

Sharing Autism Through Metaphors: (Dis)ability, Difference and Diversity in Temple Grandin's Portrayals of Autism

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ABSTRACT: Autistic people, professionals claim, lack the socio-emotional awareness to employ metaphors. Yet public, medical and neuroscientific discourse about autism is full of metaphors, including those used by autistic people themselves. Analyzing the autobiographic writings of Temple Grandin – livestock scientist and autism spokeswoman – I treat her metaphors as shared sociocultural resource negotiating the identities of autistic people within a larger context of changing American disability narratives and identity politics.¹

KEYWORDS: Autism, metaphor, disability narrative, identity politics, neurodiversity

There seems to be a curious contradiction in talking about autism and metaphor: “Working with a bright and verbal autistic child,” developmental psychologist Francesca Happé writes, “can be an eye-opening experience. One discovers that one is speaking in metaphors!” (275). People with autism, neurodevelopmental theories have long maintained, are incapable to understand or produce metaphors.² “Autists,” claims for example neuropsychiatrist Tatiana Glezerman, “are unable to understand metaphors, irony, lies, and humor” (21). The writings of autistic authors, however, are full of symbols, analogies and metaphorical language.³ This contradiction is usually

¹ My thanks to Daniel Todes and Stephen Casper for their thoughts, insights and suggestions.

² Recently, small-scale studies have suggested that autistic children can, to some extent, learn to “overcome” their “defect” in understanding metaphoric language. While these studies propose a more positive and dynamic understanding of autistic ability, they nevertheless operate under the same assumption of a primary, innate neurological defect and do not problematize the sociocultural dimensions and limitations of metaphors and communication. See e. g. Rundblad and Annaz; Persicke et al.; Melogno and Pinto.

³ Murray presents an excellent overview and analysis of self-presentations of autistic people.

resolved by dismissing such metaphoric expressions as accidental, unconscious or inherently autistic. Israeli neuroscientists Kasirer and Masal for example concede that people with autism spectrum disorders might possess “a unique verbal creativity” (1). They trace its source, however, to supposedly stereotypical autistic traits such as an unusual recollection of details and the ability “to focus intensely on a single topic” due to “weak central coherence,” i. e. the incapability to connect details and observations into a holistic picture (6). In this manner, the metaphoric expressions of autistic authors are portrayed as standing outside the realms of “normal” human interaction, a move that dismisses their linguistic creativity as part of a larger pathological condition. Such portrayals are highly stigmatizing. They deny autistic writers the ability for insight and social interaction. Rather than treating people with autism as a deficient “other,” I instead use the autobiographic writings of Temple Grandin to offer an analysis of such writings as an active negotiation of autistic identity through metaphors shared with a wider audience.

Recognizing metaphors, neuropsychiatrists believe, requires a ‘theory of mind’: the cognitive ability – supposedly natural for most people but lacking in those with autism – to comprehend and anticipate other people’s thoughts, emotions and intentions.⁴ Theory of mind, and the corresponding lack thereof – “mindblindness” – turns metaphors into a diagnostic tool to help ascertain cognitive functioning (Adachi T et al.). Conversely, philosophers have used autism as an instrument to learn more about

⁴ For major proponents see Frith and Frith; Baron-Cohen et al. For critiques of theory of mind see McGuire and Michalko; Dinishak and Akhtar; Cull; McGeer. For restrictions and bias experienced by autistic people see Yergau.

the nature of metaphorical thinking (Camp 157; Wearing 197). In doing so, they employ autistic people as a pathological model population whose deficiencies supposedly enrich our knowledge of neurological and social normalcy. Even the acknowledgement that autistic people have some metaphoric ability is often framed within the increasingly controversial, yet still highly attractive theory of mind framework. Autistic people's "more original and creative metaphors," Kasirer and Mashal speculate, might "relate to difficulty in theory of mind" (5, 6). They further assert that mindblindness "makes one focus on one's own thoughts, ignoring the addressee," potentially leading "to production of expressions that are less conventional" (6).

Philosophers and psychologists, however, have pointed out that "theory of mind" and "mindblindness" are metaphors in themselves, and carry negative connotations. It relies, Dinishak and Akthar show, on a one-sided definition of social interaction that locates the fault for failed communication solely on the side of the autistic person. Yet, they point out, misunderstandings and interpersonal disconnect can be attributed to mindblindness on both the autistic and the non-autistic side. Moreover, theories of mind and mindblindness contribute to perceiving the behavioral and linguistic patterns of autistic people as meaningless or pathological, rather than adaptive and social (110, 111). One might thus ask whether the prevalent paradigm of theory of mind, with its connotation of one-sided social incapability and isolation, does not obstruct our ability to perceive the language of autistic individuals as metaphoric contributions to larger sociocultural themes such as the pervasive trend to perceive our selfhood as

essentially neurological.

Thus, at the same time as neuropsychiatrists declare the incompatibility of autistic and metaphoric thought, we encounter an autism discourse dependent on metaphorical language (Broderick & Ne'eman). When psychologist Bruno Bettelheim described autistic children in the 1960s, he couched his theories in the symbolic language of psychology and psychotherapy. His notion of the autistic child as an 'empty fortress,' autism researcher Mitzi Waltz writes, coined the metaphors for the decades to come: notions of "the essential emptiness, otherness, or non-humanness" of autistic people gave rise to the "idea of a 'real' self that is hiding, missing, estranged, or asleep" (*Metaphors* 2). From the 1970s on, however, parent autobiographies and organizations added interpretations, voices and pictures that challenged Bettelheim's model. By the mid 1980s and early 1990s, people with autism themselves such as Temple Grandin or Donna Williams began to speak out about their experiences (Grandin; Williams). Their narratives have changed the way we perceive autism, offering counter-representations to the 'empty fortress' Bettelheim had depicted. These accounts have contributed to the recent popular fascination with autism that stems from the mystery of the seemingly incomprehensible autistic mind (McGuire and Michalko 163; Waltz, *Metaphors* 1). For some, autism itself has become a metaphor, "for the rise of an inhuman, materialistic modern culture" (Waltz, *Metaphors* 8).

Both American popular perception and dominant medical discourse still tend to define autism as a condition that precludes meaningful social behavior. By this definition,

autistic people are incapable of insight into their own behavior or their interaction with others. Autism activists and social scientists, particularly in the U.S., have resisted this portrayal as dehumanizing. By “rejecting the narrow confines of what constitutes human social functioning,” anthropologist Roy Grinker argues, we can see that autistic people are indeed social actors who “share the cultural values of the communities in which they live” (173; also Bagatell). Such positions are anchored in a long history of American minority and disability rights movements, in which demands for more diverse understandings of humanness and citizenship have been central (e.g. Patterson, Nielsen 157-200).

The autobiographic accounts of autistic people illustrate this point. In the last two decades, such publications have grown enormously in the US. Simultaneously, portrayals of autism – and disability in general – have changed from the traditional narrative of overcoming and normalization to a more self-confident claim of otherness as an integral and positive part of one’s identity (Murray; Foss). In this essay, I will focus on the writings of American animal scientist Temple Grandin, one of the most widely known spokespersons for autism. This focus is not a claim that her work is more typical or representative than that of others. Yet she has shaped and has been shaped by American discourse over autism as disability or valuable difference for longer than any other published autistic author. Following her writing over a period of thirty years makes visible changing definitions of autism and autistic people in American science and public alongside her personal development, thus countering the notion of the static autistic person outside of social spheres and apart from cultural influences.

To many, Grandin's work appeals as a fascinating insight into the innately different autistic mind, yet her writing actually draws its strengths from familiarity. Indeed, her influence stems from her talent to portray autism through everyday experiences and popularized scientific language. Her metaphors are socially and culturally interactive. They evolve and change, depending on the audience, her own role, age and status, and the restrictions that the predominant definitions of autism place on her. Using images and theories easily accessible to an American audience enables Grandin to express her work's overarching themes: Autism as a neurological rather than a psychological condition, and as difference and advantage rather than defect and disability. This shift, I argue, makes visible a larger development in talking about disability in America. Whereas during the first half of the 20th century, disability was understood as something innate and inscribed in the body, by mid-century professionals in the psycho-sciences began exploring its psychological effects and sequelae (e.g. Garrett). In some areas, this perspective enabled more sociocultural, relational and relativistic understandings of disability. In the early 1940s, for example, American Gestalt and social psychologists Fritz Heider and Grace More Heider described deaf people as a social and phenomenological minority, and concluded that the "frustrations and difficulties involved in deafness are largely those created by the adjustment between the majority that has more and the minority which has less" (Heider & Moore Heider 120; Schmidt). Similarly, eminent British psychoanalyst Dorothy Burlingham explained in 1961 that blind children were a "minority in a world" made for the sighted (121). In autism research, however, psychoanalytic perspectives were strongly dominated by a

discourse of blame, in which mothers, in particular, were made responsible for their child's condition. Parents, autistic individuals and autism activists have embraced a definition of autism as an innate neurological condition, thus rejecting such notions of fault and reclaiming agency over defining their identities. Unlike earlier innate and biologicistic models of disability, this is a model not based on normative bodies and minds, but on larger cultural themes of minority rights and (neuro-)diversity.

The metaphorical systems in three of Grandin's works – *Emergence: Labeled Autistic* (1986), *Thinking in Pictures* (1995), and *Animals in Translation: Using the Mysteries of Autism to Decode Animal Behavior* (2005) – make the development of these themes especially clear.⁵ Unlike with other, more recently published autistic authors, the almost thirty years span of her publications uniquely allows us to follow the development of her metaphors alongside changing perceptions of autism. Her 1986 *Emergence* is usually considered the “first book written by a recovered autistic individual.” “There is no other book like it – even remotely like it,” psychologist and autism expert Bernard Rimland commented in his foreword to a 1996 edition (1, 3). In the spirit of popular disability biography, *Emergence* presented Grandin as the rare and extraordinary example of the ‘recovered autist,’ somebody who had overcome her disabling condition to join the non-autistic world. *Emergence* served a double goal: By

⁵ Two of these works – *Emergence* and *Animals in Translation* – were coauthored, *Emergence* with young adult writer Margaret Scariano; *Animals in Translation* with psychologist Katherine Johnson. Their tone, style, and, not the least, their metaphors, however, are consistent with Grandin's extensive body of writing, interviews, talks and lectures. Osteen criticizes the still prevalent suspicion that any coherent narrative by an autistic author must be ghostwritten and inauthentic (26).

systematizing her perceptions into a neurobiological, ostensibly logical model of brain 'circuits' and 'wirings,' she emancipated herself from psychodynamic models. At the same time, these wide-spread technological and mechanistic metaphors made her experiences accessible to her audience, creating for them a communality of language, if not necessarily a similarity of mind and experience.

In her later work, Grandin replaced the theme of recovery and overcoming by a more ambivalent depiction of autism as an integral part of her identity. In the years following *Emergence*, her professional status and public image changed: After earning a PhD in animal science from the University of Illinois in 1989, she became professor of animal science at Colorado State University and a widely-respected livestock expert who had designed most North American animal handling facilities. Simultaneously, she became one of the most prominent public faces of autism in the US, during a period of diversifying definitions and growing public awareness. Thus, by the mid-1990s, when she published *Thinking in Pictures*, Grandin could draw upon her status and recognition as animal scientist and autism spokesperson. This change in public role corresponded with a shift in her metaphors. The notion of visual (rather than verbal) thinking became her symbolic vehicle for exploring the benefits and disadvantages of autism. In the following years, she moved further toward arguing for the advantages of autistic perception. Thus, her 2005 *Animals in Translation* promoted her theory of similarity between the autistic and the animal mind, touting both as superior to the non-autistic person.

Grandin's books and those of other autistic writers have elicited great interest from scientists, psychologists, parents of autistic children and a wider lay audience. The reception of these works, however, tends to fall within two camps, both in their own way self-affirmative of the very criteria they set out to prove: In one camp are those who try to diagnose the autistic elements in Grandin's writings. By doing so, they hope to further our understanding of autism in particular and human thinking in general. Cognitive psychologist Francisca Happé thus identifies traits of Grandin's writing such as an (asserted) tendency for literal understanding as possibly “an important feature of autistic communication” (213). In a similar vein, literary scholar and proponent of cognitive cultural studies Lisa Zunshine generalizes from Grandin's writing to human brain structure. In doing so, she understands Grandin's “library of videotapes, which she could play in her mind and inspect at any time”(273) – a description Grandin herself acknowledges as at least partly metaphorical – as evidence “that we do not just 'learn' how to communicate with people and read their emotions” but require an intact neurological structure to do so (273). Ironically, Zunshine translates Grandin's metaphors into her own of a “cognitive architecture” that is “damaged [...] in the case of autism” (273).

In the other camp are those who praise the very same features – e. g. the use of distinct metaphors and particular symbolism – as an expression of valuable autistic talent and difference. For literary scholar Julie Brown, for example, Grandin's writing exemplifies the increasingly popular portrayal of autism as a neurological difference rather than defect. Drawing from the tenets of the disability rights movement and the

ideal of a diverse American society, neurodiversity activists argue that it is social norms, not their neurological difference, that disable people on the autism spectrum.⁶ Consequently, Brown encourages authors of this marginalized minority to “claim their literary heritage not only for their own benefit but for the benefit of the neurotypical world as well,” just “as women minorities, and gays / lesbians” did before them (10). Yet in this discussion, both sides take autism as a fixed neurological entity. Marking certain traits, behaviors or writing styles as innately autistic, they 'other' the autistic author rather than paying attention to shared socio-cultural influences. I instead offer a reading that understands these works as part of a larger, shared discourse on mind, thought and humanness that allows writers such as Grandin to establish non-pathological identities, yet also restricts their expressions to neurobiological language.

I will now take a closer look at Grandin's three interconnected sets of metaphors – the mechanical brain, visual thinking and the animal mind – and analyze them as a means of understanding autism as a defect and disability, difference and advantage. In doing so, I neither claim an ultimate definition of autism nor superior insight into her mind. Rather, I use her work to show how shifting definitions of autism, social norms and selfhood affect the identities autistic people can or cannot claim within the larger context of American narratives of identity and minority, diversity and disability.

A Different Kind of Pathology: Autism as Neurological Oversensitivity

⁶ For a sketch of the history of the neurodiversity movement see Kras; Graby; for a position within the discourse on neurological and cognitive discourse see Fenton and Krahn; for its metaphorical dimension Broderick and Ne'eman.

One of the few things autism researchers now agree on is that autism is a neurodevelopmental condition. The ever-growing list of potential causes – genetic and environmental influences, immunodeficiency, endocrinological or brain differences – includes nearly all explanatory models of modern biomedicine without, so far, providing any clear answers.⁷ During Grandin's childhood in the 1950s, however, the scientific – and metaphorical – framework was predominantly psychosomatic and psychosocial (Nadesan 79, 94). Influential psychologist Bruno Bettelheim famously asserted that some kind of psychological trauma, such as a frigid mother's rejection, caused the child to retreat into itself – to become an 'empty fortress.' Waltz has pointed out the mythical element of this metaphor, reminiscent of Parsifal's search for the Holy Grail in the empty fortress. On the emotional level, this framework put the blame for autistic behavior on the child and his or her family, in particular the mother. The therapist on the other hand assumed the responsibility of “breaching the defenses of the autistic child to reveal his human self,” thus claiming for themselves the rewards of therapeutic success (2). Bettelheim's theories need to be understood within the larger psychologization of childhood and family dynamics in postwar America, when psychoanalysis became a popular and popularized tool. The mother-child relationship, in particular, was pathologized as mothers anxiously monitoring themselves and were keenly monitored by psychological experts for displaying the “right” kind and amount of mother love (Plant 90-110). This was particularly true when the child was disabled. Mother-blame, Waltz has shown, has been an integral part of professional models on

⁷ For an overview of current theories and research see e. g. Zimmermann.

the pathogenesis of autism (Waltz, *Mothers*).

Confronted with such assumptions by a long series of therapists, Grandin rejected them all as burdensome and belittling, and sought redemption in neuroscience: “Psychological theory in 1956 theorized that autism was caused by psychic injury. Modern knowledge in the neurosciences indicates that this is rubbish. Autism is caused by damage to the central nervous system. It is a physiological problem” (*Emergence* 49). This damage, she asserted, can be reinforced by lack of love and affection: “it’s possible,” Grandin writes in the language of neuropsychology, “that if a baby does not receive comforting touch, the feeling and kindness circuits in the brain shrivel up” (*Pictures* 86). Cognitive psychologist Francisca Happé has criticized this “biological bias” in Grandin’s work, and interpreted it as an intrinsic expression of Grandin’s autism. As an autistic person, Happé asserts, Grandin shows little interest in her supposed social deficits and “ignores or discounts the importance of our affective or emotional life.” Perhaps, Happé concludes, her example can “serve as a warning to us that these autistic writers may not be interested in, or capable of writing on those subjects about which we should like most to hear” (211). Happé’s dismissal assumes a shared neurotypical emotionality and in doing so excludes the autistic author from the ‘we’ of the emotionally aware.

Yet Grandin spends many pages exploring her emotions, their origins, and how, in her opinion, they differ from those of non-autistic persons. She describes her feelings of alienation and loneliness growing up, her dreams of a “magical machine that would

soothe me and make me less different” (*Emergence* 61) and the anxiety attacks that “distressed, destroyed, and defeated any gains I had made earlier” (*Emergence* 70), but also delves into learning to care for animals and humans. She describes these emotions as the effect of neurobiological processes, in mechanical and technological metaphors that are hardly unique to autistic people. Rather, she has adopted and modified the language of the neurologists and psychologists to whom she extensively refers. To understand and explain her experiences, Grandin began to study psychology and animal science, couching her needs in the language of neurobiology: She describes her autistic mind as an oversensitive machine in an unbalanced state of malfunction, constantly threatened by the distorted information that its sensory faculties provide. Autism is cast as a form of hyper-arousal, the biochemical dysfunction of an “overaroused sympathetic nervous system” in which hormonal imbalance causes debilitating anxiety attacks (*Pictures* 59). Moving away from psychosocial models, Grandin explains her actions and behavior in a way that give her a sense of control over her actions and emotions: “Taking the [anti-anxiety] medication is like adjusting the idle adjustment screw on an old-fashioned automobile engine.” Rejecting psychological explanations and the demeaning dependence on therapists, she has become a “[b]eliever in [b]iochemistry” (*Pictures* 112).

Understanding Grandin's self-portrayals merely as an expression of autistic preference for biological models overlooks how in her writing she has skillfully deployed changing popular motives in our understanding of mind, self and identity. By the 1980s, historian of science Stephen Casper has argued, the emerging field of neuroscience

had successfully popularized the notion of an essential neurochemical self (124). This neurological turn significantly changed definitions of autism.⁸ Other critics have understood Grandin's focus on biological models as a strategy. Rhetorician Dennis Lynch concedes that such an approach “might make a social-constructionist cringe” (13). To Grandin, however, it is instrumental. “Because of her situation,” Lynch comments, she “writes about the facticity of her body: she draws on its biology and apparent naturalness in order, in part, to counter a notion of psychology that she knows has painfully limited her” (19). For her, the debate over autism as a psychological defect or a neurobiological condition is a question of identity and autonomy. Psychosocial explanations are, of course, not inherently more stigmatizing than neurobiological models. It is our society and culture that continues to stigmatize psychosocial conditions as personal fault and failure. Neurobiology, on the other hand, with its apparently objective, depersonalized metaphors of machinery and computers (perhaps broken yet fixable), offers the autistic writer an attractive model for a less pathological (self-)perception.

Significantly, defining autism as a neurological condition can redistribute agency from the psychologist to the autistic person herself. What is 'wrong' is no longer a psychosocial problem of bad parenting or self-inflicted failure to conform to societal norms, but an innate neurological condition, an integral part of the self rather than something to be shed and left behind. Thus, fault no longer lies with the autistic person or their parents, but – in a liberating twist of neurologic determinism – within

⁸ For historical shifts in defining the cause and essence of autism see Verhoeff; Evans.

the internal structure of the brain. Science journalist Harvey Blume recounts another example of such liberating determinism as “[o]ne high-functioning autistic” describes “her farewell to psychotherapy as a crucial act of self-assertion.” With the 1986 *Emergence*, Grandin was one of the first autistic persons to use neurobiological language to assert a self-determined identity. Yet – typical of portrayals of autism in the 1980s and '90s – her early neurological model still depicted the condition as a deficit. Only the notion of autism as neurological difference or neurodiversity that emerged in the late 1990s, alongside a disability movement built on notions of diversity, allowed for a less pathological depiction. Using metaphors of visual thought, Grandin explored this potential of difference rather than disability in her 1995 *Thinking in Pictures*.

A Different Kind of Ability: *Thinking in Pictures*

“It wasn't until I went to college,” Grandin recalls, “that I realized some people are completely verbal and think only in words” (*Pictures* 27). She, on the other hand, “think[s] in pictures. [...] Words are like a second language to me” (*Pictures* 19). This realization of startling difference motivated her to explore and systematize her own narrative into a larger system. The model of visual thinking both clarified her sense of self and served to make her perceptions accessible to others. Her 1995 *Thinking in Pictures* captured this new development in imagining the autistic mind. Visual thinking, she maintains, is at the root of many autistic people's inability to generalize, and understand abstract concepts. In turn, she theorizes, apparently random pictures and

symbols can become a means to structure one's life and make language comprehensible. "Many people are totally baffled by autistic symbols but to an autistic person they may provide the only tangible reality or understanding of the world" (*Pictures* 37). One such symbol for Grandin was the door. As she was growing up, she recalls, "[p]ersonal relationships made absolutely no sense to me until I developed visual symbols of doors and windows" (*Pictures* 34). Getting along with people, she decided, "was like a sliding glass door. The door has to be approached slowly; it cannot be forced; otherwise, it will break" (*Pictures* 120). Julie Brown has identified the door as Grandin's overarching symbol for autism (216). Yet to Grandin, doors were only a temporary symbol which she later discarded. Her individual and idiosyncratic door symbolism could not accomplish the overarching goals of (autistic) autobiography: to help the author understand his or her own life, to help the (non-autistic) reader gain an understanding of what this (autistic) life feels like, and – a motive prevalent especially in Grandin's later work – to offer autistic readers a tool for self-understanding and self-help.

Only once she devised her system of visual, non-verbal thought, Grandin writes, she could understand – and move beyond – her idiosyncratic fascination with door symbols as just one expression of visual thinking. Her model of autism as visual thinking now could express the ambivalent zone between disability, difference and advantage. Rather than using intrinsically autistic imagery, as some critics claim, Grandin chose a widely popularized set of metaphors of information processing to facilitate understanding between her and her audiences. For example she describes

her thoughts and memories as if they were embedded in video recorders, computers and other devices of information processing. This technological imagery resonates with a long tradition of depicting the brain as a container in which memories are stored and retrieved as if they were things (Goschler). Over the three decades of her writing, the devices she uses to exemplify this process of storing and modifying information evolve with the technology. Initially, movies, pictures and videotapes predominate. “I translate both spoken and written words into full-color movies,” she wrote in 1996 still, “complete with sound, which run like a VCR tape in my head.” (*Pictures* 19) Yet soon, computers offered a much better model. In *Thinking in Pictures* she explains learning as processing a “new version of software for the computer” until her memory is “fully programmed” (*Pictures* 27, 29). Over time, as computers and their related systems become more complex, these are incorporated into her system of metaphors. By the 2000s, the internet, with its themes of exchange, connectedness and simultaneity, has become the dominant model. Now, Grandin likens the particularities of autistic thinking to the frustrations of a slow download – an experience with which most of her readers are only too familiar.

Similarly, she compares dealing with her surroundings to multi-tasking on a computer, further complicated by distracting “pop-up ad[s]” ” (*Animals* 92). Unlike the non-autistic person, (supposedly) capable of dealing with this multitude of information, Grandin writes, she “can work inside only one window at a time, and it takes me forever to switch to a different one” (*Animals* 253). Rather than explaining her experiences with complex theories of modern computer science – something that only

a small part of her readership could fully grasp – she anchors her metaphors to everyday experiences that make her thought processes palpable. Yet, she adds, such technologies are only a rough appropriation of the autistic mind. The available programs and gadgets lag behind her abilities: “I don't need a fancy graphics program that can produce three-dimensional design simulations. I can do it better and faster in my head,” she commented in 1996 (*Pictures* 21). Frustrated by the limits of mid-1990s visual software – nothing but “crude cartoons” – she resorts to science fiction for a more accurate explanation (21).

Computer and machine metaphors hold a special place both in autism discourse and in neuroscience. Generations of psychologists, linguists and computer scientists have used them to ponder human consciousness and artificial intelligence (Goschler 16). These metaphors represent a conceptual shift away from the psychosocial: Autism becomes a difference in the “wiring” of the brain. “It's the wiring, silly,” writes Harvey Blume (“Autism & The Internet”). Metaphors of information technology create both distance and admiration, placing the autistic person into a part-utopian, part-dystopian future in which minds and computers have melded in a realization of our dreams and fears of technologization. Portraying the autistic mind as computer-like turns it into an intermediate state, between human and artificial intelligence. Other autistic authors have since explored this ambivalence, wistfully contemplating the losses and advantages of supposedly being able to “relate better to a good machine than any kind of person” (Robison 151).

Grandin places herself within this discourse, negotiating her humanness, difference and talents as the advantages and disadvantages of visual thinking. Yet, playing with these popular themes, she also becomes the harbinger of a fantastic future. Rather than Bettelheim's 'empty fortress,' the autistic person has become someone who is more adept at understanding the technology upon which we all depend – a more extreme variation of the geek and nerd subcultures that now provide admired role models. Nadesan has argued that it is exactly this depiction “of autistic intelligence as at once alien and machine-like” that allows for the current stereotype of the autistic savant as puzzlingly different yet admirably gifted: “Autistic intelligence has become a site of condensation for the cultural fascination with, and fear of, self-regulating, cybernetic machines devoid of human emotion and sociality” (88).

The trope of the autistic mind as a web browsing entity within a larger network redefines the autistic person as socially-connected rather than isolated. No longer the dull, unresponsive “tape-recorder” as which Grandin was labelled by her school mates (*Animals* 18), nor the mere one-sided information storage of the VCR and CD-ROM, her mind now has become an interface of communication – the very thing the autistic mind supposedly is incapable of – that deals with various forms of input and output. Moreover, using the machine-metaphor to her advantage, she can claim a machine's unbiased objectivity for her thinking. “My mind readily accepts the new 'software',” she writes about her (self-perceived) unbiased attitude toward new information. While non-autistic people construct their world according to their social or emotional preconceptions, the autistic mind – supposedly unaffected by sociocultural constraints

and superior in its lack of bias – can perceive the world as it really is (*Pictures* 27). Tapping into contemporary fascination with computer technology, Grandin created a notion of autistic superiority that she would supplant with popularized evolutionary theories about neurological and emotional development.

A Different Kind of Emotion: Autism as a “Way Station” Between Animals and Humans

“Closeness to animals creates the desire to understand them,” ethologist Frans de Waal observed (40). In Grandin's case, this desire is complemented with – and complicated by – the need to understand her difference from fellow humans. This difference in turn leads to an assumed similarity with the animal other. In an anthropomorphic move, animals become the model organisms for theories of autism. As with her computer model, this confers upon the autistic mind superior perceptive abilities, yet also adds an emotional dimension that the computer metaphor lacks. She thus paradoxically re-humanizes autism by animalizing it. Claiming a neurobiology more similar to animals than humans, Grandin considers herself incapable of experiencing the “mixed”, “ambivalent” and “complex” emotions characteristic of humans and their relationships (*Animals* 88). More “like a calf gamboling about on a spring day,” she portrays herself with a range of simple feelings shared with the animals with which she works (*Pictures* 89). She contrasts this image of alluring simplicity with the dreary “emotional craziness” of non-autistic life, thus constructing a notion of autism as reminiscent of more innocent, carefree times (*Animals* 89).

Animal analogies such as metaphors of wildness, strangeness and feral behavior have long been common in autism discourse (Waltz 4). Usually they convey the startling otherness of the persons described, as the animal becomes a way of making sense of unconventional behavior. Aware of those stereotypes, Grandin hastens to point out that “we aren't *that* different from normal humans.” For her as an animal scientist, likening autistic people to animals is neither derogatory nor de-humanizing. To the contrary, it provides a tool for negotiating what it means to be a human being, an animal or – an autistic person. “Autism,” she maintains, is a “kind of way station on the road from animals to humans, which puts autistic people like me in a perfect position to translate 'animal talk' into English” (*Animals* 7). To make this point, she draws from a long tradition of portraying differently abled people or the racial other as positioned at an intermediary evolutionary position, somewhere between animals and full humanity (e. g. Baynton). Brain evolution, Grandin theorizes, is in many ways “like building an addition onto your house instead of tearing down the old one and building a new one from the ground up.” In particular, she deploys American neuroscientist Paul MacLean's model of the “triune brain” in which different parts of the brain evolved at different evolutionary stages, thus being either uniquely human or shared with the animal world.⁹ Rather than one brain, we rather have three brains, and thus identities. There is the reptilian brain, responsible for basic life functions; the paleomammalian or “dog” brain as a center for emotions, and finally the neomammalian brain, located in the neocortex and responsible for “reason and

⁹ For an overview and criticism of MacLean's model see Reiner; Campbell.

language.” Although often criticized as simplistic, McLean's model proved highly appealing for explaining supposedly primitive or animalistic human behavior. For Grandin, the triune brain is a means for making sense of autistic traits by tying them to a younger – and implicitly more innocent and objective – evolutionary stage. In autism, she explains, the neomammalian brain in the neocortex suffers from “bad input” (*Animals* 56). To compensate, autistic people “fall back” on their animal brains (*Animals* 57). This, she believes, is a completely natural reaction considering that the “animal brain is the default position for people” (*Animals* 57).

The animal mind, Grandin thinks, is characterized by precisely the two traits that also predominate in the autistic person: visual thinking and hyper-arousal caused by oversensitivity. Animals and autistic people are hypersensitive to sound and sensual impressions: “The reactions of an autistic child and a scared, flighty horse are similar” (*Pictures*, 83). Yet the keen senses and instinctive behavior prerequisite for a wild animal's survival are an inconvenience in handling domesticated cattle and leave autistic people constantly out of sync with their surroundings, disoriented by the din of civilization (*Pictures* 155). At the same time, she cautions, faulty sensory experience causes developmental delay, be it in animals or human. Like the autistic child who suffers from sensory deprivation, neglected and abused zoo animals “exhibit strange, autistic-like behavior” (*Animals* 86). Both kinds of behavior, she suggests, can be counteracted by similar means. “Overcoming tactile defensiveness is like taming an animal,” she writes, tying behavioral therapy to the experiences of animal ownership (*Emergence* 128). In this manner, common observations of animal behavior thus become the uninitiated person's guide to autistic people. Simultaneously, Grandin's

interpretation is meant to offer a means for self-interpretation to her autistic readers, presenting a sense of self rooted as much in neurocognitive thought as in evolutionary biology. While this perspective proves attractive to many readers, she has also drawn criticism from autism and neurodiversity activist for catering to a non-autistic audience with her claim that autism is something to be tamed and normalized, and for maintaining the highly problematic notion of low and high-functioning autism (Brown; Baggs).¹⁰

Like the computer comparison, Grandin's animal analogy locates the autistic person at an intermediate level, foreign and familiar at the same time, thus helping her to negotiate her own difference, her place in society and, on a more general level, what it means to be human. What could be read as regression to a lower state of being, becomes merely a range of abilities along the evolutionary scale. Rather than reclaiming her essential humanity, she makes the case for the situational superiority of the animal and autistic mind. Mobilizing her double role as animal scientist and autistic person, she promises insight into forms of consciousness that fascinate the non-autistic audience because they seem remote and impenetrable. Claiming that we all are the product of our triune brains, Grandin can go beyond the animal and autistic mind. Sharing with her audience the belief that we are our brains, she aims to offer insight into our unconsciously animalistic side.¹¹

¹⁰ In a similar vein, ethologist and animal right activist have criticized Grandin for her simplified evolutionary theories and claims to creating more humane animal handling and killing facilities (e. g. Bekoff).

¹¹ For perceptions of mind, brain and selfhood in contemporary "neuroculture" see Casper, Vidal.

The similarity of animal and autistic thought is essential for her claims about their situational superiority. These two mindsets, Grandin explains, are actually advantageous. “[F]or normal people,” she speculates, “language is probably a kind of filter” that straightens experiences at the loss of apparently superfluous or unfitting details (*Animals* 261). Consequently, the brains of normal people must be incapacitated, cut off from experiencing objective reality by their need to make sense of things. Animals and autistic people, on the other hand, “don't see their ideas of things; they see the actual things themselves.” (*Animals*, 30) Uninhibited by sociocultural filters, Grandin asserts, animals and autistic people are able to perceive reality as it is. It is not autistic but neurotypical people who miss out, she argues: “There's a great big, beautiful world out there that a lot of normal folks are just barely taking in” (*Animals* 24). Deficiency and ability thus become a matter of definition: The autistic inability to ignore the “swirling mass of tiny details,” often labelled “*super-sensitive*,” might just as well be considered “*super-perceptive*” (*Animals* 643, 65. Emphasis in original).

This is a stark contrast to the model of neurological deficiency that had dominated her earlier work. True to its title, her 1986 *Emergence* was meant to address the question: “How does a child, labeled autistic, emerge into the real world?” (9). “People with severe sensory problems,” she had written in 1995, still, “have a horrible time trying to figure out what reality is” (*Pictures* 76). As neurologist Oliver Sacks elaborated in the foreword to the 1995 *Thinking in Pictures*, Grandin's success disproved the “medical dogma,” predominant “for forty years or more that there was no 'inside', no inner life”

to the autistic person. Nevertheless, Sacks still characterized her as “disconnected,” as someone making the leap to the so-called real world only through her extraordinary efforts. Broderick and Ne'eman summarized this long-dominant model: “The autistic person has gone (whether of his or her own volition or not) to another place, to a separate, spatially removed state, a state of autism, from which, significantly, one might conceivably return” (465). In the 1980s, the real world was that of the non-autistic society, a place where the autistic person might recover to achieve some resemblance of normalcy. Normalization remains an important theme in autism narratives – both fictional and biographic – to the present day (Osteen 28).

By 2005, however, Grandin had rejected this narrative of normalization. Turning autism into something simultaneously more intrinsic and more ambivalent meant dropping terms like 'cured' and 'recovered.' Offering insight into autistic perceptions and advocating for understanding remain important themes in her writing, as do education and therapy, yet now it is the autistic / animal mind that offers something valuable – even superior – to non-autistic people. The non-autistic world is deconstructed by the more perceptive minds of autistic people who, according to Grandin, hold the real claim to objective reality. This claim, based on the language of neurology, technology and animal science, gives autistic people agency as they supposedly possess a perspective not accessible to non-autistic people. The division between both mindsets is not meant to be absolute: Because “people have animal brains,” Grandin imagines that “everyone has the potential for extreme perception” (*Pictures* 65).

Conclusion

“Today’s autistic child,” philosopher Ian Hacking remarks, “brought up on children’s stories about autistic children, and who in later years goes on to write an autobiography, will give accounts that are textured by the early exposure to role models” (1469). This is particularly true for the US and the English-speaking world where first-person accounts of autistic people have proliferated in print, on TV and online, and where notions of minority-as-diversity has been particularly influential. When Grandin sat down to write *Emergence*, she had no role models of other autistic writers. As reportedly the first autistic person to successfully publish an autobiography in the US, she had to couch her narrative in other, pre-existing discourses: the more general genre of disability biographies with the still dominant motive of normalizing and overcoming, and the mechanistic language of neurobiology.

Doing so helped her gain agency even though she did not yet contest her condition's pathological nature. Rather than relying on the psychotherapists who tried to diagnose her with a mind-altering childhood trauma, she sought to overcome autism by her own volition, turning herself into the exceptional 'recovered autist.' As her self-perception and public image changed from 'recovered autist' to renowned animal scientist and autism spokesperson, she accordingly adjusted her definitions and metaphors. Her personal and professional growth occurred alongside shifting popular and scientific perception of autism which have been expanding and fragmenting, forming networks

of selves that touch and connect, debate and differ. An ever-growing number of activists, organizations and websites lobby for neurodiversity, tolerance, therapeutics approaches or miracle cures. Their very range attests to the conflicted nature of autism and autistic identity, yet also to a widely accepted understanding of human beings as essentially determined by our neurological make-up.

Rather than using supposedly autistic language, Grandin has, in fact, skillfully adapted popular metaphors that are already culturally encoded. Her metaphors stem from the popularized scientific language of brain and selfhood in which common, everyday experiences and locations stand in for complex neurological, social and psychological processes. Comparisons between man, machine and animal have long fascinated scientists and the lay public. Grandin taps into this fascination. The autistic mind, she claims, occupies a unique position in bridging the divide between humans and computers, more able and adapted to deal with modern technology. Likewise, the autistic person becomes an instrument for determining the boundaries between man and animal, normal and abnormal. She certainly is not the only one to put autistic persons in this intermediate position, yet her positive view of the animal mind stands out. Utilizing the widely shared metaphor of minds as computers and the fascination with new technologies she engages in the discourse on difference and disability. Reality and normalcy as defined by the non-autistic person is challenged by claiming a machine-like, precise recording of the world as it is. Grandin's mechanistic system is softened by the model of the hyper-sensitive animal mind that, like its autistic counterpart, offers an indiscriminating, unbiased take on the world. Building on the

opposition of nature vs. culture, she uses the ideal of the autistic person unspoiled by society to rally for tolerance, autistic difference and talent.

Attending to the metaphors and writing of autistic people as part of a social process—rather than defining it as outside of meaningful social interaction—sheds light on how we construct human selfhood and animal consciousness, and whom we exclude by so doing. Acknowledging the irony that a person supposedly unable to utilize metaphors is actually mastering them, also enables us to see that Grandin's advocacy is ironically normative: As her portrayal of autism skillfully caters to our yearning for unbiased objectivity, for superior insight into ourselves, animals and machines, it takes part in a idealization that does not necessarily benefit those living with autism. The stereotyping tendency to equate autism with an innate affinity to technology, and to understanding the non-human puts normative pressure on autistic individuals to prove their social worth by displaying special autistic talents in these realms while excluding them from other, supposedly more socio-emotional fields (Murray). Moreover, by embedding such claims in the language of evolution and the animal other, such a portrayal encourages us to see autistic people as innately different rather than as fellow human beings. While furthering acceptance of human diversity, Grandin's narrative also contributes to the standardization of discourse about autism, as it draws heavily from the contemporary belief in neurological selfhood. Although it secures a place for autistic identities in American mainstream science and society, such a narrow definition of the autistic self may also exclude those who are less adept at utilizing—or less willing to utilize— the tropes of neuro-identity.

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