.nih.gov/research-priorities/rdoc/index.shtml>, accessed April 2015.

symptoms,⁸⁷ while van Os (2014) makes a plea for idiographic (personalized) understanding rather than nomothetic (law-like) explanations of psychiatric disease.⁸⁸

However, even if new systems of classification and concepts of psychiatric disease provide new theoretical insights, better treatments and symptomatic relief for mental ailments, this might not satisfy ‘those activist critics who see in psychiatry an agent of social control’ (Rosenberg, 1975: 256). Even if psychiatry manages to overcome ‘the crisis in psychiatric legitimacy’ by developing the technical means and much closer and more successful connections between biomedical research and clinical practice – i.e., by illuminating pathophysiological pathways and developing successful and specific diagnostic markers and ‘normalizing’ interventions on the basis of these pathophysiological mechanisms – it might still not satisfy the critics who consider psychiatry a repressive (or reductionist) vehicle for social and moral control or a puppet of large commercial interests.

What I have shown using the case of autism is that psychiatry relies, and needs to rely, on particular ideas about the nature of disease and on ideas about what is considered appropriate or inappropriate about our thoughts, feelings and behaviors. Even if psychiatry manages to vindicate its medical status, it cannot escape operating in a particular style. Consequently, as psychiatry deals with sensitive topics such as deviant human behavior, emotions and personalities, it will probably, and hopefully, never escape a critical stance which constantly questions the stylized thoughts regarding the nature of psychiatric disease. In addition, whether psychiatrists like it or not, psychiatry is increasingly drawn into political and ethical discussions about intervening on the threshold between healthy and ‘abnormal’ child development, about the boundaries between mad and bad, and about the desirability of screening and prevention of what we have come to call neurodevelopmental disorders (Morgan, 2015). Politics and society are not external to psychiatry, but inevitably part of it.

⁸⁷ See Ruzzano et al. (2015) for an application of this network approach in autism.

⁸⁸ Neither Borsboom (a psychologist) nor van Os (a psychiatrist) is particularly concerned with the medical status of psychiatry. Nevertheless, they do seem to take the disappointing achievements of psychiatric research (or again, the discrepancy between expectations and performance) as a starting point for their ‘better’ models of psychiatric disease. For my review of van Os’ book, see Verhoeff (2014).

Arguably, the more general lesson that can be learned is that psychiatry should not try to neglect or reject a critical reflection on even its most fundamental assumptions. Unfortunately, as a psychiatrist myself I sometimes experience hostile ‘disciplinary defense reactions’ that try to protect ‘medical’ territories and certain scientific commitments against a contextualizing and historicizing critical mood. It may even be that the zealous quest for a truly medical psychiatry has been an obstacle to the recognition of the inevitable normativity of the foundations of psychiatry. I suggest that it is not the discrepancy between certain expectations of a truly *medical* specialty and performances consistent with these expectations that exposes the weakest spot of contemporary psychiatry, but rather these very expectations themselves and the difficulty mainstream psychiatry has incorporating and accepting a certain type of critique.

If we start to acknowledge that psychiatry is always formed by social and cultural conditions, a critical reflection on these conditions will become accepted by and relevant for psychiatry itself. What are the social, historical, financial and political factors that shape psychiatric knowledge, practices and institutions? And what are the forces that keep particular traditions and seemingly indisputable facts in place? Of course, these types of questions are already addressed by entire departments and a range of historians and sociologists of science and medicine, and this study also tried to contribute to this particular type of study. However, these questions are relatively unimportant in psychiatric science. In practice, they tend to be designated as interesting, but fundamentally irrelevant to the work of biomedical scientists and clinicians in the field of psychiatry. As an alternative, I argue that these questions are fundamental to psychiatry since a study of the contingent conditions of possibility for contemporary psychiatry shows that the practices and operative philosophies in psychiatry are not given but are actually always open to change and debate. Only by understanding this will psychiatry mature its insecure identity as an ailed medical specialty. This is one of the reasons why I suggest that psychiatry should work more closely with the human and social sciences. A more active interaction with fields such as medical anthropology, sociology, medical history and disability studies will give psychiatry a better understanding of and grip on how society shapes psychiatry and vice versa. In this respect, the current partial focus on the brain sciences keeps psychiatry somewhat ignorant and powerless.

A second reason that there should be more ‘intercollective communication’ between psychiatry and the human and social sciences follows more directly from this study. As Chapter 6 argues, the gap between basic autism research and the everyday struggles of those diagnosed with autism seems to be widening. I have argued that current scientific perceptions of autism as a neurodevelopmental disorder drift away from the diversity of problems and experiences of those diagnosed with autism. In addition, the boundaries of autism are unlikely to be drawn by the brain sciences, while there are growing socio-cultural, economic and clinical concerns regarding the still growing ‘autism epidemic’. These worrying developments create opportunities for a more positive – instead of a merely critical – role for the human sciences. They can play a positive role in the development of new styles of psychiatric thought that explicitly take personal, social, cultural and historical context into account. Of course, the brain sciences make reference to social and cultural factors, but they tend to reduce the environment – of cultural meanings, social economical situations, symbols, local practices, traditions, and so forth – to quantifiable inputs that are only interesting in the way they affect the brain (Rose and Abi-Rached, 2013). I suggest that, at least for the field of autism, new styles of thinking about mental ailments should not conceive of the milieu as merely external to an abstract disorder, but as constitutive of the impairments and disruptive behaviors of an individual. This does not imply a neglect of the brain or body, but a recognition of the embeddedness of the human being that constantly shapes and is being shaped by its surrounding world. From this perspective, which is certainly not at odds with certain current developments in the neurosciences, it is by taking the individual in his or her particular situation into account that mental ailments can exist.

Chapter 7 provided something of a first step in the development of such a new style for psychiatry. The work of Kurt Goldstein offers some ‘active connections’ in thinking about disease that can facilitate the development of new types of studies in which ‘the milieu’ becomes indispensable in defining health and disease and in thinking about recovery and intervention. Interactions with fields such as sociology, medical anthropology and medical history can be very productive as these fields have a lot to say about the ways in which particular environments – for example, schools, homes, big cities, and small towns – are inextricably linked to healthy and pathological conditions, instead of seeing environmental factors only as external etiological factors that affect

distinct pathophysiological processes. Such a new style should not lose sight of the vital – or biological – aspects of disturbed mental life that are, nevertheless, always mediated by the specific milieu the person experiences. Obviously, brain or body interventions can still play a significant role in relieving certain ailments. However, they cannot be evaluated separate from the particular circumstances in which they are used.

Furthermore, such a new style might have to let go of the very idea of autism and psychiatric disease entities in general. Paradoxically, the ‘unifying’ disease entity of autism keeps different scientific and academic disciplines rather disconnected. As I have argued in this dissertation, autism neuroscientists investigate autism’s neurobiological basis, while social studies of autism focus on topics regarding autistic cultures, neurodiversity, autistic subjectivity, and so on. Both these fields study autism, but in radically different ways – they develop independently. Psychiatry can take the lead in developing new concepts and ways of thinking about psychiatric disease that enable these different disciplines to work more closely together on shared problems. Goldstein’s person-centered understanding of disease, in which the distinction between ‘the social’ and ‘the biological’ is never absolute, is one option that deserves further scrutiny, particularly in the field of autism.

This alternative understanding of disease and style of psychiatric thought, of which I have only sketched a rudimentary form, will end psychiatry’s dominant focus on the biomedical and brain sciences, which psychiatry currently depends on for its medical identity and status. Instead, it will entail a broader focus that puts the troubles, impairments and adverse experiences, as well as the strengths and resiliencies of the entire human being at center stage. In the spirit of Canguilhem, this does not imply a neglect of ‘the biological,’ but a recognition of the inescapable normativity of life, biology and medicine. Undoubtedly, any new style of psychiatric thought will generate new types of problems and criticisms, but I expect that psychiatric research that manages to take the intricate relationship between human life and the surrounding milieu seriously has a better chance at translating into clinical practice.

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