Dirk Evers

Neurodiversity, Normality, and Theological Anthropology

In this paper I want to take a closer look at the concept of neurodiversity and to identify issues of normality and human identity linked to this concept. I will argue that the neurodiversity movement's emphasis on normality is ambiguous and sometimes counterproductive, but that nevertheless it raises important questions and promotes insights about mistaken concepts of human 'normality' and the relation between biology, brain, and personal identity, as well as about advocacy, authority, and self-determination. This concurs with philosophical reflections on the relation of nature and normativity: There is no objective human nature and no normal human behavior. All this calls for new ways of understanding Christian theological anthropology, which I sketch in the last part of the paper.

1. Neurodiversity and the Struggle for Identity of Autistic People

Neurodiversity is an approach to psychiatric deviation and disability that points to the diversity of human neurological conditions and sees them as normal variants within the range of what it means to be a human being. Neurodiversity began as a movement in the 1990s as a critical challenge to popular debates about psychiatric disability, especially with regard to autism. Another term used at the beginning of this movement, which as an international civil rights movement aimed at equal opportunities and rights for neurologically different people, was "neurological pluralism" (Blume 1997). Central was the claim for self-advocacy of autistic people and that different neurological conditions should not be assessed as diseases but on par with differences regarding gender, sexual orientation, or ethnicity[1]. Advocates of neurodiversity hope to counter stigmatization by promoting autism as a positive identity – a normal human variation rather than a pathology. In

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1 Autism has often been compared to homosexuality and thus to variants of sexual behavior (cf. Jaarsma and Welin 2012). Simon Baron-Cohen developed the "extreme male brain theory of autism," defending the thesis that autism represents an extreme male profile of neuronal cognitive structure, which lacks 'empathizing,' but is good in 'systematizing' (Baron-Cohen 2002).

this first paragraph, therefore, I shall deal with autism and its genetic causes, discuss briefly the search for an autistic brain, and then return to discuss the neurodiversity movement and some of its claims.

a) Autism

Autism as neurodevelopmental disorder was first described by Leo Kanner in 1943 as a childhood syndrome characterized by "autistic aloneness" and "insistence on sameness" (Happé, Ronald, and Plomin 2006, 1218). The term autism, however, is older. The Swiss psychiatrist Eugen Bleuler coined it in 1910 and with it referred to a withdrawal of patients suffering from schizophrenia into their inner world, with any interference from outside becoming an unbearable disturbance (cf. Parnas, Bovet, and Zahavi 2002). He took the Greek word *autós* (self) and transformed it into an abstract English noun. Simultaneously with Kanner, the Austrian pediatrician Hans Asperger described what later became known as Asperger Syndrome as 'Autistic Psychopathy,' which he diagnosed in four boys to whom he subscribed normal to high intelligence, while at the same time they appeared to be focused on themselves and unable to develop empathy and join in normal social interaction (Asperger 1944; cf. Matussek 1971). Asperger published in German and received little international attention until the 1990s.

After the 1940s followed a period of confused terminology (for example, "infantile schizophrenia," "early childhood psychosis," and "symbiotic psychosis"; Fombonne 2003, 503), and it was not until the late 1960s that systematic empirical investigations progressively helped to establish autism as a distinct syndrome. Since 2013, when the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-V) was published, the different variants of autism have been merged into one diagnosis of *Autism Spectrum Disorder* (ASD). ASD, as defined by the DSM-V, comprises highly heritable neurodevelopmental disorders characterized by "Persistent deficits in social communication and social interaction" and "Restricted, repetitive patterns of behavior, interests, or activities" (American Psychiatric Association 2013). Included are *autistic disorder*, *disintegrative disorder*, *pervasive developmental disorder-not otherwise specified* (PDD-NOS), and *Asperger syndrome*. Autism is also listed in the 10th edition of the *International Statistical Classification of Diseases and Related Health Problems* (ICD) from 2010 under number F84 "Pervasive developmental disorders." It is described as "A group of disorders characterized by qualitative abnormalities in reciprocal social interactions and in patterns of communication, and by a restricted, stereotyped, repetitive repertoire of interests and activities" (World Health Organization 2010, F84).

Autistic disorder is at the most severe end of the spectrum, while *Asperger syndrome* is a mild form of autism. People with Asperger syndrome often have average or high intelligence and show less or even no delay in cognitive development and language. However, they also have problems with certain social aspects of semantics and communication. On the whole, autistic conditions go along with (1) impairment of *social skills*, which may become manifest in the early months of a newborn that barely interacts with the parents and is rather fixated on certain kinds of objects, (2) impairment of *communication*, for many due to a retarded or even missing development of language, for others due to a lack of semantic competence regarding emotional subtleties of human communication, or because they develop their own kind of expressions (neologism), (3) the development of *repetitive and stereotypical forms of behavior*, which have a positive and reassuring effect on the person and must not be disturbed. Autism usually is a life-long condition so that many autistic persons need help and support throughout their lives. Although quite effective and individual therapies have been developed to deal with the symptoms, the condition as such will not go away.

Diagnostic manuals give names to certain syndromes of disorder and deviant behavior, but they do not provide explanations or even point out etiologies. Indeed, the causes of the different forms of the autistic spectrum are still unclear and highly disputed, but fortunately the picture has fundamentally changed since the 1940s. In those days autism was associated with emotionally frigid mothers (Jaarsma and Welin 2012, 22) and related to incompetent parenting. With research into the genetic, neurological, and environmental conditions of autism, the dominant role of genetics has been demonstrated. It is estimated from family and twin studies that up to 90 % of variance must be attributed to genetic factors (Jaarsma and Welin 2012, 22; cf. Fombonne 2003, 504). However, autism has to be regarded not as a single disease, but as a syndrome with multiple genetic and non-genetic causes which interact. In the case of autism, there is no Mendelian single gene which is responsible for it, but a variety of genetic factors – a recent study claims that as many as 350–400 different *loci* may be involved (Iossifov et al. 2012, 285). Most of these genetic factors are inherited by the child from the parents, while about 16 % are *de novo* mutations (286; see also O'Roak et al. 2012), which are the result of new mutations in the germ cells of one of the parents, usually the father. The risk of such mutations increases with the father's age at the time of conception. However, the genetic diversity leading to different forms of the autistic syndrome, as well as the presence of many 'autistic' genes in the ordinary population, suggest that there are certain

genetic predispositions toward developing autism with environmental factors actually triggering it[2].

This contradicts certain common misunderstandings linked to genetics and the notion of a gene. There are different notions of what genes are. A gene in the strict sense[3] is a portion of DNA sequence that provides the information, or the 'code,' for certain proteins as well as functional information that regulates the expression of the proteins involved. These proteins interact and work together so that the organism is able to develop certain traits. An updated definition of a gene is the following, formulated by members of the ENCODE project[4]: "A gene is a union of genomic sequences encoding a coherent set of potentially overlapping functional products" (Gerstein et al. 2007, 669). On the whole, the process, which leads from the genetic material to the development of certain traits of an individual, is a very complex interplay of many processes. Popular notions of genetic determinism are misleading. And contrary to the picture which Richard Dawkins once drew (Dawkins 1981), there is no point in conceptualizing a gene or the DNA as an independent entity or even agent. Whether and how the DNA is transcribed and translated depends on complex features of the enclosing cell and the intercellular as well as the wider environment of the whole organism. From the moment of conception, human developmental biology involves complex interactions between the nuclear DNA, and its cellular, organismic, and external environment.

b) Autism and Neuro-Science

Because of the complexity of the developmental processes involved, and because of the development of new neurological research tools like brain imaging, research into autism moved away from determining genetic factors and was fueled by the search for the 'autistic brain.' Studies made use of imaging technology such as MRT, PET, and CR scans and looked for the neurological underpinnings of the different forms of the autistic syndrome. One can see this development in the context of the *Decade of the Brain* from 1990–99, which then US president George Bush announced "to enhance public awareness of the benefits to be derived from brain research" (Bush 1990), and which led to an "extraordinary increase in the visibility of neuroscience" (Jones and Mendell 1999, 739). The Presidential proclamation of the *Decade of the Brain* claimed that the

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2   For an extensive discussion see Meek et al. 2013.
3   See Dupré 2016, 551–53 for a philosophical discussion of the concept of genes.
4   Cf. https://www.encodeproject.org/.

need for continued study of the brain is compelling: millions of Americans are affected each year by disorders of the brain ranging from neurogenetic diseases to degenerative disorders such as Alzheimer's, as well as stroke, schizophrenia, autism, and impairments of speech, language, and hearing (Bush 1990).

While the time of strict genetic determinism seems over, anything which can be identified in brain structures gains special attention, although again the relation between neurological structures and behavior is by no means a simple unilateral relation of cause and effect[5].

There are a few characteristics of the brains of autistic persons that are discussed as relevant. Children with ASD have larger overall brain volumes and differences in brain growth trajectories. Adults with ASD often show anatomical and functional abnormalities in the prefrontal cortex, basal ganglia, temporal lobe, and the limbic system, especially the volume and function of the amygdala, but the regulation of neurotransmitters might be a factor as well[6]. Genetic dispositions and environmental factors during early childhood are supposed to be the main causes which lead to those brain structures important for developing the different kinds of autism. These neuronal conditions include specific changes in the cortical and sub-cortical areas and under-connectivity between and within these areas, as well as certain features of the overall organization of the brain. However, *the* autistic brain has not been identified, and what we now call *Autism Spectrum Disorder* does not represent a common underlying neuronal pathology. The field is far from establishing a coherent narrative describing the cause of autism, by reference either to genetics or to the structure of brains, and it has been suggested "that it is time to give up on the search for a monolithic cause or explanation for the three core aspects of autism, at the genetic, neural and cognitive levels" (Happé, Ronald, and Plomin 2006, 1219). Much more research will be necessary, especially focusing on the interactions between genetics, environmental factors, and early childhood development. This also suggests that any kind of support or therapy must take account of a variety of symptoms and address them separately. However, the results of brain research triggered the claims of the neurodiversity movement, which we will deal with in the following section.

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5   We must refrain from discussing at length the philosophical issue of the relationship between brain and mind. It seems to be undisputed that there is some kind of causal or conditional relationship between brain and mind, but we have no reason to believe that this relationship is linear and that it is sufficient for explaining the wider spectrum of autistic symptoms. And it is also quite unclear how the mind retroacts on neuronal structures. The training of commemoration, for example, has an effect on certain structures in the brain responsible for memory.

6   For a recent review see Waldie and Saunders 2014.

c) Neurodiversity

The term 'neurodiversity' is generally credited to Judy Singer, a sociologist diagnosed with Asperger Syndrome:

> For me, the key significance of the 'Autistic Spectrum' lies in its call for and anticipation of a politics of Neurological Diversity, or what I want to call 'Neurodiversity.' The 'Neurologically Different' represent a new addition to the familiar political categories of class/gender/race and will augment the insights of the social model of disability (Singer 1999, 64).

As a category, neurodiversity is a catchy term, because it allows for different semantics linked to the notion of diversity, which is a positively connoted term in biology and ecology as well as in sociology and popular discourses on modern pluralist societies. It comes along as both a cultural concept and a biological metaphor. And the prefix 'neuro' refers to what is seen by many as the natural biological foundation of mental phenomena, or to put it according to a title of a popular book on brain research: it refers to the fact that we are our brains (Swaab 2014). Autism, then, is a natural variant of human neurological conditions and behavior and must not be understood as something to be cured, but as an individual specificity with different ways of communication, socializing, and sensory perception than the typical majority of people, that may not necessarily be problematic and that must be respected like differences of skin color or sexual orientation[7].

Neurodiversity promotes an understanding of neurobiological diversity like autism not as deviant forms of human cognitive faculties or as dysfunctional, but as normal variants, and argues for a new and more inclusive notion of mental conditions: All human beings are neurodiverse, while some

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7 Just as cognitive conditions cannot be separated from the individual person, sex and gender shape a person. Indeed, homosexuality is normal in the sense that a change in the traditionally hostile environment might be enough to ease the burden linked to homosexuals and to make self-advocacy possible. This is different with other phenomena like transsexuality, which as a form of gender incongruence is registered in the ICD close to autism. Here medical assistance is often asked for, from hormone therapy to sex change surgery. The change of a hostile, negative environment is important, because in similarity with homosexuals many of the problems for transsexuals may be due to social conditions. But this is not enough. For a nuanced debate of transsexuality and its biological, neuronal, psychological, juridical, philosophical, and theological implications see Schreiber 2016. And while for so called high-functioning autistic persons a change in social conditions and a certain degree of technical help, including new forms of communication made possible by the internet, might be enough, more severely impaired autistic persons require more support, more medical aid and therapy, including pharmaceuticals, and more social care, and their self-determination may remain limited.

are not neurotypical or 'normal' in a statistical sense. The term neurotypical was coined by Tony Attwood to denote those people who do not have autism (Attwood 1998; cf. Cashin 2006). Telling is a famous quotation by the autistic advocate Jim Sinclair from 1993, which can still be found on the webpage of *Autism Network International*:

Non-autistic people see autism as a great tragedy, and parents experience continuing disappointment and grief at all stages of the child's and family's life cycle. But this grief does not stem from the child's autism in itself. It is grief over the loss of the normal child the parents had hoped and expected to have … There's no normal child hidden behind the autism. Autism is a way of being. It is pervasive; it colors every experience, every sensation, perception, thought, emotion, and encounter, every aspect of existence. It is not possible to separate the autism from the person – and if it were possible, the person you'd have left would not be the same person you started with. This is important, so take a moment to consider it: Autism is a way of being. It is not possible to separate the person from the autism (Sinclair 2017).

What makes many disorders of the autistic spectrum special is that the person concerned cannot be separated from the neurological condition. There is no 'normal' person trapped in autism. Thus, the neurodiversity movement speaks of 'autistic persons' or 'autists' rather than 'persons with autism.' In the broadest sense, the concept of neurodiversity sees the whole spectrum of neurological conditions as 'normal' human differences which should be tolerated, respected, and treated on par with other human differences. The advocates of the movement, in one way or other, suggest that people with different neurological conditions are just different, not handicapped or dysfunctional, and that the problems and challenges they are facing are due to social and cultural conditions and impediments, but not inherent to autism as such. Variations in brain development and function should not be considered defects, but should be appreciated and accepted as natural and of the same value as any other form of physical or biological variation of human beings.

d) Objections against Unconditional Claims of Neurodiversity

Neurodiversity itself is not uncontested. Even among activists for autistic persons there is no complete consensus on the validity of the concept of neurodiversity. The psychological strain linked to an autistic condition can be so heavy that autistic persons themselves wish for treatment and would want the burden of suffering to be relieved. One also has to take into account the burden of parents and families of autistic children, who sometimes face difficulties in constructively relating to their children or siblings. Organizations like *Autism Speaks* and *Talk About Curing Autism* actively promote

research and medical treatment for autism[8]. Some activists of the neurodiversity movement have, on the other hand, harshly criticized demands for research and therapy for autism and have even equated a cure with genocide and see it as a hindrance to developing an autistic culture (see Hayasaki 2015). Behavioral therapies are seen as an imposed training of behavior which goes along with a severe impairment of the child's sense of self, comfort, safety, capacity for self-love, etc. There is, indeed, no cure for autism, but it is difficult to deny that there may be severe challenges linked to an autistic syndrome, and that these challenges cannot be ascribed to society alone, but have to do with aspects of the condition itself.

Moreover, references to genetic and neuronal causes of autism meant to prove neurodiverse conditions as 'natural' variants, suffer from an implicit inconsistency. A strong commitment to causal genetic and/or neuronal explanations as the source of autism may foster the acceptance of autism as a 'natural' variant people simply have to live with and society should not discriminate against. But it also implies that other causes leading to the same effect of autism might turn the same phenomenon into something pathological. John Elder Robison, one of the first proponents of neurodiversity, explicitly made this argument with regard to chemical poisoning, which was discussed as a possible cause of autism. He claims:

> Autism that's a result of chemical poisoning is a very different thing from the condition I grew up with. … Being born different is one thing; crippling ourselves through preventable injury or ingestion of chemicals is something else entirely. No one wants to accept that (Robison 2013).

One tends to agree with Robison on this point, but it is not easy to say exactly why. If autism is part of a personality, it is not obvious why the secondary causes which bring about this condition should matter. Is it a presupposed qualitative distinction between natural and human-made artificial causes which is responsible for this difference? Is it because you cannot do something against causes of the first type, but can avoid those of the second? Is it because natural causes are contingent and cannot be anticipated, while those of the second type are by-products of human agency? Or is it because chemicals are technical, while other environmental influences are natural? How do we argue against releasing chemicals that might change brain structures when, at the same time, we plead for the acceptance of all varieties of neuronal conditions?

If we relate the spectrum of causes to the spectrum of effects which autism can have on different lives, from small and only occasionally impeding

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8   Cf. http://www.autismspeaks.org/ and https://www.tacanow.org/.

eccentricities to fundamental conditions where all aspects of life are affected and permanent assistance is needed, then we are neither able to identify two obvious and sharply demarcated categories of 'natural autism' and 'incidental autism,' nor are we in a position to say that each and every neuronal condition has to be valued unconditionally, because that may promote neuro-fatalism and underestimate the extent to which human beings form their own identity by struggling with it and work on the physical limits of their own condition. And that not only applies to autistic persons, but to every human being.

Some, like Dana Baker, have therefore argued in favor of keeping the difference between *neurodiversity* and *neurological disabilities*, and this seems to be a valid move. Both terms refer to the same medical conditions, but address different issues with regard to the public sector:

> Neurodiversity describes features of neurological difference associated with individual or community identity that is a more or less elective choice of those experiencing neurological difference. Neurological disability refers to impairment of socially determined major life functions caused by observable, diagnosable difference in an individual's brain (Baker 2006, 15).

Neurodiversity can be understood as the claim of rights for autistic persons like equal opportunities (schooling) and social support, as well as the refusal of stereotypes of autistic persons (like being non-empathic or lacking self-awareness and just being tragically locked into themselves) by developing counter-narratives and pointing to the potentials and abilities of persons experiencing neurological differences rather than pointing to their social shortcomings. In short, neurodiversity claims recognition and acceptance for autistic persons. *Neurological disabilities*, on the other hand, point to the fact that autistic persons experiencing severe forms of ASD need help and feel the burden of reduced communicative skills.

Given that autism can be an objective burden to human lives, and given that there may be human-made causes for autism, which should better be avoided, nobody should *construct* autism as uniformly non-pathological, which is an act of domination itself and in danger of paternalism. On the other hand, nobody is in a position to draw a clear boundary between autism that is non-pathological and autism that is pathological. The individual must have priority, and we should avoid as many social, economic, and cultural conditions as possible which might put unnecessary and detrimental burden on autistic human lives. With autism as with other cases the language of disease has the power to be simultaneously both stigmatizing and liberating. An account of autistic conditions as diseases can liberate from feelings of guilt or blame and make it easier for the people concerned to ask for help

and treatment, and to stand by the adverse effects which they are not fully capable of controlling. On the other hand, it can also increase social stigmatization and lead to the application of discriminatory categories.

e) Neurodiversity and "Normality": Three Issues

The neurodiversity movement addresses serious problems, and points to the often neglected or even denied fact that normality and functionality are always defined against standards which are by no means self-evident. Three issues seem to be of particular importance.

1) The neurodiversity movement points to the fact that standards of normality and functionality are far too often not in accordance with human dignity and self-fulfillment, but serve political, ideological, religious, or economic goals. What is called 'mental illness' can vary from culture, time, and place (Hacking 1999, 100–24), and what today and in the West is labeled as a psychological condition, might be seen and valued quite differently in other parts of the world and at other times. What is non-functional is so only in relation to a given historic social culture and context, but within the horizon of the respective individual and her first-person-perspective it may as well be an integral part of how one sees the world, and this way of seeing things and leading a life according to those individual conditions may indeed not only be a personally valid way of life, but may contribute to the ways of life which the majority of people lead.

2) The neurodiversity movement also points to trends of pathologization of socially challenging conditions. It is easier to deal with phenomena which carry a name and can be classified as objective categories in the real world than to allow for blurred and open categories and narratives. These phenomena can then be treated according to standard procedures, and failures of diagnosis and treatment can objectively be identified and legally controlled. Psychometric measuring, academic nosology, and medical treatment can become a function of societal, political, and economic trends towards a functional management of human lives.

3) The neurodiversity movement also points to the issue of advocacy. The question is: Who speaks on behalf of whom? In the case of autistic people this includes the right to make decisions on their own behalf, even when their condition might call their competence into question. It includes the right to make mistakes. On the other hand, it may be part of the respect for autistics to challenge and encourage them to develop. Acceptance as such may as well impair self-respect and self-fulfillment, when people lose self-confidence or do not develop it in meeting challenges they are confronted

with. In any case, a delicate balance between support, challenge, encouragement, and unconditional acceptance must be maintained, including sometimes opposite interests that have to be mediated – interests related to inclusion, and interests related to identity and self-advocacy.

With this the neurodiversity movement addresses an issue which is at the core of modernity: the dichotomy between naturalistic, scientific views of our biological, neurological, and mainly functional nature, and our mindset of an inner "buffered self" (Taylor 2007) capable of self-determination and seen as the decisive source of authenticity. It is part of the "malaise of modernity" (Taylor 2003) that it has become extremely difficult to connect functional, scientific views of nature with our inner world of self-experience and *vice versa*. In modernity, the question of what is natural and what is normal is often controversially debated. Most present-day physicians take autism to be at bottom a genetically determined disorder with biochemical and neurological consequences. Critics from the neurodiversity movements challenge this view and claim that in important ways autism has been socially constructed and that this condition is a constructed category imposed on the natural variation of genetics and biochemical and neurological conditions. This leads us to the question of how, in the case of human beings, the notions of nature and normality relate to one another.

2. Nature and Normality: Philosophical Considerations

a) The Normative Implications of the Concept of Nature

The normative function of the concept of nature is intimately linked to the history of the term, about which David Hume had remarked "that there is none more ambiguous and equivocal" (Hume 1992, 249)[9]. Etymologically, the root of the term 'natural' goes back to the Latin word *natura*, which originally referred to those properties which living beings have not acquired, but which they possess by birth (*natus* = born). Aristotle in his Physics distinguished between those entities which exist by nature and those which exist by other causes (Aristotle [1936] 1956, Physics, II 192b). Under the category of natural things, he subsumes all animals, all plants, and the natural elements earth, fire, air, and water, while beds and dresses are technical things made by human production. The difference here is that of natural vs. artificial. Insofar as natural beings are not produced artificially but develop naturally, they apparently have an inherent principle of being. Thus, the

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9   For the following cf. Evers 2011.

term *natura* adopted the meaning of essence or substance, and *natura* came to mean that set of indispensable properties which qualifies an entity as an exemplar of a natural kind, or as Thomas Aquinas stated: "It is [its] 'nature' by which something is called a natural thing"[10].

This explains the ambiguity of the term natural. It refers to what is common or typical within a certain range of variation of a specific group and measures what is natural by relating it to the majority or to the average of that group. At the same time, it may denote the healthy, unspoiled or fully developed state of something, which goes along with a normative approach. In its different aspects, 'nature' is not just descriptive, but usually carries normative implications. Consequently, its semantics is shaped by contrasting concepts like natural vs. artificial, nature vs. culture, natural vs. supernatural, and the like. This is of special importance in the case of human beings, because humans are "self-interpreting animals" (Taylor 1985) and have to relate to what might be natural for them or not. Humans can deliberately deviate from natural urges to the extent of fasting or sexual abstinence. They use their bodies also as means of expressing themselves, and they create the world they live in by language, culture, and technology. It is natural for humans to transcend and transform nature, and they can even ask for what might lie beyond nature. Thus the distinction between cultural norm and nature gets blurred, and the morally rejected can be denounced as unnatural.

b) Natural and Normal

The idea that in the case of human beings there are normal and abnormal ways of behavior is a very familiar one. Abnormal behavior is considered to be a deviance from what is regular, familiar, and appropriate. While normal behavior is usually seen as rooted in the nature of human beings, abnormality is understood as having its cause in certain defects of that nature and as resulting in unpredictable, unstable, and inappropriate behavior. And since nature is understood as the norm for behavior, abnormality is considered to be something regrettable, unfortunate, and even, in those cases where we presuppose an element of freedom and responsibility for that behavior, punishable.

Here the concepts of nature and norm meet. Normality as a concept relates individuals to a paradigm for the kind, the concept of the normal

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10 "'Natura' est secundum quam res aliqua dicitur res naturalis" (Aquinas 2000, SCG IV, c. 35).

member of a natural kind. Thus, 'normal' is not a simple property, but a binary relation or a correspondence between two instances, the properties of the respective individual and the presupposed norm: Something or someone is normal only in relation to a norm, and this norm can refer to the natural properties of a specific group. It makes no sense to ask whether something is normal or abnormal without specifying what kind we are referring to, what is understood as normal for this kind and how standards of normality are justified. So, for instance, it is normal for men to develop bald heads when they grow older but (perhaps) abnormal for women. That does not imply that all men develop bald heads or that no woman does. However, it makes no sense to say that this is either normal or abnormal for people in general, since it is linked to the gender divide. We must first distinguish specific kinds, before we can ask what is normal for them: "Taxonomy must always precede judgments of normality and deviance" (Dupré 1998, 224). And we have to justify what we consider to be a relevant standard of normality. In the case of the baldness of men it may be a mixture of the frequency of occurrence and the harmlessness of the feature. In contrast, we wouldn't consider cancer to be normal. Although it is not rare, especially among older people, it is harmful and threatens to destroy the organism.

While in pre-modern philosophy the norm of a kind was considered to be the essence of a kind, predetermined by nature or the creator and regulating the life-form of that kind, modern philosophy, if it believes in natural kinds at all, usually claims that natural kinds have to be discovered by empirical methods. The Human Genome project, at least in its public perception, tries to develop a full account of the genetic foundation of human properties and thus something like a genetic map of functional human nature. Whether this account will licence a concept of normality will depend on which and how many properties of humans are determined by the genome and if there is determination at all. At least when it comes to human behaviour, genetic research has clearly shown that there is no genetic 'explanation' which causally traces human behaviour back to genetic encoding. Genes regulate the production of proteins in cells, and it needs a very complex and non-linear interplay of dynamic factors within a cell, between cells within a body, and between a body and its environment for an individual to acquire nervous, muscular, and emotional traits, regulatory circuits and appropriate behavior. Human traits and behavior are a result of give and take with the environment and the physical, emotional, and cultural experiences an individual has. However, even if there is no reason to assume biological determination for a certain behavior, this behavior may not generally be experienced as a free choice.

In an evolutionary perspective, genetics and functional biology justify a basic sense in which it may be useful to talk about physically non-functional conditions and thus in a sense about normal and abnormal conditions like hearing and deafness. There is in some cases an obvious way of normative thinking with regard to human flourishing: our ideals of good health and of avoiding suffering. That is why we intervene medically when some conditions threaten a person's normal functions of, for example, eyesight, walking, speaking, and other common physiological capacities. However, it is important not to overextend such judgements of normality beyond the physiological realm. And it is again 'normal' to have some defects, because 'nobody is perfect,' and when we grow old, some capabilities 'naturally' get lost.

c) There Is no Objective Human Nature and no Normal Human Behavior

With regard to human behavior, one must be aware that it is not physiological functioning which provides standards of normality and calls for medical intervention, but psychological condition. The absence of certain capabilities of bipedal locomotion or audible speech is a significant disadvantage to those concerned, and medical intervention seems appropriate, but with regard to human psychological functionality things are not quite as obvious. Again, we first have to do taxonomy to make judgements of normality and deviance. We have to identify certain behavioral patterns and compare them with the normally 'functional' majority. But it is obvious that in the case of human behavior it is difficult, and actually a mistake, to talk about psychological capacities and abnormalities in ways abstracted from the social, cultural, and even technological context. Naming and taxonomy, as Foucault has shown in his studies on criminals, mental illness, and homosexuality, are political strategies revealing the intimate relationship between knowledge and power, and are pursued by professional bodies for purposes of social control (Foucault 1990, part II). As an example, homosexuals as a taxonomic group are an invention of 19th century medicine and not a given natural kind.

In recent years, however, the reference to cognitive science and what it is able to identify as universal, trans-cultural behavioral patterns implies that it is the brain which eventually explains human behavior. Evolution works via genetically encoded developmental patterns to produce structures in the brain, and thus it brings about human forms of behavior 'hard-wired' in human neuronal circuits. This view of cognitive science stands against what has been called the mainstream social constructivist model in the humanities and social sciences: The way we behave and think is a matter of social

conditioning and owes little or nothing to our biological nature, a position which proponents of cognitive science like Barkow, Cosmides, and Tooby in their foundational text of evolutionary psychology named "standard social science model" or SSSM (Barkow, Cosmides, and Tooby 1992, 23)[11].

However, the lesson from biology, genetics, and neuro-science is that there is no given human nature and no 'normal' human behavior. Empirically, the realization that genes and brains develop by interacting with their physical, social, and cultural environment and thus bring about a broad variety of forms of brain structures and behaviors, makes any reference to a given human nature, which does not change in historical times and across cultures, obsolete[12]. Not every variant of human behavior and human mind is possible. There are limits of biological and cognitive structures, and these limits shape the landscape of diversity among humans in our time on this planet. But they do not allow for the determination of a common human nature.

Furthermore, the distinction between what is naturally given, what is experienced in a first person perspective, and what is socially constructed is not given as such, because all these perspectives are irreducibly intertwined. Our scientific views of reality depend on method, means of investigation, theoretical models, and personal knowledge (Polanyi 2009). They are shaped by individual interests and competence as well as by society, language, and the community of science. That does not mean that there are no such things as, for example, neuronal conditions not of our own invention. But this thesis refers to the fact that we must take into account "the ways in which we endlessly renegotiate – and are forced to renegotiate – our notion of reality as our language and our life develops" (Putnam 1994, 452). Our personal views of reality bring together our quest for meaning with questions of being, and society is the network of language, culture, institutions, and power structures in which these quests take place. In this complex and multifaceted framework, references to nature, as well as references to the contingency of cultural patterns, are inextricably intertwined with normative questions. That is why discourses on the relation between nature and nurture and their normative consequences are so frustratingly persistent and unwilling to go away: They cannot be settled once and for all by generally accepted distinctions between facts and values, because these distinctions can and must be endlessly renegotiated.

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11 Barkow, Cosmides, and Tooby are seconded by Pinker 2002, but have also provoked much criticism. For a theological assessment of this debate see Stenmark 2009.
12 For a more extensive argument see Dupré 2003.

This may seem a challenge to religious views of human beings and theologically reflected anthropologies, since they seem to insist on normative and morally significant views of nature and normality. However, I suggest that, on the contrary, this view rather liberates theological anthropology to understand human beings in all their diversity, including their neurodiversity, as the image of God. This view might also help to value autistic people as contributing to our understanding of what it means to be human.

3. Theological Anthropology

In the following I want to reflect on fundamental perspectives of Christian religious anthropology which take the interrelated and developmental character of human existence into appropriate account. It will turn out that a realistic acceptance of the complexity of the interacting factors in human psychology leads to a complex picture of the forming of human identity, which (1a) is far from promoting a Cartesian 'spiritual machine'-like model of human nature, but intends to give significance to biology, the body, and the brain[13]; which (1b) is far from falling into the pitfalls of anti-realist social constructivism, although everything which human beings are is shaped by culture and language; and which (2) argues for a religious view of human beings which takes into account that 'to be created in the image of God' implies a dynamic view of human existence and identity, based on the fundamental indeterminacy of human nature, oriented towards mutual respect, and understanding human existence not as a script, but a calling.

a) The Openness of Human Nature

As I have tried to show, human nature, if this term refers to anything at all, cannot be separated from the interaction of developing human individuals with society and culture. And since cultures are always in flux and show real diversity, a profound skepticism about the possibility of a universal descriptive concept of human nature and normality is appropriate. Something can be seen as normal only relative to the particular culture in which it occurs. But modern cultures have become very diverse, spawning an ever-widening variety of life-styles and identities with blurred boundaries between different options, so that any descriptive taxonomy becomes contingent and has

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13 Cf. Kelsey 2002 and the extensive study Kelsey 2009, in which David Kelsey contrasts the Cartesian 'spiritual machines' paradigm with the notion of human beings as 'personal bodies.'

to work with more or less arbitrary characteristics and categories. Descriptive normality is reduced to statistical frequency and extends mainly to the physiological. All other notions of normality are normative, indeed, and should not be disguised as descriptive data. Historic contingencies, cultural relativism, and different levels of scientific perspectives shape our views on human nature. That is why no definition of who we are can possibly answer our quest for understanding ourselves once and for all, but leads to further questions like: How should we be? Why are we asking that? And who is interested in our answers, and why? And since our means of describing the natural world have become pluralist and comprise a whole set of perspectives like genetic, biochemical, behaviorist, cultural, cognitive, and others, there is a plurality of regards which cannot be put together to one comprehensive view of the significance of human existence. There are many perspectives on human beings, which cannot be exhausted and which cannot finally and conclusively define a given human nature.

This view implies that human beings are what they are, and that any scientific assignment of general properties must not be taken for a normative statement of what human beings *should* be or *really* are. And if there is no fixed human nature, then there can be no defect of human nature, because there can be no mismatch between what human beings actually are and what they are supposed to be. There can be functional defects with regard to certain functions which human beings in their majority have, like deafness, and there can be deformities such as cleft lips and palates or diseases like metabolic disorders or cancer, which threaten and impair bodily functions. But on the whole, with reference to human beings as such, there is no failure of or deviation from human nature as a standard, but only different variants, albeit damaging or even lethal variants, which pose different challenges for leading a human life.

That all points to the fact that in modernity the understanding of what is human and what are relevant and valuable modes of human existence is immensely expanded and "an ever-widening variety of moral/spiritual options" (Taylor 2007, 299) is accepted. It gives priority to self-advocacy and is strengthened by the functionality of modern secular and pluralist societies, which refrain from normative claims regarding life-styles and provide technological, medical, and social help for people's life choices. On the other hand, one must not downplay the restrictions and pressures towards certain standards of bodily appearance and behavior at work in modern pluralist societies. Real, assumed, or fictional expectations of others, the pressure of having to be different, fashions and counter-fashions, social media as places of self-expression and deception, dependence on socio-economic

good conduct and much more contribute to the fear of many that the promises of endless opportunities may also promote hidden forces towards new, subtle forms of heteronomy. In this complex developments fundamental binary categories, like healthy vs. ill or male vs. female, may get blurred, but are not given up completely. They still serve as references of individual, social, and juridical decisions, but not as given norms of naturalness. As a consequence, we have to discuss again and again the flexibility and fuzziness of the respective phenomena and find ways to deals with incongruences of different kinds.

With the challenges of modern anthropology, we begin to understand in new ways how human existence is not simply given, but is a calling: We don't have a personal identity, but we develop it within the rich possibilities and sometimes painful constraints in which we lead our lives. That has consequences for Christian theological anthropology[14]. A valid Christian theological anthropology is not in a position to overcome the ambiguities of modern anthropological discourses by finally saying what human beings *really* are. On the contrary, it must always be aware of a fundamental reservation regarding conclusive definitions of nature or normality – whether this is with reference to biblical traditions or natural law. Rather it must unfold the insight of God's ongoing presence as creator as a calling to develop human ways of individual and communal life which reflect the short-comings and constraints as well as the chances and opportunities of human existence in the light of faith. Theological anthropology, which takes scientific accounts seriously and which refers to the actual plurality and complexity of human existence, is not a theoretical or speculative discipline or the continuation of explanatory science with reference to revelation, but a practical endeavor. It seeks to elucidate the complex reality of human existence and to develop guidelines for a life-long orientation of faith. It does not define human nature, but tries to clarify, unfold, and further the orientation of faith according to the love of God as present in Jesus Christ – a perspective that is supposed to shape and inform Christian ways of life and practice. It does not, in the first place, state *what* we have to think about natural or normal human behavior, but it seeks to inspire and inform the ways *how* we think

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14 I understand theology as a form of *fides quaerens intellectum*, the ongoing endeavor to reflect Christian ideas, beliefs, and forms of conduct of life by relating them to God's salvific activity as revealed in Jesus Christ and as communicated by scriptural, creedal, ecclesial, and doctrinal traditions, and by confronting them with present developments of knowledge and cultural formations. The aim of Christian theology is to elucidate, understand, and shape the significance of Christian faith for individuals and communities today. I restrict my considerations to Christian theology, because this is my field of expertise and my own tradition.

about ourselves, and how we deal with our notions of naturalness, normality, health, and disease in responsible and respectful ways in the light of God's love and mercy.

b) The Shape of Christian Anthropology

For the central concept of Christian theological anthropology, that is the notion of the image of God, it means that this is not a descriptive term that functions in explanatory contexts, but one that serves as a guiding principle of how to relate to different contexts (medicine, society, law, science, education, etc.) without losing our sense of calling, as created beings, to reflect the love and mercy of the divine. I sketch its significance by highlighting four theo-anthropological principles.

1) *Negative Anthropology*: I suggest that we should understand the notion of the image of God not as a static definition of what it *really* or *ideally* means to be human, but as a version of negative anthropology. As in the case of God in traditional negative theology, an understanding of human beings as images of God expresses fundamental reservations against any closing definition of human nature. It locates human beings in the realm of divine calling to lead their lives in the reflection of divine presence, but it does not positively determine what it means to be human. Thus human beings as created in the image of God participate in the indefiniteness of God. Their identity is not related to a fixed norm, but rests on a lifelong and ever-new relationship to the ground of being. Negation (*apophasis*) opens a space of not knowing, of not being in a position for final judgement, of not having arrived at a final destination. It allows us to tread a path where diversity, tensions, and the quest for identity don't have to be resolved once and for all. Thus it is one task for theological anthropology to argue for the futility of giving conclusive explanations with regard to human beings. That does not imply, however, that human existence is something impaired or inconclusive, but confirms that it is not an exhaustible object of theoretical thinking and that any total theory of human existence is logically, in principle, and factually impossible.

All human beings participate in the image of God regardless of their physiological conditions, their gender, sexual orientation, or age. However, no distinct and finite set of properties describes this image. It is founded in and always related to the ground of existence itself. The relevant biblical reference for the concept of the image of God, Gen 1:27, states that human beings were created as the image of God, and that they were created male and female. The gender binary, however, is nothing distinct to human

beings, but a feature which human beings share with the majority of other living beings on this planet. Thus it cannot as such indicate the specificity of human beings. It might point to the fact that not any single individual is a complete image of the divine, but that human beings in their diversity and their mutual relationships represent their creator. Thus it rather refers to formal and relational features of human existence than to certain specific properties. Human beings are always different, and in all their differences they are dependent on each other as well as related to their creator. And in all this they are entitled to be treated with the same reservations which apply to God: "You shall not make for yourself a carved image, or any likeness of anything" (Ex 20:4).

2) *No perfection*: This implies that being created is not the same as being designed and produced. Existence is a calling and not a given property, and it is a calling which binds human beings together. In no ways is God's creation perfect in the sense that it matches with the ideal of a given master plan. Although traditional notions of a law of nature tried to establish a normative understanding of creation as such, this notion is not found in the biblical traditions and it is under immense pressure in an evolutionary framework. Even Cardinal Ratzinger, before he became Pope, mourned that the central "idea of moral natural law," the view that "nature itself is rational" and morally good, "is broken by the triumph of the theory of evolution" (Ratzinger 2005, 51).

Creation in the biblical perspective is good, even very good, but not perfect or completed right from the beginning. Therefore, there is a profound biblical realism with regard to the shadowy sides of creation and its imperfection, which are seen as factual and unavoidable conditions, but not as evil (Welker 1999). In the Christian, biblical perspective, there is no ideal of perfect goodness, no given norm of naturalness, no unchallenged notion of normality. Creation must always be defended against chaos, and it comprises construction as well as destruction. Nature is a complex process including the changing of light and darkness, wonders and horrors, gifts and challenges. Karl Barth has expressed this biblically inspired view of the concurrence of the bright and shadowy sides of creation in volume III of his Church Dogmatics:

It is true that in creation there is not only a Yes but also a No; not only a height but also an abyss; not only clarity but also obscurity; not only progress and continuation but also impediment and limitation; not only growth but also decay; not only opulence but also indigence; not only beauty but also ashes; not only beginning but also end; not only value but also worthlessness. It is true that in creaturely existence, and especially in the existence of man [sic], there are hours, days and years both bright and dark, success and failure, laughter and tears, youth and age, gain and loss, birth and sooner or later its

inevitable corollary, death. It is true that individual creatures and men [sic] experience these things in most unequal measure, their lots being assigned by a justice which is curious or very much concealed. Yet it is irrefutable that creation and creature are good even in the fact that all that is exists in this contrast and antithesis (Barth 1960, 296–97).

A Christian perspective of faith, hope, and love claims the prerogative of light against darkness, the refutation of futility, the possibilities of the positive hour, and the final victory of hope, but it does not ignore or suppress the challenges and obscurities of reality.

This implies that an unusual mental condition may be experienced as a burden, a challenge to oneself and to others, but it must not be seen as defect, failure, deformity, or, in a religious perspective, as deviance from the will of the creator, or even as guilt. With regard to neurodiversity and autistic people, it is important that in our individual lives, in our families, congregations, and communities, we succeed in making explicit that all human beings belong together, because we are all called to realize what it means to be an image of God. We all develop our identity in the making, we are all struggling with the limits and conditions of our lives, one way or another, and we are all dependent on our relations to others who support and challenge us without stepping in for us and thus respect us unconditionally. We have to develop ways in which people can live healthily even with painful and troublesome conditions. Any division of human beings into those who please God and those who don't is made impossible by the concept of human beings as the image of God.

3) *No static concept of the divine or the kingdom of God*: This teaches us to understand God not as supreme unmovable perfect being, but as a complex and integral triune process of creational power, redeeming participation, and transforming inspiration. God in the Christian sense is a triune God, understood as differences-in-community, and hence not as a supreme being perfectly loving, but as love itself. The Christian notion of God identifies differences and relational otherness within Godself as God's inner moving and movability by which God does not exist at the cost of others, but for their benefit; or, as Kierkegaard stated, "if he moves himself and is not moved by need, what moves him then but love" (Kierkegaard 1985, 24)! God's existence is beneficial existence, and in this sense human beings as creature are called to be the image of God by leading their lives as beneficial lives for others.

Only if we understand God's presence in creation in manifold ways (as invisible ground of being related to everything, but not as a being among others in space and time; as calling and inspiring creatures to transcend themselves; as redeeming love which participates in creation and interacts

with, heals, and saves finite creatures) can we overcome the pitfalls of static theistic anthropologies. Creation establishes the reality of a developing and relatively autonomous world and not, by its nature, the kingdom of God. God renounces all-pervasive power and re-enters creation only as spirit and love, and thus inspires individuals, communities, and the whole of creation towards ways of life which then reflect what Jesus called the kingdom of God[15]. It is within these dynamic that human existence finds its place, experiences joys and sorrows, the bright and shadowy sides of creation, and responds or refuses to respond to God's manifold presence. Since God is in Godself a community of mutual diversity, God is respectful towards alterity and diversity and calls us as God's images to respect differences and diversity and to carry their burden through love and to heal and overcome atrocities which go along with them by mercy, even to the extent of love of enemies (Mt 5:44; Lk 6:27; cf. Evers 2015). And this is what the biblical traditions call peace (*shalom*) as reconciled ways of living together and working towards that degree of fullness which can be reached within the limits of our finite existence.

4) *Called to live in peace (shalom)*: In Jesus' beatitudes, according to Matthew's version of the Sermon on the Mount, we are called to be peacemakers (Mt 5:9). If we want to establish peaceful ways of living by reflecting God's love as images of God, we have to respect others as being different so that they can develop what they might be called to be. That confronts us with the task of finding balanced, tactful ways of dealing with distance and nearness. We have to grant others a minimum of security so that they can go beyond themselves and develop their own way of living. Nobody can live in peace (*shalom*) without a minimum of security. But we should be careful not to take over the lives of others. Concern for others, as Martin Heidegger once put it, must not throw the other "out of position" by dominating her and by making her dependent (Heidegger 1996, 110). Caretaking and concern must aim at empowering the other to take care of her own existence as much as possible. Respect has to go together with indulgence and challenge, sometimes even provocation or setting up limits. To care for other people is different from taking care of things. We have to develop trust in others by being trustworthy ourselves. Nobody can live in peace (*shalom*) if she cannot trust others. And we should be careful not to make trust dependent on acceptable conduct. However, unconditional trust is at the edge of turning into indifference, if it is not balanced with distance and self-advocacy of the

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15 Cf. Simone Weil's remark that the "act of Creation is not an act of power. It is an abdication. Through this act a kingdom was established other than the kingdom of God. … God, having renounced being its king, can enter it only as a beggar" (Weil 1987, 3).

other. Again, it is the balanced and competent transition between distance and nearness which is decisive. We must relate to others not as means for our goals, but as important and significant in what they actually are. Nobody can live in peace (*shalom*) if she is reduced to bare material, which is used, exploited, or put aside by others. We have to learn time and again to control our ways of controlling by deliberate withdrawal and by undermining allegedly unavoidable power-structures. Other human beings in their otherness, their dependence, and even in their burden call for the best in human beings, because they appeal to the image of God as the foundation of human self-respect and challenge us to realize it more fully. And thus, it is often the case that others by taking give more than they receive.

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Dirk Evers
Martin-Luther-University Halle-Wittenberg (Halle, D)
dirk.evers@theologie.uni-halle.de