Political Physiology in High School: Columbine and After

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ABSTRACT

In this paper I investigate the mechanics of killing, brining together neuroscience, military history, and the work of the French philosophers Gilles Deleuze & Félix Guattari. Investigating the Columbine killers and the way they negotiate with the intensity of the act of killing allows me to construct a concept of "political physiology," defined as "interlocking intensive processes that articulate the patterns, thresholds, and triggers of emergent bodies, forming assemblages linking the social and the somatic, with sometimes the subjective as intermediary." While most people must be in a blind rage to kill at close range, the Columbine killers raised the threshold at which an evolutionarily inherited non-subjective "rage agent" kicks in, thus allowing themselves to be subjects in the act of killing. Yet they were not "cold-blooded killers," either, those who lower the intensity of the act of killing below the threshold that prevents most interpersonal violence from reaching lethal proportions, since they committed suicide soon after their killing spree from burning out. The success of the Columbine killing machine warns us of a "machinic phylum" whose singularities are virtually available for incorporation into bodies by subjects willing to undergo extreme experiments in political physiology.

INTRODUCTION

On April 20, 2004, 404 of the 1074 students enrolled at the Dutchtown High School in Ascension Parish in southeastern Louisiana skipped school. The reason many gave for their truancy was that it was the fifth anniversary of the Columbine High School massacre. This wasn't in solidarity with the victims, but because two of their classmates, who were free on bond, had been arrested in January for "terrorizing," a felony according to Louisiana criminal law, punishable by up to 15 years in prison. According to the police, the two had made "elaborate plans" to re-create the Columbine massacre. As it turned out, the day was uneventful: "I felt fine," reported one student, "the only difference was the number of students who were out of school and that teachers had to lock classroom doors."[1]

What does this anecdote say about the bodies of contemporary high school students? About their "political physiology"[2] – those interlocking intensive processes that articulate the patterns, thresholds, and triggers of emergent bodies,[3] forming assemblages linking the social and the somatic, with sometimes – but not always – the subjective as intermediary?[4] To what intensities of anxiety have students been subjected so that they "feel fine" in a lock-down? We could look to "trauma theory" here: their endorphin release thresholds have been set so high by previous events that it's only in situations which evoke high intensity reactions that endorphins are released to serve as pain relief: this is known as "trauma addiction".[5]

To fully understand trauma theory, we also need the distinction between anxiety and fear. Anxiety is heightened readiness for emergency action; in anxiety, chemical

releases result in lower thresholds for action: you're so "jumpy" any little thing sets you off.[6] In complexity theory terms you're in a "sensitive zone" in which small internal fluctuations or external events – which "normally" would be accounted for by homeostatic mechanisms keeping the organism in its everyday state – will instead trigger activation of an emergency reaction pattern. On the other hand, with fear, a particular object has already triggered such a pattern and you are then focused on dealing with that particular object or situation. The triggering of an emergency pattern by the recognition of a fearful object will release endorphins, as you might need the analgesic effect to act in the emergency.[7] Thus, as horror movie directors, Homeland Security officials, and political leaders know full well, fear is a relief compared to anxiety: "better the devil you know than the devil you don't."

Browse any issue of *Inside School Safety: Effective Management Strategies for School Administrators*, and you'll see fascinating experiments in surveillance being conducted on high school students: networked video cameras, face-scanning technology linked to databases of missing kids and sex offenders, metal detectors, both permanent and handheld, K-9 patrols, drug testing of urine samples, psychological profiling, and other techniques, turning the high school into one of the most striated spaces in contemporary American society. Besides the ubiquitous "war on drugs," many school districts cite Columbine and other school shootings as rationales for the increased security measures they implement. We don't know whether and to what extent these security measures are themselves anxiety producing; we would need some empirical testing. But where are we going to find a non-anxiety-ridden population in the post 9/11 United States to use as a control group?

I want to move back from the Dutchtown incident to examine the Columbine massacre itself in terms of political physiology. In doing so, I'm going to switch the usual philosophical approach, which focuses on death as an event to be suffered. Other than the analysis of the body of the guardian in the *Republic*, however, there has been precious little philosophical analysis of the killer, the one who deals death to others. By contrast, the psychology or even physiology of killing has been a deep and abiding theme in Western literature, from the *Iliad* onward, from the war epic through crime fiction.

BEYOND THE MORAL / INTENTIONAL ANALYSIS OF COLUMBINE

The best reporting done on the Columbine massacre has been by Dave Cullen at *Salon.com*. I assume the basic facts will be recognizable in outline: two white teenage boys, Dylan Klebold and Eric Harris, open fire in an affluent suburban Colorado high school on April 20, 1999, killing 13 others and finally themselves. The assault followed extensive planning and assembling of an arsenal of firearms and bombs. The original plan was to detonate bombs in the school cafeteria and to wait outside in the parking lot to shoot fleeing survivors. However, the bombs failed to detonate and so Klebold and Harris entered the school, choosing the library as their initial point of attack. They killed the students over a period of 16 minutes, and then fell into a 30 minute "quiet period" before they killed themselves.

Cullen's work has dispelled many myths about the killers, including the idea that they were complete outcasts (in fact they had a good-sized circle of friends with whom

they partied; they even went to the prom); that they had been victims of extreme and continuous bullying (not true; they were fringe types, but not daily victims, as were some other school shooters); the "Trench Coat Mafia" connection (a separate group); the targeting of jocks, African-Americans, and Christians (Klebold and Harris were "indiscriminate haters" who even included racists among their most hated objects); and the "unlikely martyrdom" of Cassie Bernall (she was the one who was allegedly asked whether she believed in God and when she said yes, she was killed; in fact, it was another girl who was asked this question – *after* she had been shot, and though wounded by the initial attack, she survived). [8]

Most Columbine coverage has been mired in moral / intentional analyses of motivation and blame. What's been missing from the discussion has been the question "how," rather than "why." Not "how" as in the mechanics of the killing, the ease of access to firearms, the availability of bomb plans on the Net and so forth, but "how" as in: how did the bodies of Klebold and Harris negotiate the intensity of the act of killing?

COLD BLOODED KILLING

The most troubling thing about the killings is how Klebold and Harris could accomplish them as subjects: they were in neither the blind rage nor the trance-like "fugue" of other school shooters, but they interacted with their classmates, questioning them, taunting them.[9] Dave Grossman's fine work on military history and corporeal technologies, *On Killing* (1996), shows that overwhelming evidence in military history points to a deep-seated inhibition against one-on-one, face-to-face, cold-blooded killing on the part of some 98% of soldiers. The biggest problem of military training is how to overcome this

deep inhibition. It's not that societies have to stop a natural impulse to murder; far from it. Armies need elaborate training to compel the vast majority of soldiers to kill, and even past basic training, elaborate social technologies such as the firing squad are needed to facilitate cold-blooded killing.[10]

Indeed, so deep is this inhibition that traditional military drill, when conducted as target shooting at bull's-eyes, produced only a 15-20% *firing* rate among American infantry troops in WWII (excluding machine-gunners).[11] Now a firing rate doesn't indicate willingness to kill, as Grossman explains. The usual "fight or flight" dichotomy is falsely drawn from *inter*-species conflicts; *intra*-species conflicts are also marked by "display and submission," which, along with "flight," are much more likely to occur before "fight" (especially fight to the death).[12] Hence much of the firing rate was "display" rather than "fight."

How can we give a materialist, physiological, ground for this inhibition? Antonio Damasio, in *Descartes' Error*, has developed a theory of the link of reason and emotion in which the key is the "somatic marker hypothesis, whereby scenarios of future situations are marked by flashes of "as if" body images: images that are produced by an imagined scenario of what it would be like to live through the imagined situation.[13] The feeling of what this or that future would be like to live through thus serves to shape the phase space of planning into zones of the plausible and implausible, the pleasant and nauseating, the thinkable and the "unthinkable." Unconscious emotional premonitions thus cut down on the possibilities for which one needs to use classical reasoning by assigning an emotional weight or "valence" to the imagined scenarios.

The inhibition on killing, then, I would propose in combining Grossman and Damasio, comes from sensing what the intensity of the fight to the kill would be like. In other words, the inhibition occurs because a "true" attack, an attack beyond a certain threshold -- the threshold mutually recognized as that indicating display -- might provoke a deep panicked self-defense (rather than submission).[14] In other words, we don't want to take the risk that a full-fledged attack will trigger a panicked fight for life on the part of opponents who are willing to submit when faced with an attack that can be read as display calling for submission. Or more precisely, the body doesn't want this – since we are dealing with embedded corporeal inhibitions that constrain subjective action. Past a certain threshold of biochemical parameters, antagonistic muscles fire and punches are pulled, fingers release their strangleholds, well beyond and against subjective will. Try it, you'll see. Thus it's not who is "willing" to kill that counts, but who is *able* to kill, that is, which body can overcome or bypass the inhibition.[15]

A further boost to the inhibition is the need to avoid the intensity of revulsion afterward: living with having been a killer would be too much. Seeing the guts of the other must then trigger an imaginative scenario in which "what if that's *me* with *my* guts hanging out?" is entertained.[16] The nausea that would be the "somatic marker" of that image would then be prospectively a non-subjective inhibitor and retrospectively the base for the subjective guilt the soldiers feel for having done that to someone else. "How would you like it if I did that to you?" The guilt-machine of the Golden Rule.

Here we could also propose that the inhibition on close-range killing in cold blood is linked to the recognition of the humanity of the opponent through face-recognition; the capacity for face-recognition is among the earliest to appear in infants.[17] Recognition of

the proposed victim as possessing a face kicks in the sort of revulsion scenarios we have just discussed. Many battlefield accounts have testified to how a glimpse of the face of the enemy has profound inhibitory effects. The blindfold on the victim of a firing squad thus has dis-inhibiting effects, as it breaks up the eye contact between victim and executioner(s).[18]

PROFESSIONAL TECHNIQUES OF KILLING

How then do armies get soldiers to kill? The political physiology of military killing entails articulating the patterns, thresholds and triggers of the military unit with the patterns of intensity, the thresholds of inhibition, and the triggers of command embedded in the soldier's body. Let's go through the hierarchy of thresholds embedded in most people's bodies,[19] from easiest to most difficult, following Grossman 1996: violent thought, revenge fantasies, *ressentiment*, and so forth; the push in the back, arm or chest; the body punch; the slap in the face; the punch in the face; the slash with nails or knife (prosthetic nails) in back, arm, chest, and face; the overhand stab with a knife in back, arm, chest, face; the disemboweling underhand stab in the gut or genitals; the kill with bare hands or teeth on neck, face, and eyes. (Your own mirror neurons are firing intensely as you read these sentences!) The most difficult killing, then, is hand-to-hand between isolated opponents who can "identify" with each other.

What are some factors in enabling military killing? The most well-known are distance, machinics, teamwork, command, and dehumanization. These form an "Idea" (Deleuze 1994) or "abstract machine" (Deleuze and Guattari 1987) in that together they

form a multiplicity, or set of differential elements, differential relations and singularities.[20] All these factors are socio-somatic corporeal techniques which, when combined in a "solution" or "machinic assemblage," lower the intensity of the act of killing so that it falls below the threshold that would inhibit in most people close-range killing with the hand. Distance (or more precisely the differential relation of rates of change of advance and retreat) and machinics (or more precisely the assemblages composed between humans and machines – guns, knives, etc.) combine so that it's not a very intense act just to push a button when far away from the killing. Teamwork and command (horizontal and vertical social relations that are differentially composed and strewn with singularities)[21] will combine to disperse the intensity among a larger social body – it's not me killing you, but my group – phalanx, legion, battalion – fighting yours.[22] Finally, with dehumanization, the intensity of the act of killing an animal is below the threshold of inhibition for killing a human – the whole point behind Grossman's distinguishing of fight or flight (inter-species) from display and submission (intra-species). Repetition in training serves to lower the intensity even more. Artillery and aviation troops have such great enablers from distance, machinics, teamwork and command that they achieve close to 100% "fight to kill" rates without even much need to resort to dehumanization of the enemy.[23]

Without the enablers of distance, machinics, teamwork, command, and dehumanization, most soldiers must leave the state of "cold blood" in order to kill – they have to dump their subjectivity. They burst through the threshold of inhibition by super-charging their bodily intensity. Thus the tried and true method for killing in close combat is the *berserker rage*, the frenzy of killing anything that enters the "death zone"

immediately in front of the berserker. In the berserker rage, the subject is overwhelmed by a chemical flood that triggers an evolutionarily primitive module which functions as an agent which runs the body's hardware in its place.[24] The Greeks called it "possession by Ares."[25] It's important to understand that such rage is itself traumatic: it sets your endorphin release thresholds so high that only more combat will get you off.[26]

Two common triggers of the berserker rage are the death of a comrade[27] and panic over engulfment.[28] A third trigger, at which we have already hinted, is direct and immediate threat to life, the panicked self-defense reaction that display and submission seeks to avoid. There are of course many other triggers we can't discuss here, among them abandonment, as when domestic violence escalates from beating to killing, as often happens only after separation. The military problem of the berserker rage is how to turn it on and off on command (and only on command): this is the problem of the conversion of the warrior (whose triggers include insults to honor) into the soldier who kills only on command.

A second strategy for facilitating killing by soldiers, a major innovation in military training perfected by the US Army in the Vietnam era, is not to overwhelm the inhibition threshold with the chemical flood of rage, but to bypass it by operant conditioning that triggers an unconscious, automatic "read and react" mode in which soldiers fire individually on whatever human-shaped targets appear in their range of vision.[29] Not a berserker rage, but a conditioned reflex. Here, the subject is bypassed by direct access of the military machine to reflexes embedded in the spinal cord of the soldier – as clear an instance of political physiology as one could imagine.

With this new corporeal technology the US Army greatly increased firing rates in

Vietnam; Grossman's thesis is that this increase was purchased at the price of a huge spike in post-traumatic stress disorder, as increasing the percentage of soldiers able to kill also increased the percentage of soldiers who had to face the consequences of having killed. Bypassing the subject by plugging the spinal cord directly into the military machine still means soldiers have to deal with the after-effect, when the subject re-appears. In one way the small percentage of willing killers prior to this conditioning were self-selected: the ability to kill also guaranteed an ability to handle the sight of the victim.[30] This makes sense based on our hypothesis that the nauseating body marker of the imagined scenario of the victim's mangled body isolates the singularity "to kill" in a "no go zone" of the virtual for most soldiers.[31]

QUESTIONS ABOUT KLEBOLD AND HARRIS.

When considering the Columbine killers in detail, given our above analyses, we have six factors to account for: 1) cold bloodedness; 2) bodily intensity; 3) thresholds of violence; 4) planning the "unthinkable"; 5) breakdown; 6) suicide.

Cold blood, bodily intensity, and thresholds of violence. Klebold and Harris were subjects in the act of killing: they verbally interacted with their classmates. Is this an indication of cold blood (they lowered the intensity of the body state in the act of killing) or raised thresholds (they were able to maintain subjectivity even at body intensities that for others would have triggered the primitive, non-subjective, rage agent)? I'm tempted to the latter hypothesis. [32]

Planning the “unthinkable.” This paper may be as difficult for you to read as it was for me to write. Yet it apparently wasn’t at all difficult for Klebold and Harris to concoct their elaborate plans. Somehow they were able to operate below the threshold of horror and explore rationally the phase space of mass murder. This is “unthinkable” to most of us: we would be nauseated if these were “real” plans. If not “unthinkable,” then at least “undoable.”[33]

Breakdown: Klebold and Harris could only keep up the killing for 16 minutes. After the massacre in the library they lived for another 30 minutes, with lots of available targets. Why the inability to continue?

Suicide: Linked to the question of breakdown is that of suicide. Why end the quiet period with their own deaths? “Remorse” is too moral / intentional to be of use here. If they were remorseful, a materialist would have to say that was the conscious reflection of a corporeal depression coming off the high of the killing. The physiological intensity of the kill must have burnt them out: raising thresholds allows only a short endurance of hyper-intensity. But this depression would only aid, not cause the suicides, for we cannot forget that the suicides were planned all along. Why? Did they have a premonition -- a feeling of the somatic marker of this scenario -- that facing everyday life after such a high would be too depressing? In other words that the killing would be so intense that their whole life afterward would be just too dull to face? Perhaps they were caricatures of warriors, who want to “live fast, die young, and leave a beautiful corpse”? Is there an analytic link between “living fast” (the rush of killing) and “dying young” (the inability to face the relative depression of ordinary life)?[34]

THE COLUMBINE MACHINE

In the terms of *Anti-Oedipus*, Klebold and Harris construct a paranoid desiring machine aimed at anti-production; it runs for awhile, then breaks down in a flame out, solar nihilism. They were subjects, but subjects experimenting in political physiology, seeing what somatic intensity they could withstand in coupling technological machines with biochemical rush, fueled by and enabling the use of guns, bullets, bombs to release flows of flesh and blood from their normal organs.

We can quickly identify some rather obvious enabling factors for their killing machine: (1) teamwork; (2) machinics (bombs and guns vs knives / hands); (3) video game and chat room desensitization as thanatographic techniques.

The key factors, however, are the thrill of judgment and the rush of taunting. Even if Klebold and Harris had not been taunted for years, they were, simply by being high school students, constantly judged and found lacking. In the terminology of *Anti-Oedipus*, They invested in the superior / inferior hierarchy from a paranoid perspective, putting themselves on top. Harris' hatred was generated by contempt: he hated people for their "stupidity" above all (Cullen 2004).

It's important to remember, however, that Klebold and Harris were not "prejudiced," and that Columbine was not a "hate crime," a crime in which the victim is chosen and attacked for his or her membership in a despised group. In Deleuzoguattarian terms, traditional stereotyping and bigotry is molar, aimed at members of groups, but the up-close killing at Columbine was molecular. Let me explain.

We begin with the alleged martyrdom of the Christian girl. In fact, *all* the victims in the library were taunted before being shot at, including a fat boy and one with glasses. Furthermore, the answers of the victims were completely unrelated to their deaths (that is, they weren't killed BECAUSE their answers betrayed membership in a despised group), and they weren't searched out for their characteristics. They were only available objects, seeds that enabled a crystallization of the free floating hate of Klebold and Harris. From this perspective, the taunting was not gratuitous cruelty, but physiological necessity.[35] Despite all their training at raising thresholds and operating subjectively at high intensity, they needed one last jolt to enable the act of killing. They found that jolt in judgment: having been judged and found wanting their whole lives, Klebold and Harris became judges, on the spot.

The judgment machine ("to be done with the judgment of God" is a profound Deleuzean wish) operates in many of our social machines. In "control society," it's a matter of constant checking and modulation, of dispersed self-enforced surveillance and improvement (Deleuze 1995). Advertising is obviously one of the major stimulants of judging that one's own organs are faulty and in need of commodified improvement: "ask your doctor if Zoloft (Lipitor, Vioxx, Levitra …) is right for you." Thus judgment is a catalyst of production, a provoker of flows, a vector of desire.

Now we know high school is a particularly intense locus of judgment. (An excruciatingly vivid somatic marker is attached to that sentence for many North American academics, I would say!) And since everyone falls away from the norm, everyone has a becoming-minority, all Klebold and Harris had to do was simply to look at their victims to identify their weaknesses; they were able to find a failure everywhere:

you’re black, you’re Christian, you’re fat, you’ve got glasses. Particularly enraging was the attempt to turn an inferior organ into a social advantage: “do you think those glasses make you look cool?” was one of their taunts. Perhaps one of the ultimate targets of Klebold and Harris -- certainly an unconscious one -- was thus the judgment machine itself?

To return from such speculation to our materialist concerns, it should be clear that the taunting was not a cool categorization, but a felt rush of superiority faced with inferiority. The secret of the Columbine killers, the answer to the question “how?” is the vast disinhibiting effect of finally operating the judgment machine for their own benefit, of being the trigger points of all that desire. The somatic marker of the scenario of the victim’s death must have been that of the sheer joy of finally being the judge after having been judged so often, a rush that raised the threshold of inhibition and allowed them to enact the “unthinkable.” That their killing machine finally broke down, that the bodies of Klebold and Harris could not sustain the intensity, indicates they weren’t really cold-blooded, but hyper-intense: they didn’t lower the intensity of the act of killing, but they raised the threshold at which a non-subjective rage agent would have kicked in. The breakdown of their machine highlights the difficulty of maintaining the bodily intensity necessary for the act of killing, while the fact that it ran for 16 minutes warns us of a hideous “machinic phylum” whose singularities are virtually available for incorporation into bodies by subjects willing to undergo such extreme experiments in political physiology.

NOTES

1 *The Advocate* (Baton Rouge, Louisiana), April 21, 2004. The full story is available online at 2theadvocate.com/stories/042104/sch_quiet001.shtml. In July 2004 an Ascension Parish grand jury declined to indict the two, citing "insufficient evidence." *The Advocate*, July 14, 2004. See www.2theadvocate.com/stories/071404/new_teens001.shtml.

2 The philosophical project indicated by this term entertains close relations with the field of "social neuroscience" pioneered by John Cacioppo. While there are some differences of emphases between the two approaches (I would probably emphasize the intermeshing of developmental processes with differing time scales rather than the interaction of social and biological "levels" as does social neuroscience) the resonances are far stronger than the dissonances. For a lucid introduction, see Bernston and Cacioppo 2004.

3 To understand emergence we must first understand the ontology and epistemology of "complexity theory," as explicated in the development of Deleuze 1994 by DeLanda 2002. In this school of thought, material systems are modeled using the techniques of nonlinear dynamics, which reveals their patterns ("attractors"), thresholds ("bifurcators"), and triggers (events that move systems to a threshold activating a pattern). Complexity theory enables the study of "emergent" phenomena, a term I use in a double, synchronic and diachronic, sense. Emergence means the (diachronic) construction or development of complex systems resulting in a (synchronic) focused unified behavior achieved by constraining the behavior of components of the system. From the synchronic aspect, I propose a stacked hierarchy of material systems, so that individuals on one level are components of emergent unities on the next level: cell, organ, somatic body, social body. But the diachronic aspect shows that time scales of each level are staggered, so that what appears as a systematic unity on a specific level is an event, a process, from the perspective of another level with a longer time scale. Cells come and go but the organ stays (relatively) the same; people die but the social body lives on, and so on. By "social body" I mean that human groups (institutions, teams, corporations, families, and so on) can be analyzed as emergent unities, with a systematic behavior whose powers extend beyond that expected by simply adding up the power of members acting alone. A powerful way in which such emergence at the group level comes about is the "entrainment" solicited by rhythmic group movement (McNeil 1995).

4 I have tried in Protevi 2001 to develop a notion of "body politic," using the notion of self-organizing material systems, that enables us to speak about the subjective capacities of bodies developed by what Foucault or Deleuze would call subjectivizing practices. This approach is a third person account, a genealogy of subjectivity, rather than the mutual constraints proposed by Francisco Varela's "neurophenomenology" (Varela 1996). It doesn't attempt to reduce subjectivity in the sense of accounting for its contents in a third person explanatory framework, but it does try to understand subjectivity as originating in a body shaped by political practice: a "body politic." This approach is both post-structuralist and post-phenomenological in that it focuses on the historical formation of bodies rather than universal unconscious structures as well as focusing on the gaps and shortfalls of consciousness. Such a stance might not help us with the hard problem of consciousness, but my question here is the role of consciousness (or at least

subjectivity, that is, "extended consciousness" in the scheme laid out in Damasio 1999) in the general economy of political practice. Two phenomena need attention here. (1) Much of political practice tries to render irrelevant the effects of subjective agency by rendering behavior predictable, either in mass, by neo-liberal economic practices which seek to produce the conditions which will in turn produce "rational," that is, predictable, behavior, or by discipline for individuals and small groups. See Satz and Ferejohn 1994 and Murphy 1996 for rational choice theory and social conditions. Mark Bonta and I have treated this issue throughout our *Deleuze and Geophilosophy* (2004). (2) Much – but not all – of the violence which forms an essential part of political practice is only enabled in escapes from consciousness, or at least attenuations of conscious control, as this paper attempts to show.

5 "Endorphins" is shorthand for a variety of neuropeptides that allow for "stress-induced analgesia." For general overviews of stress induced analgesia, see Bloom 1999; LeDoux, 1996: 132; or Niehoff 1999: 146-147. For more specialized pieces cited by those authors, see Millan 1986 for an overall view of opioids and pain; and Lewis, Cannon and Liebeskind, 1983 and Watkins and Mayer 1982 for opioid and nonopioid systems in pain control (it appears that opioid pain relief is extinguished in chronic pain: Millan 1986: 333). While most of these studies involve rats, some analogous mechanisms in humans are believed to operate.

6 See LeDoux 1996: 149 for reflex potentiation ("lowered thresholds for action"), where LeDoux cites Davis 1992; 289 for anxiety as hyperarousal; and 228 for anxiety as "unresolved fear," for which LeDoux cites Öhman 1992. For Öhman, anxiety is provoked by frustration of avoidance behaviors evoked by fear, which heightens perception. "Anxiety" is of course a generic term. LeDoux 1996: 229 cites the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) for full range of anxiety disorders: panic, phobias, post-traumatic stress disorder (PTSD), obsessive-compulsive disorder (OCD) and generalized anxiety. On page 230 LeDoux cites Öhman 1992 to the effect that panic, phobic fear, and PTSD reflect "activation of one and the same underlying anxiety response," and goes on to claim in his own voice that "generalized anxiety most likely involves the same underlying brain system (at least partly) as the other anxiety disorders."

7 See Bolles and Fanselow 1980 for the difference between pain and fear and the analgesic effects of fear.

8 See Watson 2002 for a thorough examination of the evidence.

9 Fugue states are a species of dissociation, along with daydreaming on one end of the spectrum and multiple personality disorder on the other. I claim that berserker rages are activations of an evolutionarily shaped rage agent. In considering the Columbine massacre I'm not sure what's more troubling: that Klebold and Harris could kill the way they did, as subjects, or that other humans have been launched into murderous rages or even more bizarrely, murderous trances. We need to wrest the phenomena of the murderous rage and the murderous trance from their banality. How do these rages and trances work? Where do they come from? What can we do about them? How do they relate to what we would usually consider normal subjectivity?

10 Barbara Ehrenreich's great book, *Blood Rites* (1997), discusses among its other topics the

elaborate lengths to which religious rituals go to enable human sacrifice.

11 Grossman 1996: 3-4, citing Marshall [1947] 2000. While Marshall's work has been the subject of controversy for years, Grossman's arguments in support of him seem convincing to me.

12 In some territorial mammal species, such as lions, a newly victorious alpha male will try to kill the offspring of his defeated adversary. My point concerns the display and submission behavior among animals of the same generation, hence of roughly the same size, in one-on-one combat. The well-known phenomena of chimpanzee wars and murders always involve ambushes in which at least two but often seven or eight chimpanzees will attack a single, isolated victim. See de Waal 1996: 38, citing Goodall 1986. Insect warfare seems too far removed from our concerns to be interesting, except if we attain an extremely high level of abstraction concerning "mass" society. See de Waal 29-30, citing Alexander 1987. The Western cultural figuring of Asian societies as "anthills" or insect colonies however deserves attention.

13 " See Damasio 1994, 165-201 for an extended discussion of somatic markers, particularly 180-183 for the role of somatic mapping in the prefrontal cortex. At Damasio 1999: 281 he cites work in mirror neurons located in the cortex as possibly involved in "as if" loops or "internal simulation." Damasio is of course only one figure in the rapidly expanding field of "affective neuroscience." Other noteworthy works are LeDoux 1996, Panksepp 1998, and Rolls 1999. We cannot deal with the technical details of this field in this context; in particular we must bypass arguments over the role of cortical versus midbrain and brainstem structures in generating basic emotions. Some of the debates within the field are accessibly summarized in review essays by Watt (2000) and Panksepp (2003).

14 See Niehoff 1999: 75 on "protective aggression," citing Archer 1988; 127 on the release of norepinephrine in attack situations; and 130 for a summary of Gray 1977, which postulates a behavioral inhibition system tied to physiological arousal.

15 Here the awkwardness of the "body" and "subject" terminology should be evident. What I want to say is this: any first person account of rage must include an account of how the highest order of consciousness, that is, personal subjectivity, fades away in rage. In the grip of a "towering" rage, at its peak, humans no longer speak, they only howl and spit and growl. If we assume, as seems reasonable, that subjectivity and language are intimately linked, then we are no longer to relate these acts to a personal memory, that is, they no longer seem to be coming from "me." (See LeDoux 1996: 200-203 for the role of the amygdala in the unconscious and nonverbal "emotional memory system;" see Bloom 1999 for clinical problems in treating people burdened with nonverbally stored traumatic memories.) At this point, the switch to a third person perspective is needed in order to account for the replacement by rage of consciousness. (1) Other people tell you what "you" ("your body") did while you were "blind" ("unconscious") with rage. (2) You piece together retrospectively what must have happened from the changes in the world from when you last remember being there, by attributing causal action to "yourself"("your body") while in the rage. Theweleit 1987-89 cites reports of people "waking up" from a rage and wondering who it was that did all that damage. "This person wasn't dead before, I'm the only one here, I've got blood all over me, I remember getting really mad at him, and thus it must have

been me who killed him." As Nietzsche's *Genealogy of Morals* tells us, a long history of the development of "personal responsibility" is enfolded in this identification of the actor of the events with the "me" of the narrator. Thus in rage there is no hyper-intense or transgressive experience: there's no subject to the experience, only to the aftermath. The evolutionary module theory developed in this paper gives another sort of third person account, this time a physiological explanation of the take over of the control of the body by a "rage agent."

16 I am willing to speculate that the physiological keys to such empathic identification are "mirror neurons," on which some of the most interesting work in cognitive science is now being done. See Gallese 2001 and Keysers et al. 2003.

17 The link of faciality and recognition of subjectivity is of course a basic Deleuzoguattarian point expressed throughout *A Thousand Plateaus*. Infant facial movements that can be interpreted as "expressions" of emotional states are of course as well an early achievement, predating face-recognition. See Hendriks-Jansen 1996: 252-277 for a fascinating discussion of caretaker-infant interaction, with extensive citations of the relevant literature.

18 Grossman 1996 relates numerous anecdotes about face-recognition inhibition. On firing squads, see p. 225.

19 The question of thresholds sends us in two directions. (1) Recent work in "Developmental Systems Theory" (DST) (Weber and Depew 2001) calls on "material self-organization," the key concept of complexity theory, to argue against the idea that behavior is determined by genes. For DST, development is not directed by a genetic "blueprint" set in advance, but emerges through the reliable repetition of a bio-social context, featuring intersections of complex systems, throughout the entire life cycle of the organism in question. The attack on genetic determinism enabled by the connection of DST and complexity theory opens the door to political physiology, which, while it acknowledges the role of natural selection in shaping basic emotions like panic and rage, relies on the manipulation by social institutions, within a context of lifelong development, of the thresholds and triggers that govern the activation of such basic emotions. For a philosophical argument against genetic reductionism from the standpoint of (DST), see Griffiths and Gray 1994. For one of the most important treatments of DST see Oyama [1985] 2000. For more on DST and the unit of selection controversy see Griffiths and Gray 2001 and other essays in Oyama, Griffiths and Gray 2001. (2) Thresholds can be both too high or too low, a difference that destroys the putative unity of the concept of "aggression." Self-defensive violent behavior can be provoked by the misperception of a threat on the part of a person with lowered thresholds resulting from trauma, while predatory or utilitarian violence can result from the development of high thresholds, opening up a person's "as if" somatic markers to realms of action outside the norm, resulting in antisocial (or "psychopathic") behavior. See Niehoff 1999: 180-181, as well as Damasio 1994: 178 on "developmental psychopaths" and somatic markers; see also note 30 below.

20 DeLanda 2002 is the best introduction to this aspect of Deleuze's thought.

21 A singularity is a critical point in a system's structure and history in which a change of behavior patterns is possible. Singularities in social systems are such that a vague suggestion

from a monarch – "will no one rid me of this meddlesome priest?" – will preserve "plausible deniability" while at the same time being as effective as a direct command from a superior closer in rank to the killer.

22 The tradition of multiple members in a firing squad rather than single executioners is thus explained as well.

23 The long-distance killing by the Allies in the European theatre of WWII was no less effective than that of the Pacific theatre, even though the race hatred directed at the Germans was nowhere near as intense as that directed at the Japanese (Dower 1987).

24 Perhaps second only to the question of adaptationism for the amount of controversy it has evoked, the use of the concept of modularity in evolutionary psychology is bitterly contested. I feel relatively safe proposing a rage module or rage agent, since its adaptive value is widely attested to by its presence in other mammals, and it is universally regarded, except by extreme social constructivists, as a primary emotion, or what Griffiths 1997 calls an "affect program." Affect programs are emotional responses that are "complex, coordinated, and automated … unfold[ing] in this coordinated fashion without the need for conscious direction" (77). On basic emotions, see Ekman 1992. While Ekman and other researchers list "anger" as a basic emotion, Panksepp 1998 lists "rage" as one of his basic emotions (see chart at Turner 2000: 68-69). See Griffiths 1997: 93 for a comparison of the modularity of affect programs and Fodor's notion of modularity, which calls for a module to be "mandatory … opaque [we are aware of outputs but not the processes producing them] … and informationally encapsulated [the information in a module cannot access that in other modules]." On the difference between the intense emotion I would call "rage" and milder forms of "anger" see Griffiths 1997: 231. EP gets into trouble when it postulates modules for complex social emotions like jealousy, or most controversially, for complex behaviors like rape. For a sane and balanced overview of the controversies surrounding EP in general, see Laland and Brown 2002; for a rip-roaring attack on EP, see Rose and Rose 2000. Note that saying we have an evolutionarily shaped rage affect program or basic emotion need not imply a simplistic notion of genes "for" rage.

25 See Harris 2001 for a reading of the Greeks and anger, by a classicist operating with psychological rather than physiological categories.

26 For "trauma addiction," see Bloom 1999 and van der Kolk and Greenberg 1987.

27 See Shay, 1995 for Vietnam era anecdotes on this trigger. I speculate that such rage is triggered by the flashing somatic marker of future pain (separation from and mourning for the comrade) coupled with the memory of pleasure tagged to the person of comrade. See LeDoux 200-203 for emotional memory; although LeDoux focuses on fearful memories, dopamine would seem to be a key player in the production of pleasant memories, as summarized at Niehoff 1999: 131. The wrenching shift between the pleasant memories and the painful future triggers rage, a notion that dovetails with Panksepp 1998, where frustration, as the curtailment to the free use of "seeking" and "play" systems, triggers rage. Deleuze's critique of pleasure as the subjective appropriation of shared energy can be explained in terms of his privileging of the emergent social body over the components of that body, the individuals involved (Protevi 2003).

28 Theweleit 1987-89 records many anecdotes to this effect.

29 Grossman 1996: 177-179.

30 See Grossman 1996: 180-185 for military use of psychopaths, where he unfortunately relates psychopathology to a "genetic predisposition." (See note 19 above for anti-gene-centered views.) For a non-reductionist biological account of psychopaths as individuals with low-intensity setpoints, that is, high thresholds for reward and punishment, see Niehoff 1999: 129 and 181; on psychopathology and "kindling" (need for greater and greater stimulus), 166. We could hypothesize that in addition to their "stimulus hunger" that there is some malfunction in the mirror neurons of true cold-blooded killers: they just don't identify with the victim.

31 Guilt is only one small aspect of PTSD; many of the problems have to do with the high endorphin release thresholds of the traumatized body. In other words, PTSD is at least as much physiological poisoning as psychological disturbance, though neither one nor the other exclusively. For good introductory treatment of the psychophysiology of PTSD, see van der Kolk 1996.

32 Cullen 2004 cites the conclusion of a psychiatrist and the FBI agent in charge of the Columbine case that Harris was a psychopath (hence low-intensity, cold-blooded, "stimulus-hungry") and Klebold a "rage-filled depressive." This combination itself created its own psycho-physiological dynamic as it worked within the machinic assemblage: Harris-Klebold-bombs-guns-school. That Harris was too cold and Klebold too hot means they complemented each other, with Klebold's rages providing Harris with stimulation and Harris' planning capability keeping Klebold in line. Harris by himself might have been cold-blooded, but I'm speculating that the complex system he formed with Klebold was a "raised-threshold" system.

33 This whole paper is anti-cathartic: violent fantasies, as thantographic techniques, are desensitizing and enabling, not cathartic. I define "thanatography" as representations of violence provoking physiological changes, analogous to the provocation of physiological change with pornography. These two fields of political physiology or socio-somatic manipulation crossed to brutal effects in the Baghdad prison scandal of 2004. Needless to say the analysis of thanatography needs to be differential and population-based: there are no simple linear functions here, but patterns, thresholds and triggers distributed in a population.

34 Recall that Hector refuses to fight from the walls of Troy, explaining to Andromache that he would feel "great shame" at doing so (*Iliad* 6:440).

[35] Compare the trash-talking in the *Iliad*.

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