

KATRINA

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DRAFT of 1 November 2005: Please do not cite in a professional publication w/o permission.

Hurricane Katrina was an elemental and a social event. To understand it, you first have to understand the land, the air, the sun, the river and the sea; you have to understand earth, wind, fire and water; you have to understand geomorphology, meteorology, biology, economics, politics, history. You have to understand how they have come together to form, with the peoples of America, Europe and Africa, the historical patterns of life of Louisiana and New Orleans, the bodies politic of the region, bodies you need to study with political physiology. You have to understand what those bodies could do and what they could withstand, and how they intersected the event of the storm. In this paper, simply for the sake of time and space constraints, I will concentrate on New Orleans; the stories of the Mississippi Gulf Coast, or of Saint Bernard, Saint Tammany, and Plaquemines Parishes in Louisiana are complex and dramatic as well.¹

THE LAND AND THE RIVER. We could start by talking about plate tectonics, or for that matter, stellar nucleogenesis, for at the limit, everything is connected, and to tell the story of Katrina would be to tell the story of all of the earth, all of the cosmos. But everything is connected, not for a God's eye view, but just past the limit of actualization, just beyond the limit when things slow down enough for them to take form. Not even a God could see everything past that limit, because past that limit there is nothing, nothing fixed, though there are elements, as well as relations and singularities; there are multiplicities. Past the limit everything is connected as sets of related changes, rates of change smoothly changing in relation to other rates of change, up until the singular points where those relations change drastically rather than smoothly. Everything is connected, but nothing is fixed, there is no thing there, nothing anyone, not even God, could see or know.²

So let's begin, as always, *in medias res*, and talk about the land of Louisiana. To do that, we have to talk about the river. The Mississippi drains a vast swath of the North American land mass. All of the water that falls between the Appalachians and the Rockies, from the Allegheny river in upstate New York to the Missouri River in Montana, all of it that doesn't evaporate or stay in the soil or in a lake, all of it drains down the Mississippi, the "father of waters."³

Like all rivers that flow into the sea, the Mississippi snakes about at its head, creating a delta as it floods its banks and lays down sediment picked up upstream by those drops of water, which, when they flow fast enough, pick up bits of earth to carry with it. How big those bits of earth are depends on how fast the water flows, and how fast the water flows

depends on how much is behind it, pushing it, and on how big a channel it flows through. The bigger the mass of water and the narrower the channel, the faster the flow and the more earth it carries, and, the greater the chance the river would overflow the banks and drop that sediment as it slows down and trickles over the face of the earth. Now as the water flows, it will eddy and swirl, depending on the configuration of the banks and bed, for sometimes a singular configuration will trigger a different pattern of flow. The relation of turbulence and smooth flow will vary, then, not by calculable laws, as would velocity in a perfectly smooth channel, but according to singular points in the configuration of bank and bed. Now this process went on for some time, as these singularities of the configuration determined which actual pattern of the river's flow would emerge from the differential relations (velocity and turbulence) of the elements (water and earth). At another level, they also determined the historical pattern of that emergence of actual flow, the rhythm of the river's flow and flood.

Slowly, however, after European settlements progressed, flood control via levee construction began. The Europeans built military outposts and then cities on the edge of the river, to the north on the bluffs above the river (Baton Rouge, Natchez, Memphis), and to the south in the swamps along the edge of the river, between the river and the inland sea they called, strangely, a "lake" (New Orleans). Now the river, when it floods repeatedly, as it does as part of its natural cycle, leaves a ridge of sediment, highest on the banks and sloping gently away, down toward the swamps, the heaviest sediments dropping out first, building up the natural levee, which tends to subside as it dries out.. It's on that natural levee that Bienville founded New Orleans in 1718. The floods still came, of course, since the ridge was a *natural* levee. On top of that levee the Europeans used their slaves to build more levees, all up and down the river.⁴ What happens when you build levees upstream of a point? You change the actualization structure of the water flow, the values that incarnate the multiplicity, the set of linked rates of change and its singular points. There are many ways a flow can occur, given its differentials and singularities, the way its elements intersect the configurations of its channel. In this case, you squeeze the same amount of water into a narrower channel (for now you contain the same relation of mass and velocity that would have flooded the previously lower banks), so the water downstream rises still higher. And so you build higher levees. As this positive feedback loop continues, you break the river's old rhythms, you change its relation to the earth around it, you de-territorialize it.

But you can't stay ahead of the river all the time. Researchers have found that river systems tend toward a state of self-organized criticality, producing a power law distribution regarding riverbank failures and flooding. In other words, one of the guiding principles of human ecology (analogous to treating forest fires) should be that with levee construction you can stop many little floods, but when the river does flood finally – and the probability of its flooding at some point increases the larger the time scale – then those floods will be big ones.⁵ The most famous and destructive of those big ones happened in 1927, and to save New Orleans, the powers that be, out of panic, dynamited the levee southeast of the city, flooding Saint Bernard Parish and Plaquemines Parish, destroying the homes and livelihoods of many poor people. (In fact, a series of levee failures upstream, the most important of which came the very next day, meant that the

city was never really in danger. We will discuss failures of judgment in panic situations later.) In response to 1927, the relation of the federal government to the states changed, for another factor was then in place: the mass media. Radio, newspapers, telegraph, photos transmitted the verbal and visual images of the flood's effects – which were even more severe in Mississippi's Delta region than in Louisiana – to the rest of the nation, including the sight of thousands of African-Americans stranded on levees for days with no food or water and later herded into relief camps, an eerie precursor to Katrina camps.⁶ The trauma of the viewers and listeners in other parts (for you can be traumatized by seeing and hearing images of pain caused to others – here we would have to talk about mirror neurons and natural sympathy, which we will do later in discussing the use and misuse of Hobbes in discussing Katrina) created a demand to control the river even more. So the Corps of Engineers, along with state and local boards, built more and better and bigger levees, enough, they said, for New Orleans to withstand a Category 3 hurricane, determining that level of protection adequate after a cost-benefit analysis.⁷

Now the effects of the Corps projects on the river and the land were profound. First, there is the problem of “subsidence” as the sediment that would ordinarily build up the land is stopped by upstream dams trapping sediment and levees all along the river preventing flooding. Exacerbated by New Orleans's canal and pump system, untreated subsidence means the city is sinking ever faster, as pumping the city dry means drier, more compacted soil, creating a positive feedback loop making the city even more vulnerable. Furthermore, many ship channels and canals were cut into the wetlands outside New Orleans. In particular, a deep channel (the notorious Mississippi River Gulf Outlet) was created close to New Orleans so that ocean going ships would have a short, direct path from the Gulf to New Orleans, where they could intersect another flow carried by the river's flow: the flow of goods from the middle of the country meeting the flow of goods from overseas.⁸ Coupled with the denial of flooding, this shipping channel (plus hundreds of smaller canals and channels created by the oil industry) changed the ratio of salt and fresh water in the bayous, killing many species of plants and animals. The cypress trees were logged, another insult to the wetlands, for sediment had previously collected around the roots. Another positive feedback loop was set up as coastal erosion accelerated, and another coast line was actualized, one much closer to New Orleans.⁹ The other famous positive feedback loop with the river, the “dead zone” in the Gulf of Mexico from fertilizer runoff, did not play a role in Katrina's impact, at least to my knowledge, but we can fit it into our story, when we turn to discussing another element, the sun.¹⁰

THE SUN figures in our story in many ways, in evaporation, wind production, and bio-energy. Bio-energy is solar energy, mediated by carbon. Photosynthesis forms carbohydrates out of water and carbon dioxide, releasing oxygen and trapping solar energy in the chemical bonds of the complex molecules. Animal metabolism “burns” this fuel, combining oxygen with the carbohydrates and releasing the energy, plus water and carbon dioxide. It's a little more complicated than that, as nitrogen mediated by microbes in and around plant roots plays a role (and producing concentrated nitrogen fertilizers takes a lot of petroleum or carbon-stored solar energy, and they run off down the Mississippi, producing algae explosions that suck the oxygen out of the Gulf and killing

the local sea fauna, creating the “dead zone”), but it’s basically pretty simple: solar energy becomes bio-energy through the mediation of carbon.

Now the most efficient form of bio-available carbon-mediated solar energy capture is sugar cane. Cane production under European supervision was shifted from the Atlantic islands to the Caribbean throughout the 16th to the 18th century, using slave labor, at first the native Caribs, then the Irish (let’s not fall for the old “indentured servant” line: when Cromwell, in the midst of the Wars of the Three Kingdoms, intensified the shipping of thousands of Irish to Barbados they were slaves in all but name!), then the Africans. As sugar consumption in Europe worked its way down the class stratifications, displacing other forms of bio-energy, some of which came mixed with protein and vitamins,¹¹ it played a key role in a positive feedback loop described by Marx in the primitive accumulation chapter of *Capital*, for a good percentage of modern state revenue came from consumption taxes, which, together with national debt, funded the military branches of the colonial enterprise. (Marx’s analysis centers on Britain, of course, so we would have to work out, *mutatis mutandis*, the effect on France and hence on the all-important Franco-British relation.) Now the fact that increased sugar consumption played a role in decreased height for British Army recruits from 1780 to 1850¹² was offset by various differentials: increased mechanization and internal complexity of the armed forces for one thing (they call the Queen’s Guards the Beefeaters for a reason). Here we see another multiplicity: the differential elements are carbon-mediated solar energy and human muscle power, the relations are hypertrophy / atrophy / dystrophy, and the singularities are genetic potentials scattered in the population.

To explain how Africans came to Louisiana, we also have to talk about how they came to Caribbean. To see that, we need to talk about yet another multiplicity in which solar energy is the key, the heat exchange system of the planet. The elements here are sun and water and air, the relations are heating and cooling, and the singularities are the thresholds for Ice Ages, grand and small, as well as smaller but meteorologically interesting events, such as the Atlantic Multidecadal Oscillation or AMO (which competes with global warming as an account for the increased frequency of high-intensity Atlantic hurricanes in the post 1990 era).¹³ In this exchange system, we find ocean currents, including the Gulf Stream (whose heat carrying capacity and its climatological effects helps explain how Northern Europe can carry the density of population it has had over the past few millennia by affecting the types of carbon-mediated solar energy it can cultivate in producing bio-energy via agriculture), and the North Equatorial Current, which, along with the Trade Winds, helped Europeans travel from the coast of Africa to the Americas. (A shorter ocean and wind current loop system just off the coast of Africa might explain why it seems African sailors rarely went too far off shore, for it was enough for their navigational purposes up and down the western coast of Africa. Of course it should be admitted that historical research into the exploits of early African sailors has not been pursued with nearly the same enthusiasm as with early European sailors, the Vikings in particular.)

So meshing the multiplicities of the global heat exchange system and the bio-energy system we see the actualization we call the Atlantic slave trade. The differential elements

here are human muscle power and production processes, or more precisely put, the amount of force over against the precision of direction of that force, or as we put it, skill. (The Atlantic slave trade was internally complex. Just to take the example of the 18th century trade to French Louisiana, which was virtually complete by 1731, we must take into account the multiplicity that links the European appreciation of real and imagined differences between Wolof and Bambara slaves, as well as Portuguese competition for slaves in Africa, and competition from buyers in the French West Indies. The resumption of slave trade to Louisiana under Spanish rule, which began in 1766, is even more complex, as the trade was no longer almost exclusively from Senegal, but included slaves from Central Africa.¹⁴) In some cases, the Atlantic slave trade tapped into the well-established trans-Saharan slave trade, and took the skilled bodies of captive African peasants (we have to overcome our ridiculous urban, that is verbal, prejudices – our Platonic prejudices – and recognize the great embodied skills of peasants),¹⁵ and, after transporting them across the ocean, deskilled or proletarianized them, and set them to work in industrial agricultural practice on Caribbean plantations (industry can occur in plantations as well as factories).¹⁶ I say “in some cases,” because not all Africans were subjected to deskilling: the vernacular Creole architecture of Louisiana, for instance, is directly traceable to the work of skilled African slave architects who used Senegambian practices to build homes from native cypress – beginning the deforestation whose effects on coastal erosion we noted above. Among other transplanted economic skills, we should also note that the origins of rice cultivation in the Americas were due to skilled African agriculturalists.¹⁷

The rice connection brings us to yet another multiplicity with which the African slave trade intersected. Solar energy capture in roots (yams) and grains (rice) was produced in African agriculture with different techniques adapted to different positions on the landscape gradients of West Africa. Upland rice cultivation relied on precipitation, while inland swamp and river floodplain had their own decentralized and co-operative forms of irrigation, coupled with sophisticated multiple land uses, as Carney’s *Black Rice* makes clear. The very success of African agriculture, long denied or ignored (Carney shows how for centuries it was thought that African rice cultivation was due to Portuguese sailors having imported Asian seeds and techniques), allowed a certain population density that made West Africa a target for slavers. We can now see a set of linked rates of change related in feedback loops as increased predation in the slave trade changed the political structure of West Africa as rulers converted subsistence peasantry into a slave system that instead of being transported was devoted to the commercial production of rice and yams, the principal foods consumed by transported slaves on the sea voyages of the Middle Passage, slaves who would produce sugar to feed the increased consumption patterns of the European middle and working classes. Solar energy capture in its various multiplicities (controlling the growth and distribution of yams, rice, and sugar) is thus directly tied to proletarianization in Africa, Europe and the Americas.

We should not, for all that, overestimate the percentage of African slaves subject to proletarianization. In fact, proletarianization as part of industrial production on large plantations was the (highly profitable) exception to the rule, as many Africans worked at a wide range of skilled tasks.¹⁸ (It should go without saying that all this talk of skills and

deskilling refers to the strictly political-economic concept of proletarianization, and has no bearing on the magnificent creativity or awe-inspiring resistance and resilience of African-American culture, during and after the period of slavery. This resistance, often armed and violent, began, of course, with revolts in the slave depots of Africa, continued on the ships of the slave trade, and persisted on the American mainland.¹⁹⁾

As the colonial system developed, the French colony of Saint Domingue became one of the most profitable, if not the single most profitable, agricultural complexes in the world, growing sugar and coffee.²⁰ (We could tell another story about how coffee and sugar go together, as well as how tea and sugar go together, and how that difference between French and English tastes ties into the fact that the English beat the French out of India, and then later how the importance of India allowed the English to get out of the slave business in the 19th century: why bother with slaves in the Atlantic when the future of the Empire lies in Asia? Before we even mention the Opium Wars, we can see a complex system that is quite literally “political physiology.”²¹⁾ But at some point in the late 18th century the Saint Domingue system passed a threshold: too fast a rise in the importation rate of “fresh” or “unseasoned” Africans, plus a feverish step-up in production, plus the singularities called Boukman and Toussaint, led to a revolt in 1791.

As the years of revolutionary war went on, quite a few of the *gens libres de couleur* fled Saint Domingue for Louisiana, now a Spanish colony, but with a heavy French heritage, bringing with them their African slaves, and thereby creating one of the factors accounting for the difference between light-skinned and dark-skinned African-Americans in New Orleans and Louisiana. You cannot underestimate the importance of this difference in understanding the social relations of contemporary Louisiana; the ignorance of this difference contributes to the buffoonery of calling the light-skinned Ray Nagin “a black mayor,” a term that belongs to the binary racial classification of most of the United States, but which has no traction in the trinary system of New Orleans, which includes a “Creole” or mulatto term. (I’m not saying Nagin belongs to traditional high Creole society, just that his light skin allows him to play the traditional Creole role of mediation between the “blacks” or dark “Africans” and the whites. “Mediation” is a polite word: the free people of color of New Orleans reprised their role in Saint Domingue and became the hunters of escaped African slaves. The way the NOPD took up that disciplinary function is another story that needs to be told.)

Now commercialized sugar production in Louisiana did not begin until 1795, as under French rule it was suppressed by the French metropolitan government to avoid competition with Saint Domingue, and under Spanish rule the cultivation was never very extensive.²² Louisiana itself was never a very prosperous or well-managed colony under French rule. Shook to its roots by the Natchez Rebellion of 1729, Louisiana languished in the middle of the 18th century, only beginning to revive in the 1770s under Spanish rule.²³ It is only after the Haitian revolution had begun that sugar production began in earnest in Louisiana, sparked by an influx of refugee planters, and using the skills and labor power of “seasoned” or “creolized” slaves from Saint Domingue. After the transfer of the vast Louisiana Territory to the United States in 1803, sugar production boomed.²⁴ The motivation for Napoleon’s sale of Louisiana is generally attributed to his realization that

Saint Domingue was lost to him (despite Jefferson's offer to help supply Leclerc's expeditionary force in its attempt to re-install slavery there),²⁵ and thus that Louisiana's putative role as food supply for the much more profitable Caribbean island was mooted (the question of Napoleon's designs for a North American extension of his empire, with Louisiana as its base, is much more difficult to answer).

But at the same time that Jefferson bought Louisiana, he signed on with the British in attempting to suppress the Atlantic slave trade. Where would the slaves for Louisiana's sugar plantations – and the slaves for the cotton plantations of the Deep South, now made possible by the cotton gin – come from? Why, from Jefferson's home state of Virginia, among other sources for the internal slave trade.²⁶ Here we find yet another multiplicity, in which physiology and psychology intersect work and climate, thus determining the reproduction rates for African slaves: negative in most parts of the Americas, but positive in the Chesapeake region. Sugar production in the Caribbean meant overwork (dawn to dusk during planting, around the clock during harvest and processing of the cane, and yearlong, as tropical climate allowed multiple growing seasons per year); such overwork, along with the additional factors of bad nutrition, heat, disease, and torture, explain the life expectancy of 7 years in the Caribbean after arrival²⁷ – meaning a slave owner's punitive sale of slaves to the Caribbean had a clear disciplinary intent, as clear as if he had killed the slave outright. This low life expectancy necessitated a constant importation of “fresh” slaves to make up for the low birth rates and high infant mortality rates – the children died from disease, and from the infanticide slaves practiced sometimes to spare their children.²⁸ The reproduction rate of the slave population was positive in the Chesapeake region, because of the multiplicity governing tobacco production, linking the energy expenditure of the workers (linked to the singularities of the tobacco plant: its size, the angles of its stems and leaves, and so on) and the relatively moderate climate, which reduced growing seasons, allowed the winter as a period of recuperation, and eliminated the threat of tropical disease.²⁹ So the ancestors of the current African-American population of Louisiana came from the Caribbean, directly from Africa (mostly from Senegal), and from the northern states.

One of the things the Caribbean arrivals brought with them was revolution, the hope of it among the slaves and the fear of it among the whites. After the 1729 Natchez Rebellion, the most famous episode in Louisiana colonial history is the 1795 Pointe Coupee slave “revolt.” Midlo Hall tells the fascinating story of how this Jacobin-inspired multiracial class revolt occurred at the most radical point of the French Revolution, when the National Assembly had recognized the *fait accompli* of the Saint Domingue revolt by abolishing colonial slavery, and when Republican troops fought all the royal powers of Europe, including the Spanish who owned Louisiana at the time. A conspiracy that included many revolutionary poor whites, it aimed at the propertied interests, rather than at “whites,” but it subsequently became mythologized as a race war of black against white. Unleashing a wave of racialized oppression of blacks, the Pointe Coupee conspiracy became the bogey that put the fear of a racially motivated slave revolt directly into the bodies of white Louisianans. Scared as children with tales of the hoped-for savage reprisals for slavery exacted by rebellious black savages, with murder, looting, and rape prominent among them, a panic threshold is established, triggered at the thought

or sight of crowds of blacks without sufficient armed guards around them.³⁰ This bit of political physiology will play a role as well in the Katrina aftermath, exacerbated no doubt by the securitarian phobias of post-9/11 America.³¹

But first, let's discuss THE WIND AND THE SEA. We've talked about the Trade Winds, and about the meteorological multiplicity formed by the global heat exchange system. The Northeast Trade Winds, blowing northeast to southwest off the coast of Africa, tend to converge at certain points, triggering singularities and forming turbulences associated with the instability and displacement of these winds in the movement north and south of the Intertropical Convergence Zone or ITCZ. With the proper ocean temperatures (above 80 degrees) and wind speeds, we can get "tropical waves," or groups of thunderstorms. At other singular points of wind speed and water temperatures, a cyclonic heat engine will be actualized, spinning counter-clockwise in the Northern Hemisphere, forming a hurricane. Ocean water evaporates and rises out of a "chimney," releasing energy as it condenses aloft, powering winds and forming bands of thunderstorms. In effect, part of the ocean rises into the air and falls back as rain, while part of the ocean is pushed along by the storm's winds, the famous "storm surge."³² While most hurricanes form off the West African coast, Katrina formed to the east of the Bahamas. Crossing Florida, it hit upon the Gulf "loop current," a deep hot water current that flows to the west through the Yucatan channel, then north through the Gulf until it exits to the east through the Florida channel to join the Gulf Stream. In its current configuration, the loop current brought Katrina not only a vector aiming it at New Orleans, but also huge amounts of energy, for it conserved the energy contribution of the evaporation rate of the 90 degree surface water, as the deep water churned to the surface by the passage of the hurricane was not as cold as it would have been for a hurricane not following the vector of the loop current.³³ As it happens, a late singularity in metrological conditions caused Katrina to swerve a bit and pass to the east of New Orleans, thus sparing the city the worst winds (in the northeast quadrant for Northern Hemisphere hurricanes, which spin counterclockwise due to the Coriolis effect), but devastating Slidell and the Mississippi coast.³⁴

So Katrina hit the eroded Louisiana coast, its still strong winds pushing its storm surge into Lake Ponchartrain and destroying some of the floodwalls and levees along New Orleans's canals. Since a hurricane loses 3-8 inches of storm surge for every mile of barrier islands and coastal wetlands it crosses, the Louisiana coastline of one hundred years ago would have weakened Katrina enough that the current lake and canal levees of New Orleans would have held.³⁵ But the eroded coastline let the storm surge through, and the faulty levees collapsed, rather than being "overtopped."³⁶ The city was flooded, as predicted.³⁷ At which point, we have to discuss the "man-made disaster."

HOBBS AND THE PEOPLE OF NEW ORLEANS. The government reaction, at local, state and national levels, needs to be seen in historical context. Louisiana was a slave state, and it is now ranked the 49th poorest state in the Union on many measures. (This is not to imply that slavery's economic and political impact was limited to the South. For just a sample of the political importance, beyond the infamous "three-fifths clause" of the Constitution, consider that ten of the pre-Civil War Presidents of the United States were

slave holders, as well as two post-war who had been slave-holders – a ratio that means that to date, one quarter of the Presidents in US history were slave-holders.³⁸ The role of slavery in the global and national economies outside the slave zones, especially as it impacted the capital formation of the “Industrial Revolution,” was also profound.³⁹) Thirty-five percent of Louisiana’s population is African-American, as opposed to thirteen percent nationwide. This figure is higher in cities, which, following the American pattern, surrounds mostly black cities with mostly white suburbs.⁴⁰ The pattern of white flight, sparked by post-WWII suburbanization, is of course another multiplicity, as racial, income, and wealth population differentials cross automobile ownership rates. This was famously demonstrated in New Orleans, a city with 67% African-American population, and a 23% poverty rate (the national average is 12.7%), a large percentage of whom did not have cars, and who tended to reside in the lowest areas.⁴¹ While 80% of the city evacuated, those who stayed behind – or who were left behind – tended to be black.⁴² But not all: the French Quarter, 95% white and located on the natural levee where Bienville started the city, and Uptown, along the same levee westward along the river, had many whites who stayed behind. While the startling images of the Superdome and the Convention Center dominated media coverage, one of the most important untold stories unfolds along the geographical and social differential in which money stays on high ground in New Orleans. In Uptown, the private security companies (“Blackwater USA”), with their M-16s and their retired Special Ops forces, their helicopters and their guard dogs, created an enclave of the protected who avoided media attention, except for the ever-vigilant *Wall Street Journal*, which reported the plans of those civic leaders to effect “demographic” changes in the city to be rebuilt.⁴³ These plans would no doubt be made easier by the “neo-conservative” principles that will guide the federal reconstruction effort.⁴⁴

But let’s talk now about the famous sites, the Superdome and the Convention Center. The name of Hobbes sprang from the keyboards of the commentators as they heard the breathlessly reported rumors of savagery (murder, looting and rapes) and the repeated 20 second loops of “looters” (you must recognize them by now: the women holding up the Pampers to shield her face from the cameras, the teenage boy skipping through the puddles with his shopping cart). A “state of nature,” they wrote, a “war of all against all,” they assured us.⁴⁵ But what were the contents of those rumors? A “revolt” at the Orleans Parish Prison.⁴⁶ Children gang-raped and thrown, throats slit, into the freezer at the Convention Center. “Snipers” shooting at rescue helicopters. A “lockdown” of downtown after a “riot” in Baton Rouge following the arrival of refugees. All these rumors were unfounded and their similarity to rumors in panics about slave revolt cannot be ignored.⁴⁷

Now the production of exaggerated rumors in crisis situations is well-documented; the classic in the field, *The Psychology of Rumor*, was produced in response to rumor production in America during World War II.⁴⁸ We also know of the role of rumor and wild exaggeration in triggering and intensifying “race riots” in twentieth century America.⁴⁹ While rumor production with racial ramifications was inevitable in a flooded New Orleans, what is notable is the lack of skepticism exhibited by media personnel and government officials. The complex feedback loops should be noted here, for much of the

media hype came *after* the Mayor of New Orleans, Ray Nagin, and his Police Chief, Eddie Compass, relayed some of the most virulent of the rumors. Now it might be that Nagin and Compass were less skeptical than they might have been since they felt that reports of mass mayhem would speed state and federal response.⁵⁰ If this was their intention, they badly miscalculated, for instead of speeding response, their reports of “tourists” being “preyed upon” (“tourist” is of course New Orleans code for “white”), exceeded the panic thresholds instilled by the imagined horrors of slave revolt, with its racial revenge to be visited on whites by blacks. The fears crystallized in the racialization of the Pointe Coupee conspiracy, previously noted, delayed the response until Friday of hurricane week, when there was sufficient militarization of the response effort, enough to begin “combat operations,” to take back the “Little Somalia” New Orleans had become.⁵¹ The militarization of the relief effort was applauded by George W. Bush in his address to the nation from New Orleans: “It is now clear that a challenge on this scale requires greater federal authority and a broader role for the armed forces -- the institution of our government most capable of massive logistical operations on a moment's notice.”⁵² He was able to recommend the use of the Army for domestic law enforcement, something the classical liberal tradition (now represented by the “paleoconservatives” in the US) has always abhorred because of its worrying totalitarian / fascist resonances, because of the erosion of the difference between the National Guard, supposedly mostly for domestic use, but now heavily deployed in Iraq, and the regular Army.

We will have to await the results of patient historical work to know what “really happened” in New Orleans. What we can say now with good confidence in comparing eyewitness testimony, taking into account the widely documented production of rumor and exaggeration in crisis situations, is this: there were at most a few score gang members at the two sites engaging in predatory behavior. But we have to balance these stories against the small number of bodies found at the two sites. According to the *New York Times* report cited above, “state officials have said that 10 people died at the Superdome and 24 died around the convention center - 4 inside and 20 nearby. While autopsies have not been completed, so far only one person appears to have died from gunshot wounds at each facility.” While rumors of rapes abounded, police active in the Superdome found little to back them up. Again according to the *New York Times*, “During six days when the Superdome was used as a shelter, the head of the New Orleans Police Department's sex crimes unit, Lt. David Benelli, said he and his officers lived inside the dome and ran down every rumor of rape or atrocity. In the end, they made two arrests for attempted sexual assault, and concluded that the other attacks had not happened.”⁵³

So at the most, we would have stories of a few groups of ten to fifteen young men who hunted other gang members, robbed people, perhaps raped people. What can we say about this predation? The first thing to say is that it doesn't indicate a “reversion” to a “state of nature,” for gang members prey on people in these ways in every city of the country and most cities of human history. For gang predation is not some “natural” state into which societies “fall,” but a social process that is part and parcel of civilization as we have known it. All the way back to Achilles and the Myrmidons, young men have formed roving predatory gangs that prey on urbanized populations. The relation of such gang-formation processes to urban population density forms another multiplicity to be

explored; in New Orleans, gang-formation tends to follow the pattern of housing projects. The few reported murders during the Katrina aftermath can most plausibly be related to either spontaneous fights or gang members running into each other off their favored territories. Encounters during such episodes of deterritorialization would presumably carry with them high probabilities of violence.

But let's not forget this eyewitness testimony, for it shows that not all gangs were predatory. Denise Moore related the following on the "This American Life" radio program: [Interviewer: Tell me about the men roaming with guns.] "They were securing the area. Criminals, these guys were criminals. They were. Y'know? But somehow these guys got together and figured out who had guns and decided they were going to make sure that no women were getting raped. Because we did hear about the women getting raped in the Superdome. That nobody was hurting babies. They were the ones getting juice for the babies. ... They were the ones fanning the old people. Because that's what moved the guys, the gangster guys, the most, the plight of the old people. ..."

[Concerning the looting of the Rite-Aid at St Charles and Napoleon.] "They were taking juice for the babies, water, beer for the older people [chuckles], food. Raincoats so they could all be seen by each other and stuff.... I thought it was pretty cool and very well organized." [Interviewer: Like Robin Hood?] "Exactly like Robin Hood. And that's why I got so mad, because they're calling *these* guys animals? *These* guys? That's what got me mad. Because I know what they did. You're calling *these* people animals? Y'know? C'mon. I saw what they did, and I was really touched by it and I liked the way they were organized about it, and that they were thoughtful about it. Because they had family they couldn't find too. Y'know. And that they would put themselves out like that on other people's behalf. I never had a high opinion of thugs myself, but I tell you one thing, I'll never look at them the same way again."⁵⁴

But while the predatory gangs, as opposed to the protective gangs, now had an especially concentrated population on which to prey, and a police force weakened by desertion and dispersed by the mayor to restore "law and order" (that is, guard the antique shops and restaurants of the French Quarter, the big hotels and Uptown residences being sufficiently guarded by their private security forces), we cannot forget the massive solidarity shown by the people of New Orleans. Why was it the name of Hobbes came flying off the keyboards of our pundits, and not Rousseau or even Locke? Why the focus on the predation, which occurs everywhere, though admittedly with less intensity because of lower prey population density? What about the solidarity on display?

Don't get me wrong here. Hobbes is a brilliant philosopher, a great philosopher. His ruthless materialism far outstrips the limited minds of the current crop of Hobbes-mongers; their incomprehension of Hobbes's relentless focus on material power means that they will produce howlers, like Lowry's decrying of "massive lawlessness" in New Orleans. This is absurd for someone decrying a lack of awareness of Hobbesian philosophy. For Hobbes is crystal clear that while the sovereign has no obligation to the people, the people in turn have no obligation to a failed sovereign. The sovereign's actions are constantly judged by the people, and when the sovereign's power fails, then

civil law lapses and the laws of nature are the only ones in operation. We can read this in several of the most prominent and important parts of *Leviathan*. For instance, in Chapter 17, “Of the Causes, Generation, and Definition of a Common-Wealth,” we find the following: “if there be no Power erected, or not great enough for our security; every man will, and may lawfully [by the “laws of nature” of course] rely on his own strength and art, for caution against all other men.” In Chapter 21, “Of the Liberty of Subjects,” we read: “The Obligation of Subjects to the Sovereign, is understood to last as long, and no longer, than the power lasteth, by which he is able to protect them. For the right men have by Nature to protect themselves, when no one else can protect them, can by no Covenant be relinquished.” Finally, in Chapter 27, “Of Crimes, Excuses, and Extenuations,” the following rings out as clear as a bell: “That when the Sovereign Power ceaseth, Crime also ceaseth; for where there is no such Power, there is no protection to be had from the Law; and therefore every one may protect himself by his own power.” Thus Lowry is so far from understanding Hobbes that what he will see as the “massive lawlessness” of New Orleans, the taking of goods when sovereign power has failed, is completely and utterly obedient to the law of nature.

Despite Hobbes’s brilliance, the anthropological worth of his state of nature thought experiment is next to nothing, for the atomization he predicts in crisis situation⁵⁵ is belied by the massive evidence of spontaneous group formation: with family kernels of course, but also by neighborhood, and also, notably, simply by civic and human affiliation. (“My people” is how Jabbar Gibson described the group of neighbors and strangers he gathered on his commandeered bus.) The stories of New Orleans we tell don’t always have to focus on the every man for himself fantasy of the Hobbes-mongers, nor on the panicky rumors with their echoes of the fear of slave revolt, but should also be the stories of the thousands and thousands and thousands of the brave and loving people of New Orleans who refused to leave their old, their sick, their young, their helpless, and who walked miles through the floods to safety, pushing wheelchairs and floating the sick on “looted” air mattresses. Yes, we saw images of helpless poor people waiting to be rescued at the Superdome and the Convention Center, but we should never forget that they rescued themselves prior to that, through heroic solidarity, through what we can’t be afraid to call “love” (in the sense of *philia*, for Aristotle the emotional concretion of the political nature of humanity).

How can we give a rigorous differential materialist reading of this *philia*, this solidarity? After all, we shouldn’t want to be mere Rousseau-mongers in response to the Hobbes-mongers. The question is that of the emergence of human groups. Emergence is the (diachronic) construction of functional structures in complex systems that achieve a (synchronic) focus of systematic behavior as they constrain the behavior of individual components. Theories of social emergence compete with methodological individualism, which denies that social phenomena are anything but the aggregation of individual behaviors. It is important to note that methodological individualism is far more than a “theory”: it is the guiding principle behind the active construction of the atomizing practices whose results are described as natural by Hobbes and his followers.⁵⁶

To piece together the multiplicity behind social group emergence, we could begin by tracking the development of infantile face-recognition and emotional sensitivity, which inscribe brain patterns as they develop in feedback loops with caregivers.⁵⁷ Here we see that sociality is inscribed in our very bodies, as the actualization of the set of linked rates of change and their singularities lying between the reciprocally determined ideal elements of “infant” and “caregiver.” (Since such “caregivers” are enmeshed in a historically mediated web of social relations, we shouldn’t fall for any sort of “familialism” in thinking these terms.) Such early bonding is of course a repetition of bondings that stretch back throughout human and primate history.⁵⁸ As would be expected with complex systems in populations, not all bondings “take” of course, either from caregiver absence or neglect, or from difficulties on the side of the infant. Later appearing trauma can also interrupt or destroy previously established bondings.⁵⁹ Nonetheless, many bondings do take, and the neurological basis of these bondings, as with all brain activity, is found first in resonant cell assemblies, which form out of a chaotic firing background in a modular but decentralized network.⁶⁰ In these patterns of brain activity we could isolate what have been called “mirror neurons,” whose link to what is experienced and described as empathy is a fascinating research frontier.⁶¹ The bondings formed through mirror neuron activity would be reinforced at another level of activity by corporeal entrainment, which also plays a key role in producing group solidarity.⁶²

Now of course not all group formation is of the sort we’re looking for in explaining the solidarity in New Orleans. We have to distinguish between the passive affects of subjected groups and the active affects of group-subjects. Subjected groups are swept into a homogeneous mass whose unity is imposed by a transcendent signifier, like a flag. Being taken up out of yourself to join a larger unit can be a hugely powerful emotional experience. We can even call it “erotic” if we remember that this notion of eros is wider than that of sexual union. Now the symbol of a subjected group is a trigger that evokes that feeling of transport into a larger whole. The rage felt when the signifier is disrespected is directly related to the joy in erotic transport into the group, and that joy is inversely related to the pain felt in being subjected to atomizing practices: the sort of everyday isolation and its concomitant feeling of powerlessness that is well-attested to in America. Imagine the power of the emotions we call “patriotism” then: the larger and more powerful the political unit you belong to, and the weaker and more isolated you feel on your own, the stronger the emotional surge, the more sacred the symbols. We can then say that the keepers of those symbols have a vested interest in increasing your pain in isolation in order to increase the power they get from controlling the keys to your joy in union. So an empire of isolated and powerless citizens would be a powerful and dangerous beast indeed!

On the other hand, we have to think the joy of the active group-subject, the immanently self-organized spontaneous group formation we saw in New Orleans and elsewhere. For that solidarity was not just demonstrated among the people of New Orleans, but among many of the people of Louisiana. Alongside the brave men and women of the Coast Guard and the Louisiana Department of Wildlife and Fisheries, let’s not forget the hundreds of volunteer rescuers, who came down to New Orleans in their trucks and their boats, pulled somehow by that solidarity to rescue strangers. These rescuers, though able

to work the first few days on their own, were eventually refused entry to the area by FEMA, which gave us the worst of all possible governmental responses: not only did they not do it themselves, they refused to get out of the way and let the volunteers do the work. For two reasons: one, the securitarian / racist panic of thousands of blacks together without enough police, and two, because – and here we’re at the limit of paranoia, but indulge me – they ideologically want government to fail.

For here we see some of the political consequences of the neo-liberal denial of the very truth of solidarity (and hence government as expression of solidarity) and consequent production of atomized behavior (and hence government as transcendent source of order against anarchy). For you can strain solidarity and increase atomization, via scarcity, though it should be noted that in some situations, you can also increase solidarity via scarcity. Scarcity is an intensifier of underlying processes, a catalyst. And scarcity is produced, let’s not forget, according to a multiplicity whose elements are rich and poor people, “good” and “bad” neighborhoods. Scarcity is produced so that poverty is actualized along the social-geographical differential relation of access to goods, a differential enforced by the police at the singularities of entry points to privileged neighborhoods and bridges to cities across the river. During the post-Katrina weakening of the police presence, we then saw four types of “looting” actualized from this scarcity-poverty multiplicity: (1) getting necessities of life: food, water, medicine, diapers; (2) taking of non-necessities for future use or resale (one of the things our Hobbes-mongers underplay is that along with the tolerated looting of type #1, type #2 cannot be condemned, for there is no crime in the state of nature, only private judgment as to what is necessary to secure the future); (3) revenge against the rich (you’ve taunted me with your fancy goods my whole life, so I’ll wreck them so you won’t have them either); (4) nihilistic rage (you’ve left me to die, so fuck you, I’m burning it all down).

So the political lesson is not that we need order from above to prevent the anarchy that is supposedly close by, but that the solidarity that holds almost all of us together, the civic and human bonds that led all those thousands to stick together, and led those hundreds of volunteers to head to New Orleans, needs only support from a government which – instead of being systematically dismantled and artificially rendered inadequate so that it can be, in the now horribly ironic words of Grover Norquist, “drowned in a bathtub” – needs to be recalled to its proper function as the organized expression of that solidarity.⁶³

¹ I mean “dramatic” in the Deleuzian sense, indicating the intensive “spatio-temporal dynamisms” that actualize virtual multiplicities, as well as in its normal sense of fascinating narrative. See Gilles Deleuze, “La méthode de dramatisation,” in *L’Île Déserte et autres textes*, ed. David Lapoujade (Paris : Minuit, 2002) : 131-162 ; English translation in *Desert Islands and other texts*, ed. David Lapoujade (New York : Semiotexte, 2004).

² The conceptual framework of the paper is Deleuzian, with an emphasis on *Différence et Répétition* (Paris: PUF, 1968); translated into English by Paul Patton as *Difference and*

Repetition (New York: Columbia University Press, 1994). My use of Deleuze here is modulated by Manuel DeLanda's outstanding work in *Intensive Science and Virtual Philosophy* (London: Continuum, 2003). Mark Bonta and I used a DeLandeian approach to produce our *Deleuze and Geophilosophy: A Guide and Glossary* (Edinburgh: Edinburgh University Press, 2004).

³ An evocative portrayal of the Mississippi can be found in John Barry, *Rising Tide: The Great Mississippi Flood of 1927 and How it Changed America* (New York: Simon and Schuster, 1998). There are quite small river drainage systems in Texas and Alabama that empty directly into the Gulf, but the quantities here are negligible compared to the Mississippi.

⁴ For details on the historical geography of New Orleans, see Craig Colten, *An Unnatural Metropolis: Wresting New Orleans from Nature* (Baton Rouge: LSU Press, 2004). Colten reports that by 1727 the French in New Orleans had added a four-foot high bulwark (19), that by 1763, levees reached 50 miles upriver (20), and that by 1812, the year of Louisiana statehood, levees reached to Baton Rouge on the east bank (21).

⁵ Mark Fonstad and W Andrew Marcus, "Self-Organized Criticality in Riverbank Systems," *Annals of the Association of American Geographers*, 93.2 (2003): 281–296.

⁶ Barry, *Rising Tide*, is the standard work on the flood of 1927. On conditions in contemporary FEMA camps, see <http://www.abovetopsecret.com/forum/fema.html>. For a truly saddening response by Ed Kostiuk of the Oklahoma State Dept of Health, Emergency Management section, complete with Orwellian terms ("Louisiana Guests") and bizarre phobias, see http://www.abovetopsecret.com/forum/fema_rebuttal.html. Mr. Kostiuk's securitarian paranoia is evident in the following passage, which is, I assure you, not a parody, as much as one would wish it to be. Responding to a Oklahoma resident whose food gifts were accepted when others were not, Kostiuk writes: "The reason your 'pop-tarts' were accepted is they are sealed in an enclosed package and are 'tamper proof'. We are trying to protect our Louisiana friends from the criminal element and bad people that might want harm done to them. This is the reason Apples and Oranges were not allowed. I wonder if this lady allowed her children to go around on Thanksgiving and accept open candy from strangers." Readers are invited to visit www.snopes.com to test the mental outlook of Mr. Kostiuk against the documented evidence of Halloween incidents. (Although perhaps little tykes who visit strangers' homes on Thanksgiving, in defiance of all tradition, do suffer horrible fates in Oklahoma!)

⁷ US Army Corps of Engineers Press Release, September 3, 2005. <http://www.usace.army.mil/PA-09-01.pdf>. See also Andrew Martin and Andrew Zajac, "Corps officials: Funding levels not to blame for flooding," *Chicago Tribune*, September 1, 2005. The Corps's claim that the levees were in good condition but were simply "overtopped" has been challenged by LSU scientists. See Michael Grunwald and Susan B. Glasser, "Experts Say Faulty Levees Caused Much of Flooding," *Washington Post*, September 21, 2005, Page A1.

⁸ For two good popular magazine articles on subsidence and coastal erosion, see Mark Fischetti, “Drowning New Orleans,” *Scientific American* 285.4 (October 2001): 76-86 and Joel Bourne, “Gone with the Water,” *National Geographic* (October 2004). Specifically on coastal erosion and the link to shipping interests, as well as plans to reverse these effects, see Joel Bourne, “Louisiana’s Vanishing Wetlands: Going, Going ...,” *Science* (289), September 15, 2000: 1860-63. For book-length accounts see, Christopher Hallowell, *Holding Back the Sea: The Struggle for America's Natural Legacy on the Gulf Coast*. (New York: HarperCollins, 2001); Bill Streever, *Saving Louisiana? The Battle for Coastal Wetlands* (University Press of Mississippi, 2001) and Mike Tidwell, *Bayou Farewell: The Rich Life and Tragic Death of Louisiana's Cajun Coast*. (New York: Vintage, 2004). For scientific work on coastal issues, see the “NOAA-LSU Study: Portions of Gulf Coast Sinking at Significant Rate,” www.noaanews.noaa.gov/stories/s1128.htm. For web resources, see the sites of the National Wetlands Research Center, www.lacoast.gov and www.nwrc.ucgs.gov; the Louisiana State Department of Natural Resources, www.savewetlands.org; and the invaluable Louisiana Coastal Area Ecosystem Restoration Plan site, www.lca.gov.

⁹ On the historical changes to Louisiana’s coastline, see S Penland, PF Connor, A Beall, S Fearnley, and SJ Williams, “Changes in Louisiana’s Shoreline: 1855-2002,” *Journal of Coastal Research* 44 (Spring 2005): 7-39.

¹⁰ For a brief overview of the “dead zone,” see Dan Ferber, “Dead Zone Fix is Not a Dead Issue,” *Science* (305), September 10, 2004: 1557.

¹¹ On sugar production and consumption see Sidney Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (New York: Penguin, 1985).

¹² Blackburn, *Making of New World Slavery*, 561.

¹³ On the global warming hypothesis, see PJ Webster, GJ Holland, JA Curry, and HR Chang, “Changes in Tropical Cyclone Number, Duration, and Intensity in a Warming Environment,” *Science* (309), September 16, 2005: 1844-1846 and TR Knutson, RE Tuleya, and Y Kurihara, “Simulated Increase of Hurricane Intensities in a CO₂-Warmed Climate,” *Science* (279), February 13, 1998: 1018-1020; on the AMO, see SB Goldberg, CW Landsea, AM Mestas-Nunez, and WM Gray, “The Recent Increase in Atlantic Hurricane Activity: Causes and Implications,” *Science* (293), July 20, 2001: 474-479.

¹⁴ For the French slave trade to Louisiana, see Gwendolyn Midlo Hall, *Africans in Colonial Louisiana* (Baton Rouge: LSU Press, 1992), chapters 2 and 3. For the slave trade to Sapinsh Louisiana, chapter 9.)

¹⁵ The cognitive decision-making powers of peasant societies are sometimes decentralized and hidden in ritual. For an analysis of Balinese peasant society along these lines – and the superiority of these practices to centralized and bureaucratized decision-making – see Stephen Lansing, *Priests and Programmers* (Princeton: Princeton University Press, 1991).

¹⁶ See Mintz, *Sweetness and Power*, 51-57 for industrialization and proletarianization in sugar production.

¹⁷ Judith Carney, *Black Rice: The African Origins of Rice Cultivation in the Americas* (Cambridge MA: Harvard University Press, 2002).

¹⁸ According to William Fogel and Stanley Engerman, *Time on the Cross: The Economics of American Negro Slavery* (New York: Norton, 1974), “While the great majority of slaves were agricultural laborers, it is not true that these agriculturalists [were proletarianized. Most] slaves engaged in the full range of agricultural activities. These included the planting, raising, and harvesting of virtually every type of crop, as well as animal husbandry, dairying, land improvement, use and maintenance of equipment and machinery, and the construction of buildings,” p. 41.

¹⁹ Slave resistance and revolt, while much-studied by academics, is sometimes under-appreciated in popular consciousness. For good treatments of slave resistance, see Midlo Hall, *Africans in Colonial Louisiana*; Berlin, *Generations of Captivity*.

²⁰ CLR James’s *The Black Jacobins: Toussaint L’Ouverture and the San Domingo Revolution* (New York: Vintage, 1989; originally published in 1938) remains indispensable.

²¹ On sugar and tea, see Mintz, *Sweetness and Power*; on coffee and other stimulants in European modernity, see Wolfgang Schivelbusch, *Tastes of Paradise: A Social History of Spices, Stimulants, and Intoxicants* (New York: Vintage, 1993); on coffee and tea as source of caffeine, see Bennett Weinberg and Bonnie Bealer, *The World of Caffeine: The Science and Culture of the World’s Most Popular Drug* (New York: Routledge, 2002). On the Opium Wars, see Peter Ward Fay’s baroquely titled *The Opium War, 1840-1842: Barbarians in the Celestial Empire in the Early Part of the Nineteenth Century and the War by Which They Forced Her Gates Ajar* (Chapel Hill: University of North Carolina Press, 1998).

²² Louisiana industrial sugar production did not begin until 1795. See John Rodrigue, *Reconstruction in the Cane Fields* (Baton Rouge: LSU Press, 2001), p. 11; Ira Berlin, *Generations of Captivity: A History of African-American Slavery* (Cambridge MA: Harvard University Press, 2003), p. 146. For a general treatment of 18th century Louisiana, see Midlo Hall, *Africans in Colonial Louisiana*.

²³ On the effects of the Natchez rebellion, see Midlo Hall, *Africans in Colonial Louisiana*, Chapter 4; Berlin, *Generations of Captivity*, 42-43; 88.

²⁴ Rodrigue, *Reconstruction*: 11, Berlin, *Generations*: 148.

²⁵ On Jefferson’s support for Napoleon’s attempt to restore slavery in Saint Domingue, and his punitive embargo after Haitian independence, see Garry Wills, “*Negro President*”: *Jefferson and the Slave Power* (Boston: Houghton Mifflin, 2003): 42-43; and

Robin Blackburn, *The Overthrow of Colonial Slavery: 1776-1848* (London: Verso, 1988): 283.

²⁶ For a refreshingly critical overall look at Jefferson, see Wills, “*Negro President*”; on Jefferson’s sales of slaves, 121. On the magnitude of the internal slave trade, see Berlin, *Generations*, p. 161: “Driven by the cotton and sugar revolutions in the southern interior, the massive deportation [a “Second Middle Passage”] displaced more than a million men and women, dwarfing the transatlantic slave trade that had carried Africans to the mainland.”

²⁷ For details on the demands on the human body of industrial sugar production in the Caribbean, see Mintz, *Sweetness and Power*, Chapter 2, especially 49-51. For mortality rates, see Robin Blackburn, *The Making of New World Slavery: From the Baroque to the Modern: 1492-1800* (London: Verso, 1997): 339.

²⁸ See James, *Black Jacobins*: 16, on infanticide by inducing the “jaw-sickness.”

²⁹ Blackburn, *Making of New World Slavery*, 459; 465-67.

³⁰ On the Pointe Coupee conspiracy and its effects on the psychology of white Louisianans, see Midlo Hall, *Africans in Colonial Louisiana*, Chapter 11.

³¹ On rumor and race in America, see Gary Fine and Patricia Turner, *Whispers on the Color Line* (Berkeley CA: University of California Press, 2001). On the somaticization of trauma, see Joseph LeDoux, *The Emotional Brain* (New York: Simon and Schuster, 1996): 179-224.

³² The “pressure surge” accompanying a hurricane, as water rises due to low air pressure, is quite small in comparison to the wind-driven storm surge.

³³ An excellent primer on hurricane formation can be found on the NASA website at: <http://earthobservatory.nasa.gov/Library/Hurricanes/printall.php>.

³⁴ On the last-minute swerve of Katrina, as well as its weakening, perhaps due to “eyewall replacement,” see John Travis, “Scientist’s Fears Come True as Hurricane Floods New Orleans,” *Science* (309), September 9, 2005: 1656-1659.

³⁵ General Carl Strock of the Army Corps of Engineers claims that coastal erosion did not play a role in the storm surge of Hurricane Katrina, because the storm bypassed the barrier islands south and west of the city. US Army Corps of Engineers Press Release, September 3, 2005. <http://www.usace.army.mil/PA-09-01.pdf>. This claim has not been seconded by any other hurricane expert to my knowledge.

³⁶ Michael Grunwald and Susan B. Glasser, “Experts Say Faulty Levees Caused Much of Flooding,” *Washington Post*, September 21, 2005, Page A1.

³⁷ Bourne, “Gone with the Water”; Fischetti, “Drowning New Orleans”; see also the LSU documents on the “Hurricane Pam Exercise”:

http://hurricane.lsu.edu/floodprediction/PAM_Exercise04/.

³⁸ Wills, “*Negro President*,” p. 7.

³⁹ On England, see Blackburn, *Making of New World Slavery*. On the Northeastern United States, see Ronald Bailey, “‘Those Valuable People, the Africans’: The Economic Impact of the Slave(ry) Trade on Textile Industrialization in New England,” in D. Roediger and MH Blatt, *The Meaning of Slavery in the North* (New York: Garland, 1998).

⁴⁰ The infamous Gretna bridge incident, where police blocked passage of refugees from Katrina coming out of New Orleans, is a singularity marking a threshold along a racial differential: New Orleans is 66% black, Gretna is 33% black. See Chip Johnson, “Police Made Their Storm Misery Worse,” *San Francisco Chronicle*, September 9, 2005.

⁴¹ On the multiplicity linking differentials in topography and racial population in the New Orleans area, see Colten, *Unnatural Metropolis*.

⁴² Some of those who stayed behind were “essential personnel” for city government and private business; these people were required to stay by their employers. Those dependent on these “essential personnel” also tended to stay.

⁴³ On Blackwater and other private firms, see Jeremy Scahill, “Blackwater Down,” *The Nation*, October 10, 2005: <http://www.thenation.com/doc/20051010/scahill>; on “demographic” changes, see Christopher Cooper, “Old Line Families Escape the Worst; Plot the Future; Mr. O’Dwyer, at His Mansion, Enjoys Highball With Ice; Meeting With the Mayor,” *The Wall Street Journal*, September 8, 2005, Page A1.

⁴⁴ As reported in *The Wall Street Journal*, September 15, 2005, page B1: “Congressional Republicans, backed by the White House, say they are using relief measures for the hurricane-ravaged Gulf coast to achieve a broad range of conservative economic and social policies, both in the storm zone and beyond. Some new measures are already taking shape. In the past week, the Bush administration has suspended some union-friendly rules that require federal contractors pay prevailing wages, moved to ease tariffs on Canadian lumber, and allowed more foreign sugar imports to calm rising sugar prices. Just yesterday, it waived some affirmative-action rules for employers with federal contracts in the Gulf region.”

⁴⁵ Among the most prominent of the Hobbes-mongers:

(a) Rich Lowry, “A National Disgrace,” *National Review Online*, September 2, 2005: <http://www.nationalreview.com/lowry/lowry200509021258.asp>

(b) Timothy Garton Ash, "Just Below the Surface," *Guardian Weekly*, September 9, 2005: <http://www.guardian.co.uk/guardianweekly/story/0,,1570706,00.html>

(c) George Will, "Leviathan in Louisiana," *Newsweek*, September 12, 2005: <http://www.msnbc.msn.com/id/9014028/>

⁴⁶ The mostly likely origin of the "riot" rumor is that panicked prisoners, locked in their cells and abandoned by guards fleeing the building, were making noise to be rescued, as reported by Human Rights Watch:

<http://www.hrw.org/english/docs/2005/09/22/usdom11773.htm>.

⁴⁷ The following articles debunk the "carnage" myths:

(a) Gary Younge, "Murder and Rape: Fact or Fiction?," *The Guardian*, September 6, 2005: <http://www.guardian.co.uk/international/story/0,,1563470,00.html>

(b) CNN: "Police reject 'vicious rumors' of dead children; no confirmed sexual assaults" September 9, 2005, 1:02 p.m. posting: <http://www.cnn.com/2005/US/09/07/news.update/index.html>

(c) Brian Thevenot and Gordon Russell, "Reports of anarchy at Superdome overstated," *Seattle Times*, September 26, 2005: http://seattletimes.nwsourc.com/html/nationworld/2002520986_katmyth26.html

(d) Jim Dwyer and Christopher Drew, "Fear Exceeded Crime's Reality in New Orleans," *New York Times*, September 29, 2005. <http://www.nytimes.com/2005/09/29/national/nationalspecial/29crime.html>

⁴⁸ Gordon Allport and Leo Postman, *The Psychology of Rumor* (New York: Henry Holt, 1947).

⁴⁹ Fine and Turner, *Whispers on the Color Line*, 42-51.

⁵⁰ This interpretation has been offered by my colleague, Alexandre Leupin. It should be noted that any surprise at "black" government officials repeating racialized rumors relies on the faulty assumption of a binary racial system in New Orleans and furthermore overlooks the taking up by the NOPD of the traditional role of "free people of color" in maintaining slave order.

⁵¹ Brigadier General Gary Jones, commander of the Louisiana National Guard's Joint Task Force, as quoted in *Army Times*, September 2, 2005.

⁵² <http://www.whitehouse.gov/news/releases/2005/09/20050915-8.html>. This is not the time to enter the details of the controversy surrounding the possible or threatened invocation of the "Insurrection Act" as it would affect relations between state and federal officials concerning the federalization of military operations versus the maintenance of state control over the Louisiana National Guard.

⁵³ Now it is true that the NOPD is, by general acclaim, probably the worst police department in the country: underpaid, undertrained, overly corrupt, homicidal and fratricidal. And they would be motivated to cover up violence at the Convention Center and Superdome so they could claim that guarding the French Quarter antique shops instead of the people in the shelters didn't really hurt anyone. Still, to propose a conspiratorial cover-up here is more than far-fetched, since many government agencies, not just the NOPD, would have to have been involved. What were far-fetched in the first place were the rumors of mass rape and carnage.

⁵⁴ “This American Life,” September 9, 2005: “After the Flood”: www.thislife.org.

⁵⁵ Hobbes will acknowledge the possibility of temporary alliances in the state of nature, as in this passage from *Leviathan* Chapter 13, “On the Natural Condition of Mankind,” where he writes: “if one plant, sow, build, or possess a convenient Seat, others may probably be expected to come prepared with forces united ...” So while people can form temporary alliances in the state of nature, they won't be able to form durable political units, if these fall short of the absolute sovereign. Time scales are the key here: the longer the state of nature goes on (and Hobbes is as equally concerned with competition for honor in the state of nature as he is with competition for material goods) the more the atomizing forces take hold.

⁵⁶ A classic argument making this case is Barry Schwartz, Richard Schuldenfrei and Hugh Lacey, “Operant Psychology as Factory Psychology,” *Behaviorism* 6 (1979): 229-254.

⁵⁷ See Horst Hendriks-Jansen, *Catching Ourselves in the Act: Situated Activity, Interactive Emergence, Evolution, and Human Thought*. (Cambridge MA: MIT Press, 1996): 252-277 for a fascinating discussion of caretaker-infant interaction, with extensive citations of the relevant literature. For a brief account of brain development in general, including the controversy between the instructionists and the selectionists, see Joseph LeDoux, *Synaptic Self: How Our Brains Become What We Are* (New York: Penguin, 2003).

⁵⁸ Frans De Waal, *Good Natured: The Origins of Right and Wrong in Humans and Other Animals* (Cambridge MA: Harvard University Press, 1996).

⁵⁹ Debra Niehoff, *The Biology of Violence* (New York: Free Press, 1999) provides extensive references to the scientific literature. A brief online introduction to “trauma theory” is provided by Sandra Bloom at www.sanctuaryweb.com/Documents/Downloads/Trauma%20theory%20abbreviated.pdf

⁶⁰ A good place to start is with one of the last works by the great biologist and biophilosopher Francisco Varela: Evan Thompson and Francisco J. Varela, “Radical Embodiment: Neuronal Dynamics and Consciousness,” *Trends in Cognitive Science* 5 (2001): 418-425.

⁶¹ On mirror neurons, see C Keysers, E Kohler, MA Umiltà, L Nanetti, L Fogassi, and V Gallese, “Mirror Neurons and Action Recognition,” *Experimental Brain Research* 153 (2003): 628-636; Vittorio Gallese, “The ‘Shared Manifold’ Hypothesis: From Mirror Neurons to Empathy,” *Journal of Consciousness Studies* 8.5-7 (2001): 33-50; Evan Thompson, “Empathy and Consciousness,” *Journal of Consciousness Studies* 8.5-7 (2001): 1-32. On the methodology implicit in the linking of brain activity to what is “experienced and described,” see Francisco J. Varela, “Neurophenomenology: A Methodological Remedy for the Hard Problem,” *Journal of Consciousness Studies* 3.4 (1999): 330-349.

⁶² For social solidarity through entrainment, see William McNeill, *Keeping Together in Time: Dance and Drill in Human History* (Cambridge MA: Harvard University Press, 1995). For a general treatment of entrainment, see Steven Strogatz, *Sync: How Order Emerges From Chaos in the Universe, Nature, and Everyday Life* (New York: Hyperion 2003).

⁶³ Many thanks to my research assistant, Ryanson P. Ku, and to comments from James Williams, Mark Bonta, Robin Durie, Paul Patton, and Jeff Nealon.