

HUMAN NATURE BEYOND GENETIC DETERMINISM AND INTELLIGENT DESIGN  
HOW GILLES DELEUZE HELPS US WITH CULTURE AND NEUROPLASTICITY  
A DISCUSSION (11/13, 4 PM, PRESBYTRE ROOM)

As befits a French philosopher of the 1960s, Gilles Deleuze (1925-1995), was famous for his anti-humanism and his anti-essentialism. Humans are fully part of nature with no supernatural supplement; and essences are not the way to individuate things. That doesn't seem to leave much room for a Deleuzean human nature, but that's what I want to try to explore. I'll take my clue from what he says in *A Thousand Plateaus* about nomads, who "reterritorialize on their power of deterritorialization." In other words, they are most at home when on the move. But this isn't just spatial movement; we can also say that the habit of nomads is to break habits.

I'll make sense of this claim by referring to Bruce Wexler's *Brain and Culture* (MIT, 2006), in particular, his claim that humans evolved for a lengthy childhood period of socially mediated neuroplasticity. Human nature on this view is such that we are individuated by our singular patterns of social – somatic interaction. And this in turn is "nomadic" in Deleuze's sense: our nature is to be so open to our nurture that it becomes second nature. That is, we're at home wherever home is. There's an anti-essentialist nuance here, however. It's children who are most "nomadic," most plastic. Most adults drift away from nomadism and become sedentary: they want more of the same. But even here we must nuance things: what if "more of the same" means "more change"? In other words, are there adult "nomads"? I think there are. But we'll need to discuss Deleuze's ontology first in order to make sense of these claims.

Deleuze's is an interactive process philosopher: we aren't substances but processes and those processes are not individuated by properties but as singular patterns of social and somatic interaction. The embodied and the embedded aspects of our being intersect – we are bodies whose capacities form in social interaction. And it's in this intersection of the social and the somatic that subjectivity and selfhood emerge – and are sometimes attenuated and even bypassed. They are attenuated in the launching of "automatic" habits (such as empathic identification) and they are bypassed in the launching of extreme cases of basic emotions (such as rage and panic). In the first case, "you can't help yourself," you find yourself caught up in a particular feeling, and in the second, there's not even a "you" there anymore: "you" wake up later and wonder what happened. In simpler terms, "singular patterns of social and somatic interaction" means that we are what we can do with others – our embodied capacities, which develop in the history of the social interactions we have had up to the present, intersect with the similarly constituted embodied capacities of the others we now encounter. The creative potential of these encounters is such that we don't know who we are, we don't know what human nature is, until we experiment with what we can do with others. It's not completely wide-open: I'm not a hard-core social constructivist. But if plasticity is our nature, then that nature is certainly more open than programmed.

For Wexler, although we have evolved for a long period (though young adulthood) of intense socially mediated neuroplasticity, this *neuroplasticity is relatively reduced in adulthood*. In a formula, children need sensorimotor and social stimulation to form neuropsychological structures, while adults look to shape their world and / or at least to select input that reinforces previously generated structures. This difference in neuroplasticity sheds light on generational conflict, bereavement and immigrant experience, and social conflict.

Wexler also devotes some time to *emotion and the limbic system*, citing inborn modules for basic emotions (this is about as far as I go *in re* Evolutionary Psychology) and emotional

contagion (34-35). I particularly like Wexler's phrase "emotion is an interindividual process that alters the moment-to-moment functional organization and activation patterns of the brain in the individuals who are interacting" (36). I would just add that those neural changes have to be thought in relation to the modifications to the *emergent functional unit of the couple or group in which the component individuals are interacting*. Also, this emergent neuro-corporeal-social emotional process need not only be equilibrium-seeking; too often any mention of group processes is seen as equilibrium-seeking (negative feedback) as in "functionalist" sociology. Rather, we're all familiar with interpersonal emotions that spin out of control in positive feedback loops. There's mob rage, of course, but on the positive side of the ledger, falling in love can't really be seen as equilibrium-seeking, even if a stable loving couple results, for that "stability" can [sometimes? rarely?] be a mutually reinforcing dynamic process of empowerment that never settles down to anything we can describe as an "equilibrium."

Wexler makes a crucial distinction between a crudely reductionist / mechanist outlook, often mislabeled as "materialist," and one that includes *the irreducibility of corporeal / affective / social relations*. IOW, instead of infants being "fundamentally" nourished by milk in some biochemical sense, and corporeal / affective / social relations being a secondary, additional, bonus on top of the allegedly fundamental biochemical, research shows that milk alone won't foster development (89); you can even go so far as to say that milk is only "a means of ensuring contact between the mother and the infant because this contact is essential for development" (86). Of course, milk in some biochemically reductive abstraction is a necessary condition for development, but corporeal affective social relations are just as necessary, just as fundamental. There is no hierarchy with the biochemical as fundamental and the corporeal / affective / social as secondary. Indeed, *oxytocin is essentially a social hormone*: it's spatially separated by membranes into individual organisms, but its production is only triggered by the kinds of social relations that it serves to reinforce. You simply can't understand mammals w/o understanding the social nature of our bodies, right down to the hormonal and neuronal level. Again, the reason biochemical reductionism is mislabeled as "materialist" is that the corporeal / affective / social are just as materialist, in the sense of shaping the neuropsychology of development, AND in the sense of being fundamental to our being, as the biochemical. Most mammals, including humans, are bio-neuro-social creatures; that's our ontology, and that is best thought as an interactive process. Once again, we're individuated by the singularity of our pattern of interaction, not by a set of properties constituting an essence that distinguishes us from others, either humans from other animals or individual humans from others.

Wexler's treatment of human studies stresses *the mother-infant dyad*. He's careful, and we have to be careful too, to avoid any "fusion" images, which distorts individuation by seeing it as separation from a prior fusion, with all the anxiety about engulfment that entails. The dyad is a patterned interactive process, with the caregiver providing *a scaffold, a supplement*, which provides structure just beyond what the infant is capable of at any one moment, but which the infant can internalize. In this way, self-regulation shifts from the parent-regulated dyad to the developing infant. But the infant has some capacity for self-identification (Stern's "core self"), some crude and vague but active body schema or else it couldn't imitate (cf Meltzoff and Moore as read by Gallagher, *How the Body Shapes the Mind*).

The important thing to keep in mind is that *what is internalized is a pattern of interaction*, not the properties of an independent substance. We are patterns of interaction. That's our being. We're not independent substances which "relate" to other substances. If you want to put it like this, the "relations" are primary, and the relata are only nodes of multiple relations. It's

relations all the way down, if you will. Which is just a spatialized image of a process ontology. We ARE the patterns of the processes of forming and reforming of relations. This radical bio-neuro-sociality makes the prominence of video games so fascinating (106). We're embarking on a huge bio-neuro-social experiment with these things; Susan Hurley's work on the violence angle here is just one, albeit very important, angle.

We first discussed socially mediated neuroplasticity in infancy, childhood, and adolescence so that individuation is a process of singularizing a pattern of social interaction. We now turn to discuss *adult processes that seek to conserve mature patterns* (the "consonance of internal and external worlds") by selective attention to, or active shaping of, the world. The first adult process alters the perception of the existing world, that is, it works on the present from the perspective of the past. The second changes the world to "increase the likelihood that subsequent events will be consistent with pre-existing internal structures" (143), that is, it works on the present to make the future conform to the past. Wexler puts the transition from childhood to adulthood as a change in the relation of learning and power of action: "we learn the most when we are unable to act. By the time we are able to act on the world, our ability to learn has dramatically decreased" (143). I completely agree with this bio-neuro-cultural standpoint; I would just say that a little more emphasis on *population variability* would help, in two ways.

First, the neuropsychological conservatism Wexler notes in adulthood varies within a population, so that *some adults remain in search of novel experiences*. Now as Wexler notes, sometimes this novelty is just variation on familiar themes (17). But can we design a culture such that what people are used to is the search for novelty? I admit that you can't just value novelty for its own sake. You do have to have familiarity and repetition, if only as repose from novelty searching. And, some novel experiences shouldn't be experimented with! So we do need some *normative standard*: we should search for *novel ways of empowering people to search for novel means of empowering others*. IOW, our challenge is to make empowerment a radiating, horizontal social process. If we want to make Kant turn over in his grave, we could call this the "rhizomatic imperative," and if we want to give him another spin, we should note that Deleuze would call this forming a "war machine." In any case, it's not like we're going to run out of such challenges in this quest; there's more than enough injustice to fight; we can let the ones who reach utopia worry about being bored! IOW, some adults seek to "conserve" their inner neuropsychological structure by selecting friends who fight with them against unjust social structures and for positive social change. That is, they "conserve," in Wexler's sense, the fight against "conservatism" in the political sense. So what would be pleasant for them is not the conservation of an (unjust) social structure, but the change of that social structure, to which end they seek to conserve the fight against that structure.

Second, attention to population variability is needed to attend to *disempowerment right here at home*. Early I said that human nature is "nomadic" in a Deleuzean sense, that is, that "we're at home wherever home is." But that's an exaggeration. First of all, immigrants face a sometimes overwhelmingly disempowering dissonance between internal structures and external world. But secondly, right here at home there are many people who grew up here but who never quite feel at home, if you see what I'm getting at. To use a little jargon, there are many people faced with "subject positions" that are devalued by the larger culture ("internal exile" or alienation of the culturally disadvantaged). Even though it's a great advance to talk about socially-mediated neuroplasticity and the attendant notion of human ontology as the establishment of patterns of social interaction, we have to talk about populations of subjects, many of whom suffer disempowering subjectification practices.