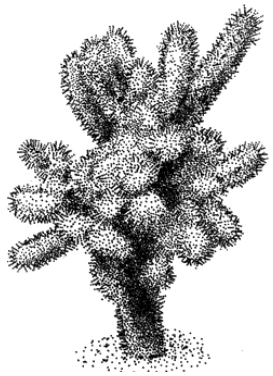

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The Racial Discourses of Life Philosophy

Négritude, Vitalism, and Modernity

Chapter 1: On the Mechanical, Machinic, and Mechanistic

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CHAPTER ONE

On the Mechanical, Machinic, and Mechanistic

Jacques Hymans, the author of perhaps the richest history of the intellectual influences on Senghor, has shown that Bergson and the Catholic mystic inspired by him, Charles Péguy, gave Senghor the critical framework in which to question "the ability of the capitalist, individualist and mechanized West to solve its own problems, especially after the 1929 'crash.' "[1] Both the West and its colonies understood the crisis of the interwar years as a metaphysical crisis of a cold, bloodless, and mechanical civilization. A comparison of lyrical passages from the German philosopher Max Scheler and the founder of *Négritude* is quite suggestive. Scheler wishes for the first steps into a new flowering garden for the European man, who is imprisoned in a dark environment "bounded by reason solely directed at what can be measured or mechanized."[2] Senghor writes

> Let us answer "present" at the rebirth of the World
> As white flour cannot rise without the leaven
> Who else will teach rhythm to the world
> Deadened by machines and canons?
> Who will sound the cry of joy at daybreak to wake orphans and the dead?
> Tell me, who will bring back the memory of life
> To the man of gutted hopes?
> They call us men of cotton, coffee, and oil
> They call us men of death
> But we are men of dance, whose feet get stronger
> As we pound upon firm ground?[3]

Senghor's African has a lesson, then, for Scheler's "European Man of today and yesterday, who, sighing and groaning, strides under the burden of his own mechanisms."[4] For Senghor, mechanism was more a metaphysic

than a technology, or, rather, Western technology was a materialization of this metaphysic. In fact, Aimé Césaire would famously and disturbingly proclaim that the putative African failure in technology revealed the existence of an alternative, superior epistemology unforgotten in the course of colonial slavery, but as Senghor suggests, such technological nihilism was itself the product of the rationalization of slaughter in the Great War.[5] In this chapter, I want to explore the anxieties underlying such a metaphysical critique. There can no appreciation, critical or otherwise, of *Négritude* without recognition of the real depth of such concerns.

Upon careful study, one finds that different kinds of anxieties and critiques have been run together, and, simultaneously, one also finds that the life principle itself, no matter how primordial a force it is often claimed to be, is in fact a reactive banner and a contrastive. Despite Gilles Deleuze's attempt to understand life as positive difference, doctrinal vitalism has ironically remained a critical project, defined less affirmatively than as the negation of its own negation—the mechanical, machinic, and the mechanistic. Indeed, Georges Canguilhem would write: "The rebirths of vitalism translate . . . life's permanent distrust of the mechanization of life. In them we find life seeking to put mechanism back into its place within life."[6] To be sure, vitalism defined itself not only in reaction to mechanisms, mechanical laws, machines, and automatons; Tom Quirk has shown how Bergsonian vitalism also provided the language of revolt against the Anglo-American naturalism of the nineteenth century.[7]

But in this chapter I shall try to make sense of the common notion that Western civilization had been mechanistic not only in terms of its methods of industrial, machinic production and, after the Great War, tools of mass slaughter but also in terms of its modes of self-understanding and being-in-the-world. Opposition to such a mechanistic worldview was expressed, as noted, both within and outside the West. Machines had become man's destructive capacity, and antimechanistic ideas resonated loudly. Yet exactly what is being decried as mechanistic is not clear. The ambiguity is compounded by the fact that over the modern period these terms—machine, mechanical, and mechanistic—have not kept in the sciences or in the arts single, well-defined, and fixed meanings. In this chapter, I have tried to achieve some clarity.[8]

To begin with, the machine certainly provides us with an image of the repetition of the same operations. Regularity issues from the setting in motion of an artificially constructed group of material parts. This repeatability can be understood in terms of how the parts hold together. Mechanical

foundations of Bergson's theory of humor, as it depends on a contrast between human life and machines that are repetitive, regular, and unchanging in their behavior. To laugh at the mechanical in us we must have confidence that we could be more supple and attentive than machines. Yet it is that very assumption which is now likely often to be the source of comedy. I think here of an episode of the American television series *The Office*, in which two paper salesmen attempt to stave off the threat of an automated Web site to their jobs. But the workers become the object of derision as their efforts to make sales through the "human touch" of gift baskets seem contrived (suggesting here mechanical) compared to automated e-mails and databases that offer cost savings, memories of past purchases, and reminders of which supplies are probably running low (and compare here the interactive and changing replies of a Web-based bookseller's automatic recommendations with the likely mechanical interaction with the staff at a local bookshop). The machine may well seem more innovative and supple in its response than the human actor. We may now suspect life of outdated machinic behavior and expect lifelike behavior from today's machines. Today, a Cartesian intuition that we are ontologically more than machines is likely not what comedy reawakens us to but what it derides. That we are in fact machines only up to a point is not an indication of our autonomy but of our failings.

science was based on the decomposability of things, not their indivisibility or individuality. Perhaps inspired by the machinists and practical tinkerers, natural philosophers or scientists were then able to discover in nature mechanical laws that described a similar regularity and determinism with regards to gross matter in general under controlled experimental conditions, whether that matter be liquids, solids, or gases. (The strict obedience of all aspects of the material world to precise quantitative law may have also been a projection onto the messy, probabilistic world of nature or the fantasy of blind submission of subjects to the law of the sovereign.) Nonetheless, processes proved to be, more or less, predictable and therefore, interestingly enough, reliable; machines built on the principles of mechanics proved more reliable and less error ridden than the human labor they replaced. Even human behavior was thought to be mechanical, that is, perfectly proportionate and typical in response to stimuli. One of the most important literary historians of vitalist thought, Sanford Schwarz, has underlined the importance to modernist aesthetics of Bergson's refusal to understand the psyche in terms of a mechanical physis in which identical causes yield identical results as positivistically described in precise quantitative law.[9] To the extent that human behavior proved amenable to such scientistic understanding, Bergson only found comedy: "the laughable element," he wrote, consists of "a certain kind of *mechanical elasticity*, just where one would expect to find the wide-awake adaptability and living pliableness of a human being."[10]

From the example of life even at the cellular level, much less the human organism, it could be argued that the reign of the mechanical was or should not be universal: life, as a zone of indetermination, is at least potentially self-directed, unpredictable, unreliable, and even free. All phenomena, in particular living processes, did not fall, in other words, under deterministic laws. In particular, mechanics as the study of the displacement of things left as a mystery the purposes of living things. Pheng Cheah draws out the destructive conclusions of mechanical causality for our sense of the essence of organic life:

> The sensible natural world is a mechanism in two senses: the movement of different parts exhibits a blind necessity or predetermined regularity that can be expressed through mathematical formulae. More importantly, no part of nature is self-sufficient because no occurrence or movement can operate without being first set in motion by something other. . . . The spontaneous self-causality of freedom is thus antithetical to mechanical causality.[11]

The mechanical worldview does not seem to accommodate the self-directedness, change, unpredictability, and freedom of life. Against his own intent, René Descartes is widely considered to have provided a reductionist, mechanistic metaphysics.

Descartes: The Animal Machine and the Human Spirit

Scholarship on Descartes' epochal importance fills many libraries; I shall be selective here. A youthful Senghor declaimed a desire to take a machete to his work. Of course, for the *Négritude* poets, Descartes represented the ontological thesis, as already suggested, that even living organisms could be likened to the interaction of material components in a machine. Such philosophical mechanism came into existence in the sixteenth and seventeenth centuries and was associated with the concepts of atomism and "matter in motion."

Mechanism itself defies simple definition. In *The Mechanization of the World View*, E. J. Dijksterhuis never once spells out a definition but traces the changing contours of the word over close to two millennia.[12] Yet for my purposes, the story does indeed begin with Descartes, whose revolutionary attempt to study reality as moving forms of space privileged the mathematical aspects of objects—their size, shape, and quantity—and emptied the natural and nonhuman animal world of animation, internal spontaneity, and purpose. All could be reduced to matter in motion and explained in terms of mechanism. The distinctions between matter and life, as well as between automatons and volitional organisms, had all been putatively proven to be otiose. The heart was not to be understood as similar to a pump but to be in fact, as we now practically know, a pump, specifically a double pump, making the analogy to pipes for circulating water exact. Mechanics simply meant that something could be imitated by a mechanical model, the iconic model being the coordinated parts of a clock. In his *Treatise on Man*, Descartes offered this well-known, yet still astonishing, analogy:

> I suppose the body to be nothing but a machine. . . . We see that clocks, artificial fountains, mills and other such machines, although only man-made, have the power to move of their own accord in many different ways. . . . Indeed, one may compare the nerves of the [animal] machine I am describing with the pipes in the works of these fountains, its muscles and its tendons with various devices and springs which serve to set them

their own class position, come to behave as quasi-automatons, as comedic performers.[95] In "Men and Machines," Bourdieu developed his key concept of habitus to explain how in the absence of actual mechanical causality in social relations purposive agents nonetheless appear as if their actions are dictated by and in conformity with their class milieu. In other words, Bourdieu's sociology of reproduction aimed to show why it was that social life actually plays out as a Bergsonian comedy. Accused countless times of holding an elitist, if not contemptuous, view of social actors, Bourdieu was able to wave away often strident and humorless reactions against his theory of "the automatisms of the practical sense,"[96] perhaps because his sociological masterpieces were never meant as a nuanced theory of action but (maybe even unbeknownst to himself) as a comedy of class society, a risible provocation.

But if for Bergson and many others the comic parodies how living beings act as machines, as mere things, then Marx parodied market society, because in it inanimate things actually appeared to have the property of active living beings. One need only refer here to Lash and Lury's recent study, just referenced, of how brand names and logos are charged with more energy and puissance than the commodity itself ever was. Marx found the transposition of life to things as well in money, machines, and land, all of which fantastically appeared to be themselves creative sources or active factors in the production of value. Money, through the mere passage of homogeneous empty time, seems to occult itself into principal and interest; capital goods or machines, though objectified or dead labor, seem to create, as a result of the illusions of competition, new value; and land, though only a magnet for extra surplus value, seems itself a source of value and is thus paid rent. Inert things seem to be the active sources of value and are rewarded as such. The market is a *mise-en-scène* in which Monsieur Capital and Madame de la Terre do their "ghost walking." Anticipating Bergson's automaton theory of humor only to reverse it, Marx's *Capital* is properly appreciated as a comedy of bourgeois society: implicit in the theory of fetishism is an animist theory of humor rather than simple irony or parody.[97]

While Marx seems to have inverted what Bergson would later describe as comedy—comedic is the conviction that there is living activity in inert things (of course, there is tragedy in Marx as well: the working class, out of the recesses of its own being, creating a system in which they are subject to cost reductions, as if they are any other physical input to the production process)—today technological development has weakened the

other than a hunger which can no longer climb to the rigging of his voice,
a sluggish flabby hunger,
a hunger buried in the depth of the Hunger of this famished More.[91]

Speaking of a lighter condition, Césaire's fellow *Négritude* poet, the Guyanese Leon Damas, mocks rigid conformity to French manners:

French man's French,
"My mother hoping for a son well table mannered . . .
A bone is eaten with restraint and discretion
A stomach should be polite
Learns not to belch . . .
A well bred nose
Does not mop up the plate . . .
Tell me about the disaster
Tell me about it"[92]

Only the oppressed, Rene Ménil argues, are able to express and enjoy "humour's bitter laughter":

> The leap of the mind that escapes the futility of everyday life is nothing but the very surge of the life instincts tugging away at and breaking the bridle of individual and social laziness. Humour is precisely the awareness of our diminished and restrained life as well as revenge against this diminution and restraint and the triumphant cry of the liberated mind . . . too bad for the marionettes we are.[93]

And this theory of humor, broadly understood, is implicit in much of our contemporary critical theory. Judith Butler's theory of drag as parody, for example, argues that mimicry can reveal how mechanical we are in the assumption of our identities; in a way, the drag queen reveals normal men and women to be marionettes controlled by a gender system. The laughter elicited by the drag queen may well be, in Bergson's language, "a benign force" meant "to correct the inability to be flexible" in our gender behavior.[94]

One is also reminded here of Pierre Bourdieu. Though a steadfast and at times tiresome defender of science and objectivity, the sociologist worked as a Bergsonian comic, for his concept of *habitus* is meant to explain how people, in unconsciously acquiring dispositions for the reproduction of

> in motion . . . the digestion of food, the beating of the heart and arteries . . . respiration, walking . . . follow from the mere arrangement of the machine's organs every bit as naturally as the movements of a clock or other automaton follow from the arrangements of its counterweights and wheels.[13]

The ontological mechanism, introduced by Descartes, worked its way from matter to the so-called lower animals to man (whom alone Descartes had raised above the mechanical, perhaps in fear of the persecution suffered by Galileo).[14] From the seventeenth century on, there emerged iatrophysicians, those who applied the general theory of mechanical activation to organic activities as digestion, blood circulation, and respiration. Technologists succeeded in the actual construction of uncanny mechanical models of living organisms, including Jacques de Vaucanson's flute-playing android and his mechanical duck, which was seen to digest food.[15] It is not easy to lose sight of the gains to knowledge we have enjoyed due to the search for step-by-step description/explanations of how the components in living systems interact to yield outcomes or processes.[16] Yet once implicated in the mechanistic worldview, physiology was reduced to a model of "corpuscles moving at a differential rates in space and exerting pressure on one another,"[17] and the internal aspects of the organism—its teleological behavior, its ability to adapt means toward given ends—are not only left mystified, but the organism should also simply wind down, even though life is also a process of self-repair and self-equilibration. Indeed, Descartes held that "life was to death as a watch wound up was to one that had run down."[18] Self-repair and other peculiarities of life—the miracle of embryonic differentiation, the complexification of astonishingly well-adapted life forms, the maintenance of heat, and metamorphoses—had long seemed to point to the existence of an immaterial vital force. Moreover, it remained true that while a machine could be taken apart and the parts assembled again into the old machine or a new one, no such reduction of the organism was, at that time, possible without the elimination of all that was living about this configuration of material parts. The living organism appeared indivisible or living exactly because it *was* indivisible. Nevertheless, the metaphysical mechanists attempted to take hold of the world as if there were no difference between a running clock and a growing tree or even a creative human being.

As Henri Bergson would later emphasize, vitalism at the very least served the scientific function of underlining what escaped mechanism's world view.

The vitalists' vital principle—their *vis vitalis*, *vis insita*, *vis nervosa*—all indicated explanatory limits more than metaphysical speculation. Indeed, it seemed that scientists less explained organismic phenomena, as empirically observed, than forced them into a mechanistic picture, even though organisms from beetles to humans, which actively solve problems in their environment, could hardly be reduced to automata that simply responded mechanically to stimuli.[19] Vitalism thus seemed to save the phenomena even if did posit metaphysical substances.

Indeed, it is easily forgotten that mechanical materialists were themselves forced, against all empirical evidence, into a highly speculative theory of preformation, for without a mysterious vital substance they had no other way of understanding how life itself was reproduced. Provocatively suggesting that these same mechanical materialist views survive today in new ideas about genetic determinism, Jane Maienschein has underlined the antiempiricist premises of earlier critiques of putatively metaphysical vitalist biology:

> The most important alternative to vitalism came from materialistic preformationism. It was not much that they started with preformationism, a conviction that all body parts exist from the beginning of the organism, preformed and ready to grow. Rather, materialists or mechanists began by seeking to banish all vital forces or entities from science and to account for life, as for all of nature, in terms of matter in motion. Since explaining the generation of form from unformed, effectively homogeneous matter seemed to require some vitalistic and often teleological cause that was hence not strictly material, and since this was *a priori* unacceptable to materialists, they arrived at the conviction that form must be there from the beginning. Building the form in from the beginning had the considerable advantage, therefore, of providing an explanation without invoking non-materialistic causes. The preformationists were so guided by their grounding in materialistic assumptions that they accepted the necessity of the form's existence even if they could not see it. Not seeing should not necessarily lead to not believing; in other words, for preformationists empiricism cannot provide reliable knowledge.[20]

However, Descartes himself did implicitly locate a split between mechanism and vitalism in the difference between nonhuman animal and human life. For him, even the former—*bete-machine* (beast machine)—was understood as a mechanism, an automaton, while "man, by his abilities to reason,

reflections are often read as psychoanalytic. But they rather reflect an attempt, similar to Bakhtin's, to rework Bergson's theory in the context of a class society. Of course, Freud did understand unconscious mental behavior as akin to something mechanical, machinelike. As Eric Santner has eloquently shown, working through is the "affect laden process of tranversing and dismantling defensive fantasies, the structured undeadness that keeps us from the opening to the midst of life and neighbor/stranger who dwells there with us."[88]

For Ménil, Césaire's humor succeeds in allowing ordinary blacks to laugh, specifically, at what is mechanical in them as a result of colonial conventions. Let me emphasize that Ménil is definitely reworking Bergson's theory here, as Bergson not only evades the roots of mechanical behavior in the class and racial divisions in society but also offers racist ruminations himself. In a discussion that is disturbing and nearly incoherent (as well as ignored in the secondary literature), Bergson wonders why "we" laugh at blacks. He emphasizes that blacks are thought of as unwashed, which to him somehow means that they are thought to be appearing in disguise. He also suggests that "we" laugh at blacks for the same reason we laugh at "clowns with red noses."[89] The joke seems to be not only that the person is simply wearing the clown suit of black skin but that he cannot take it off and regain the suppleness and freedom of the underlying active white subject. Black people are for Bergson tragic comedy.

As Ménil shows, however, Césaire's humor is specifically aimed at "cultivated Caribbean circles": their "pretension numbs the mind, solemnity curbs derision, sentimentality fossilizes feelings, and self-importance prompts stiff gestures whose ridiculousness somehow escapes" them.[90] After one of the most harrowing poetic descriptions ever written of the devastating effects of poverty on the human condition, Césaire then mocks the automatons of colonial authority:

> And neither the teacher in his classroom, nor the priest at catechism will be able to get a word out of the sleepy little nigger, no matter how energetically they drum on his shorn skull, for starvation has quicksanded his voice into the swamp of hunger (a-word-one-single-word and we-will-forget-about-Queen-Blanche-of-Castille, a a-word-one-single-word, you-should-see-this-little-savage-who-doesn't-know-any-of-The-Ten-Commandments)
>
> for his voice gets lost in the swamp of hunger,
> and there is nothing, really nothing to squeeze out of this little brat,

or complete similarity, we suspect the operation of a mechanism behind the living exterior."[82] Bergson also gives the example of the jack-in-the-box—here we have a bouncing repeated movement, comedy in repetition.[83] What the jack-in-the-box allows us to grasp is the difference between mere oscillation and a living adaptation or development of character, and this helps us reflect on how too many human responses are mechanical in form. As Scott Lash and Celia Lury have written, Bergson compares mechanistic matter with vitalist memory to show that "the comic, like matter, works through cause and effect. Life, and narrative drama, for Bergson comprise memory that is constituted in the interval between cause and effect, between reaction and action. The comic is cause and effect without interval. There is a depth to narrative, to the novel, which contrasts with the surface-like nature of the cartoon and the comic."[84] As Bergson himself writes:

> The rigid mechanism which we occasionally detect, as a foreign body, in the living continuity of human affairs is of peculiar interest to us as being a kind of absentmindedness on the part of life. Were events unceasingly mindful of their own course, there would be no coincidences, no conjunctures, and no circular series: everything would evolve and progress continuously. And were all men always attentive to life, were we constantly keeping in touch with others as well with ourselves, nothing within us would ever appear as due to the working of strings or springs. The comic is that side of a person which reveals his likeness to a thing, that aspect of human events which, through its peculiar inelasticity, conveys the impression of pure mechanism, of automatism, of movement without life. Consequently, it expresses an individual or collective imperfection which calls for an immediate corrective. This corrective is laughter, a social gesture that singles out and represses a special kind of absentmindedness in men and in events.[85]

For Bergson, laughter is social therapy for action that has become mechanical, machinelike. This corrective theory seems to have influenced Mikhail Bakhtin, for whom the petrifaction of official culture and the encrusted rigidity of elites creates the stage for subversive laughter at the mechanical movements of the powerful.[86] The influence is also present in the essay on humor by Rene Ménil, one of the founders and later critics of *Négritude* and perhaps the movement's most brilliant essayist.[87] Because there is explicit reference to Freud, though in an offhanded way, Ménil's

to speak a language, to direct his actions and to be conscious of his cognitions is categorically not an animal."[21] That is, only man truly acted rather than reacted; since his actions were trigged by internal mental acts rather than only by the impingement on the senses of external objects, he alone was capable of voluntary rather than involuntary mechanical actions. The correlative automatonization of nonhuman animals led the Cambridge Platonist Henry More to complain to Descartes of "the sharp and cruel blade [with] which in one blow, so to speak [you] dared to despoil of life and sense practically the whole of race of animals, metamorphosing them into marble statues and machines."[22] The Cartesian universe split matter from mind, *res extensa* from *res cogitans*, living machines from the one particular machine capable of thought and reason. As Evelyn Fox Keller writes, the deanimation of nature implicit in its mechanization "seemed merely to enhance man's own sense of animation, an animation now, however marked more by difference from than by kinship with the rest of the natural world."[23]

It proves important that Descartes has reconfigured the inside of man. As Shanker notes, "to the eye of the outside observer, voluntary and involuntary actions look exactly the same. It is only because each individual is able to see and report on his own volitions that we are able to make the fundamental distinction between voluntary and involuntary movements, and because animals lack a similar capacity they are ruled automata."[24] There are surprising connections between the internal self, in virtue of which humanity is alone thought to be alive, and race thinking, which I (drawing from an ignored gem of a paper by the philosopher Stephen Asma) shall discuss in chapter 3. Here I can say that while it would seem that the postulation of a rational soul (or what later was called derisively "the ghost in the machine") would unify humanity in the face of manifest physical differences, the soul or nonempirical self was transmuted and multiplied in vitalist thought into distinct racial essences, invisible themselves or rather only manifest or immanent in the varied histories that the putatively different races had apparently created.

But for the next several centuries, philosophical thought would be focused on Descartes' rupturing of the Great Chain of Being with his bifurcation of automatons and human life.[25] Some would try to restore the continuum by emphasizing that man's higher capacities could be found in lesser degree down the chain, in animals and even inanimate matter; however, the opposite attempt became dominant, and the mechanical movement of matter was analogized to reflex actions and then to thought itself (or, alternatively, thought and consciousness were dismissed as epiphenomenal). In such

radical elimination, the mechanists became committed to the untenable view that there is less in reality than our common-sense conceptions imply and thus exposed themselves to popular skepticism that objective reality could be so radically different from the way our concepts represent it as being. Volition, choice, and purpose were dismissed as epiphenomenal; in the words of the philosophers, metaphysics had become radically eliminativist—though in a surprising twist, the development of technology is leading to the point today where the mind is now asserting itself from the body, with the "replacement of body parts—hips, corneas, hearts, kidneys and the prospect of face transplants" and "new surgical techniques that enable a person to consciously observe doctors re-engineering their organs in real time on the operating room monitor."[26]

Yet even these technological developments do not do away with the precariousness of consciousness, for it has been the development of the impersonal market economy over the last two centuries that has pushed consciousness to the very edges of an alien world, practically where Descartes had located it. Confronting institutions that had taken on the form of an ontological reality divorced from generative social praxis, consciousness had become alienated from and powerless in the world, as Carolyn Porter shows in her pathbreaking analysis.[27] Porter finds that this violent reduction of consciousness culminated in American naturalism; it drew sustenance from the challenge to Cartesian dualism in the many audacious attempts in the nineteenth century to solve the mysteries not only of sentience but of consciousness itself in terms of brain chemistry or the kinds of energy conversion displayed by the extant paradigmatic technology, the steam engine. As J. W. Burrow shows, "complementary discourses in physics, in the chemistry of life and in neurology seemed, optimistically regarded, to promise a whole series of reductions and derivations, from the ultimate laws of physics and chemistry to the functioning of living beings."[28] But, as just suggested, the mechanism and reductionism of scientistic discourse probably would not have taken hold of the imagination without the ravenous development of an impersonal market economy. The impact was at least two fold: First, the more economic forces bore down on people, the more they felt that they had become interchangeable and functional, as if their actions had been mechanically shaped to serve purposes that were not their own in much the same way that machines are made to serve purposes. Second, machines increasingly stood astride peoples' working lives as dominating masters demanding to be fed with raw materials and dictating the movement of workers' limbs and the rhythms

mathematical physics revealed life not only to be a very small corner of the universe indeed but also to be explicable (at least partially) in terms of the categories of pressure and thrust, matter and mechanism, thereby splitting and isolating consciousness from one's own body (now understood as an automaton) and nature, in which man had once been at home, and yielding a dualism that called forth reactions (as I shall show) in German *Naturphilosophie*, British Romanticism, and the Cult of Bergson.[78]

The mechanistic has been here allied with reductionism, the reduction of all life to matter that can be explained fully by the laws of physics and chemistry, even though our actual experience of life is not of its inertness: life does not act in the predictable manner of Newtonian billiard-ball causality until the body is in fact dead. Reductionism, in turn, has led to the importation into biology of the engineering ideal, for once life is nothing other than a special organization of inert matter there is no reason why it cannot be reengineered from the inside out.

The machinic suggested the indifference and aimlessness of nature; nature has been pictured as a machine without sentiment or feeling and natural selection as the nonteleological mechanism by which the organic is adapted despite—in Arthur Lovejoy's colorful phrasing—the monstrous wastage, universal conflict, destruction, and death of those aspirants for life recklessly produced by a teeming Universal Mother.[79] In yet another sense, the mechanistic has been conflated with determinism, the absence of novelty with everything given *ab initio*; according to the laws of conservation of matter and energy, everything is already given and fixed and only rearranged; change is thus pseudochange against a background of constancy. Nothing new ever happens in and through time; there is no truly creative evolution, to use the title of Bergson's most famous book. In this sense, mechanism is also a timeless discourse. Vitalist thinkers rebelled against the scientism that left the world appearing mechanical, cold, indifferent, *geistlos*.[80]

There is yet another sense in which machinic and mechanical have been conceived. In what A. R. Lacey has dubbed "the automaton theory of humor," Bergson found the model of making something funny in "something mechanical encrusted on the living."[81] Bergson's book *Comedy* has doubtless not always been treated with the intellectual seriousness it deserves because of its subject matter, but here we find Bergson's genius at work. For example, mimicry succeeds when one can extract a repetitious form and copy it: "to imitate someone is to detach the element of automatism which he allowed in himself. This automatically makes him funny," as "life, if it is fully alive, ought not to repeat itself. Where repetition occurs,

the construction of a civilization of the universal. As Sylvia Washington Bâ insists, Senghor did not believe races to be pure and insisted that the creative capacities of each race derived from the specific way in which it was a mixture of the same basic elements. Senghor did not think the minds of moderns and primitives were categorically different: prelogicality and logicality were admixed to different degrees in different races. However, Senghor did think these differences to be deep and natural. To be sure, the achievements of other cultures were available to all, but only through a bodily ascesis of inherited temperaments. Wilder suggests that there is a contradiction between Senghor's belief in "transhistorical racial difference" and his promotion of a framework of "cultural and biological *métissage*."[77] The key to Senghor's disturbing theory of race was the belief that differences in degree could be deep and naturalistic.

Senghor's naturalist conception of race also contradicted his spiritualist outlook. Senghor was a follower of Bergson's anti-Darwinian cosmology, based on the principle of an upwardly moving spiritual life force culminating in that civilization of the universal. Senghor's *Négritude* proves an incoherent mix of racial naturalism and spiritualism and a failed and dangerous attempt to accept the putative reality of race for the sake of humane, political ends. However, as I shall argue in the last chapter, Senghor's Bergsonian antirationalism should not be carelessly dismissed as a philosophical irrationalism. Still, developed during his student days during the interwar years in France, Senghor's *Négritude* was constructed in terms of theoretical foundations not African but Catholic, Darwinian, and Bergsonian, and, ironically, the one place where he accepts mechanical thinking is in his understanding of race differences as the outcome of natural selection in various physical settings.

The Multivalence of Mechanism and Comedy

I have tried in this chapter not to define the mechanical, the mechanistic, and the machinic but to suggest their many senses. The reaction against mechanistic forms of thought and mechanical civilization has been deeply felt but little clarified. I have tried to make some effort here. It becomes obvious, however, that there is simply no one meaning over the course of history for the mechanical or the machinic. For the Romantics, the mechanical implied a form of political statis and domination. The mechanistic signified the domination by the inanimate: the Copernican revolution and the rise of

of their work. In this context, it was easy to push antivitalist prejudice so far that even the idea that an organism may be capable of rational decisions independent of triggered responses could be easily dismissed as pure superstition.[29] It was historical conditions, more than philosophical or scientific coherence, that gave the mechanical worldview its sense of superiority to all forms of vitalism, animism, and humanism.

Eventually, the body was reductively understood as a human motor governed by the same laws of energy and entropy as an engine in a factory. Minimal amounts of energy consumption (or nutrition) and optimal utilizations of muscular force were calculated with scientific precision. Human motion was minutely recorded through chronophotography and recomposed for maximum efficiency. This history is related by Bernard Doray in *From Taylorism to Fordism: A Rational Madness* and by Anson Rabinbach in his comprehensive *The Human Motor: Energy, Fatigue, and the Origins of Modernity.* Doray underlines that for Taylor and other exponents of scientific management "the Southern Negro" was especially suited for mechanical work, given his unthinking nature.[30] Here the identification of the "Negro" with the animal or the mechanical (and Descartes had already identified the last two) continues and radicalizes the use of the term "the mechanical" to express class contempt for repetitive, knowledge-dispossessed (rather than simply unskilled), and hence easily replaceable labor. In *Keywords*, Raymond Williams notes the early elitist prejudices against the mechanical associated with manual rather than mental labor.[31] In the course of the Industrial Revolution, the mechanical came to be defined in terms of the union of the manual workers associated with the machine. Marx defined this new machine complex as the union of an independent power source, a transmission technology, and a powered tool. In representing a huge capital investment, the machine demanded continuous operation to avoid depreciation in its value; in displacing the muscle power of adult males, the machine could devour the lives of women and children and thus depress the wage of all workers; and in having its own power source, it set the pace of work and determined the motions of labor. For these reasons, modern technology can be described as alive, as a vital machine, more alive indeed than the operatives who had become interchangeable, indiscernible, deprived thus of even haecceity, any "thisness" at all. They were at best living appendages. By so reducing the human to the mechanical, the Machine Age completed the Cartesian revolution.

The industrial economy was tied discursively to the philosophy and science of mechanical materialism: the properties of the self—freedom,

consciousness, creativity, self-propulsion—came to be understood as mere delusions, or those properties, which had once been the *differencia specifica* of the human mode of being, were transposed to the inanimate world of commodities and machines. Such inversion occasionally gave modern times the form of a dark comedy. Presented, however, more often as a matter of scientific fact was a newly inverted world in which the living served the inanimate: a new world of reduction, in which humanity too is reduced to a mere part of a machine. The human person had apparently been reduced to a *persona ficta*, an automaton; only those features of character conformable to technological and economic institutions were allowed to develop, and the rest were ruthlessly eliminated. American naturalism gave this reduction of character literary—as well as racial—form, for as Colleen Lye has insightfully argued, it was around the figure of the Asian coolie that naturalism found its "archetypally non-individual agencies," "entities without independent agency" who proved "useful to naturalism's representation of modernity's dehumanization of character."[32]

This ruthless "reduction of persons to objects, incapable of responding critically or creatively to world around them" would later call into question the tenets of Enlightenment thinking—the belief in "the capacity of individuals to be guided by reason and conscience," "the confidence society would be subjected to human control," and "the conviction that history would therefore be understood in terms of a humanist teleology."[33] The rise of the mass man was in reality the etherealization of persons. Human cries against the machine rang hollow and became desperate. Bergson's philosophy would come as a relief in the age of the machine.

Drawing from Bergson, the *Négritude* poets radically challenged the mechanistic view of all-being-matter-in-motion not only in terms of its social implications but also at its ontological root; their challenge was philosophical and profound. As I will discuss in the last chapter, their animist, panphysicist response to Cartesian dualism was not first and foremost a manifesto in defense of the living mind endangered by the rise of mechanistic civilization but rather a questioning whether in fact matter was dead. If in fact matter was not lifeless, then what sense could there be in reducing life to nothing more than the organization of matter? Senghor would look into modern subatomic physics for support for the notion of the dematerialization and vitalization of matter, for even dead matter does indeed seem to exhibit a force, gravity, which is inexplicable in terms of the mechanistic worldview. The point here was to make life less of a curiosity or oddity in what was understood as a material and mechanical world.[34]

refuted by this fact that life, obviously a spiritual force, had manufactured "the like apparatus, by unlike means, on divergent lines of evolution": the vertebrates and mollusks did not enjoy a common ancestor after the development of the eye began.[74] Because Bergson argued for the presence of God in roundabout ways and left the description of God opaque, his works were put on the Index to indicate that they were likely to be misinterpreted by a lay audience.[75] But his effort was doubtless the most intellectually serious attempt in his time to rehabilitate or modernize Catholicism on the terrain of scientific inquiry.

Yet the book is also at war with itself. While Bergson intimates the existence of a spiritual life force, he also argues in an anticipation of what is today called evolutionary epistemology—that the human intellect can be understood in purely naturalistic terms as a tool that has evolved for the making of tools, not for the intuiting of a spiritual life force. Bergson seems to be arguing that humanity is at once a form, though a special one, of a creative *élan vital* curiously in and out of the world and a natural being ill equipped by biological evolution to understand the very *élan vital* of which it is alone the self-conscious form. I shall return in my chapter-length discussion of Bergson to the question of why this evolutionary product of the intellect was held responsible for the inability to intuit life.

This same incoherent mix of the spiritual and the natural can be found in Senghor, too. On the one hand, Senghor accepted the Darwinian vision of evolution as a branching tree (as well as the Bergsonian vision of life, as the One that diverges creatively into the Many), for Africans could then be considered to carry in their blood and body a valid solution to their own specific physicogeographic problems. Darwin and Bergson both broke partially with the positivist vision of unilinear evolution. Senghor (though not Césaire) even toyed with the social Darwinian idea that deep differences in racial character may well have developed in the course of evolutionary history: "*nature* has arranged things well in willing that each people, each race, each continent, should cultivate with special affection certain of the virtues of man; that is precisely where originality lies."[76] Most important and insidious was the idea that to the extent that the intellect had not developed in the course of evolution at the expense of intuition to the same degree in the African, this racial type need not self-inflict the same level of cognitive violence on itself to enjoy an intuitive and participatory relationship to the life spirit. What softens the racism is that the races are not different in kind but only in the degrees to which they possess various sensibilities, and these differences should prove complementary in

hardheaded and scientific, was in fact received as a myth, though it did not have the form of a jumble of fantasy and idle speculation characteristic of so-called primitive thought. Anthropologists would sooner understand that seemingly nonsensical primitive myths had deeper and vital significance for the lives of their respective societies than they would understand that science could become the same kind of myth that performs important work for modern culture. Yet in Bronislaw Malinowski's sense, Darwinism did indeed function as a myth that "expresses, enhances and codifies belief . . . safeguards and enforces morality; [and] vouches for the efficiency of ritual and contains practical rules for the guidance of men . . . a pragmatic charter of primitive faith and moral wisdom."[69]

Darwinism provided nature with a theory of its history but then turned nature into a charter—indeed almost a legal precedent—that inculcated a magical belief in the efficacy of ritualistic competition, sanctioned extant social relations in general, and reconciled society to its contradictions. The theory became, as the philosopher of history Ernest Gellner has provocatively argued, a God substitute. The principle of natural selection rendered superfluous "the extraneous savior, redeemer and guarantor."[70] The Victorians could understand evolution as shaped by its own internal and worldly principle of natural selection to be a directional process, which in the words of the historian of archaeological thought Bruce Trigger could, against the fate of entropy, "create order and beauty out of chaos. . . . This teleological view read a moral purpose into the cosmos itself and aligned Darwinism with teleological socio-cultural evolution of the Enlightenment and the evolutionist philosophy of Spencer."[71] Though God was banished, the world was provided with the promise of salvation, "a solution to the problem of evil, the reconciliation of man to his world."[72] History had come to be deified: collective salvation complemented or even replaced individual salvation.[73]

But this theodicy via mechanical, natural processes, though it appealed to many European and American thinkers, did not appeal to Bergson. He believed that there also had to be at work in the world some kind of spiritual or conscious force, although he never did answer of whom this force is an expression. He also did not deny the fact of evolution but argued that it could not be explained in mechanistic or Darwinian terms, and his main example—and here one is reminded of today's debates on Intelligent Design—was the amazing similarity or analogy between the wonderfully intricate eyes of vertebrates and certain mollusks. Spirit alone could be such a craftsman. Bergson thought that mechanism had been

If the winds, seas, and thunder were once thought to be explicable in terms of the life within—spirits, gods, and thus intentions—mechanical philosophy turned the world upside down by seeing in life nothing more than matter in motion governed by strict natural laws. The primitive was thus one who represented "the invisible forces and realities of nature as subjects, i.e., as beings who endowed with consciousness and will power, communicate among themselves and man."[35] The so-called primitive's world was thus pervaded with the attributes of man—it was anthropomorphic. Hylozoism—the belief that life was an integral property of matter that had been a fundamental principle in Western understanding of organisms from ancient pantheism through Leibniz—was replaced by "mechanistic monism," the reduction of organisms to the category of "mere matter." Cartesian mechanism thus did not separate only free men from machines and animals but also philosophical mechanists from animists and moderns from primitives.[36] This is, of course, an important component of the cultural legacy that the *Négritude* poets inherited and reworked in the interwar years.

Frühromantiks on the Mechanical State

The vitalist resistance to mechanism was both ontological and political. Senghor's vision of African socialism was also vitalist in that it expressed the rejection of a mechanical view of political association for an organic one. Pheng Cheah has left no doubt about the importance of the organismic metaphor for the politics of both German idealism and postcolonial literature in his meticulous and stimulating book *Spectral Nationality: Passages of Freedom from Kant to Postcolonial Literatures of Liberation*.

In providing an escape from physical determinism, Cheah argues, the organism allowed the displacement of the mechanical as model of society in three ways: first, the parts and the whole are integrated in an organism such that activities of the parts serve the life of the whole just as the activity of the whole serves the life of the parts; second, the organism itself is an individual, so the parts do not come into accidental relations with each other due to the pursuit of self-interest but are intimately related as part of one and the same history; and finally, a liberated society can set for itself ends, forms, and structures just as the organism is too a "natural purposive being."[37] Postcolonial thinkers could imagine the development of their societies or polities in terms of organic features such as holism, harmony, and autonomy. Cheah argues that the living organism qua natural purposive being provided an analogue

for newly liberated peoples to exercise the freedom to develop, in accordance with rational ideals, their own forms of objective culture: "like organic life forms conceived epigenetically, culture is self-impelling, self-producing, and self-generating."[38] Further, Cheah adds, "through its relation to culture, the state becomes organicized. Instead of being an artificial machine imposed upon the people, it becomes united with them into a self-organizing whole imbued with organismic causality."[39] Indeed, to the extent that the actions of a people are mediated by the culture that they themselves have created, they exhibit a heightened form of freedom from natural mechanical causality that a purposive organism exhibits in its life activities. Vitalism would of course attack such cultural mediation and urge a return to raw, natural drives. But organicism is not vitalism in this sense.

Cheah notes that the organismic metaphor has indeed been understood in myriad ways and argues convincingly that it was "not inherently pathological or reactionary as is commonly assumed." Indeed, the organismic metaphor encouraged the proposal of models intended to provide "the optimal institutional basis for the actualization of freedom."[40] There is thus a need to differentiate an organicist vitalism from an authoritarian biology in which the putative governing of an organism by the *Führer* of a life force provided an analogy for such a principle in political organization.[41]

For the German idealists, the iconic mechanical metaphor of the clock was not rejected because it failed to grasp important aspects of phenomena but because it projected a despotic political ideal similar to the totalitarian one often ascribed to them. In one of the seminal political texts of German Romanticism, the sixth of Schiller's *Letters on the Aesthetic Education of Man* (1795), Schiller describes the absolutist state as mechanical because individuals are as specialized and indifferent to one another as parts in a clock, and they have been ground down to mechanical specification, as if (to put it another way) they were rule-bound pieces upon a chessboard rather than self-motivated beings:

> Once the increase of empirical knowledge, and more exact modes of thought, made sharper divisions between the sciences inevitable, and once the increasingly intricate clockwork of the states necessitated a more rigorous separation of ranks and occupations, then the inner connection of human nature was severed too, and a disastrous conflict set its harmonious powers at variance [*entzweite*] . . .
>
> This disorganization, which first started within man by art and learning, was made complete and universal by the new spirit of government

ever opportunity offers" could effect improvements for the good of the "being which she tends."[66] For Paul Rabinow, the uncompromising critic of such antimodernist reaction, Wells's Moreau should probably be understood as a Prometheus who needs be punished for ignoring the insecurity of human works, the risks linked to artificiality, and the certitude that the initial natural situation is always incomparably better.[67] Through his science fiction, Wells arguably became the first opponent of the engineering of life from the inside out. Dr. Moreau is doubtless a more important precursor of biotechnological anxiety than the crude Dr. Frankenstein.

Dr. Moreau, however, does embody some features of Darwinized nature, features that do not fit well with Richards's theory of a Romantic Darwin. While the forms that Moreau achieves fall short of natural ones, he does proceed in the same monstrously wasteful and painful way as nature: countless "experiments," proving nonviable, die brutal deaths at the laboratory table. Moreau's laboratory, known to the island's inhabitants as the "House of Pain," allows Wells to stage the merciless cruelty that Darwin thought natural processes must inflict in order to ultimately generate beautiful and diverse organic forms. In the closing pages of *The Origins of the Species*, Darwin writes:

> Thus, from the war of nature, from famine and death, the most exalted object which we are capable of conceiving, namely, the production of the higher animals, directly follows. There is a grandeur in this view of life, with its several powers, having been originally breathed [in later editions, he added "by the Creator"] into a few forms or into one and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved.[68]

His theory was soon interpreted as a source of metaphysical comfort to the Victorian middle class. Racializing the Great Chain of Being, Wells would imply that Moreau's nonviable forms, intermediate between animal and man, were similar to Africans. Moreau's assistant Montgomery is alone comfortable with the doctor's liminal creations—because he had spent time in the slave ports. Out of the extinction of transitional forms the most exalted creatures were to arise.

Darwinism was read as having established that submission to the cruel, indifferent, and external laws of competition and natural selection would alone allow for transcendence. In other words, Darwinian theory,

would not allow Man to do Nature or God one better through the *bricolage* of the working parts from the animal world as a whole. By the turn of the century, the mechanist Jacques Loeb would argue that the understanding of life was realized in the engineering and control of it. In a review of Louis Pauly's biography of Loeb, Richard Lewontin points out that the importation of such an ideal into biological science "was the coming together of the nineteenth-century ideological commitments to materialism, on the one hand, and an optimistic progressivism, on the other."[65] The movement that began with La Mettrie reached astounding heights with Jacques Loeb, whose dreams of engineering life were the *reductio ad absurdum* of the mechanist method.

Here, then, are the contradictions of the post-Darwinian biology. On the one hand, it gives a purely materialist and nonteleological theory of life (in particular, its marvelous adaptations) and, in eliminating the need for any mysterious life force, opens up the possibility of the engineering of organic forms; on the other hand, the Darwinian revolution conceives of natural selection, the putative mechanism of the evolutionary process, as a quasi-divine law upon which man simply cannot improve. I suggest that H. G. Wells meant Dr. Moreau to embody just that contradiction: an engineer of life who not only cannot improve on the craftsmanship of natural selection but fails miserably, producing one monstrous form after another. Wells, understanding that the engineering ideal is the logical outcome of the mechanist and materialist mode of explanation of life that his friend T. H. Huxley thought Darwin had vindicated, expressed grave misapprehension about this ideal, which Loeb would extol less than a decade after the publication of *The Island of Dr. Moreau* in 1896. That life was in essence (nothing more than) matter mechanically arranged in one special form or another and thus capable of being reengineered and rearranged was greeted with dismay even as it was implicitly recognized.

While not recoiling into vitalism, Wells hesitated at the world that mechanistic science seemed to be making possible. But his horror at Dr. Moreau is not spiritualist or idealist but thoroughly naturalist. Nature was simply an unsurpassable craftsman—Wells may well have read Darwin in Richards's Romantic terms. As a vivisectionist—and the cutting up of animals while still alive (the literal definition of vivisection) was morally tolerable exactly on the assumption that they could not feel pain as Cartesian machines—Moreau was given access to the internal organs that he could directly manipulate, but he still proved incapable of matching natural selection, which in working "daily and hourly" and "whenever and wher-

> [*Geist der Regierung*]. . . . That polyp-nature of the Greek states, in which every individual enjoyed an independent life, but could, when the need arose, grow into the whole organism, now made for an ingenious clockwork, in which out of the piecing together of innumerable but lifeless parts, a mechanical kind of collective life ensued. State and Church, laws and customs, were now torn asunder; enjoyment was divorced from labour, the means from the end, the effort from the reward. Everlastingly chained to a single little fragment of the whole, man himself develops into nothing but a fragment; with his ear filled everlastingly with the monotonous sound of the wheel that he turns, he never develops the harmony of his being, and, instead of putting the stamp of humanity upon his nature, he becomes nothing more than the imprint of his occupation and of his specialist knowledge.[42]

Michael Rosen notes that Schiller suggests here that while a society composed of such fragments may maintain itself in a mechanical repetitive fashion, it cannot in fact develop: "While Greek society had the ability to grow back when damaged, this regenerative capacity (its "polyp nature") had been lost by the merely mechanical organization of the modern state. . . . Whether (and how) the social machine can be restored to its organic nature is the fundamental problem preoccupying Romantic politics."[43]

In the name of the advances of commercial society, Schiller explicitly rejected any attempt at a return to the *sinnliche Harmonie* of the Greek polis, and unlike Nietzschean Dionysianism, the individual was not to be lost in ecstatic rapture. "In contradistinction, in a genuinely organismic conception of the political body, the relationship between whole and parts can no longer be understood in terms of the soul-limbs relationship because the parts are both cause and effect of the whole and not subordinate to it."[44] Rosen underlines the barrier that organicism posed to a bare instrumentalism: "The idea that things—actions, lives, institutions—should be both means and ends seems to be one of German Idealism's most valuable contributions to moral thought. . . . The point is willfully ignored by those . . . who, for their own polemical purposes, conflate Romantic and Idealist organicism with twentieth-century 'totalitarianism.'" [45] The machine-state metaphor is more likely than the organismic one to imply that polity is, as Cheah puts it, "different from and superior to the individual wills of which it is composed."[46]

Yet between Kant's organismic theory of cultural and individual autonomy and postcolonial literatures of liberation stands the specific organicism of the Catholic Church, which had a heavy influence on postcolonial

thought. While Senghor articulated what in his time was a vibrant and courageous criticism of Soviet political theory in the name of African socialism, his vision of socialism was in fact formed in his early student days through his renewed faith in Catholicism: Senghor freely admitted a debt to the contradictory interpretations of the ultranationalist mystic Charles Péguy and the integral humanist and personalist Jacques Maritan.[47] What Senghor calls African socialism echoes Catholic corporatism. Senghor writes, for example, of African society that "the person nevertheless has a chance to develop himself and to join associations, corporations, the deliberating assemblies—for palavers. . . . Equality and the sentiment of human dignity rule there."[48] If one has read the "Quadragesimo Anno" of Pope Pius XI in 1931, Senghor's vision of African socialism is simply uncanny in its similarity.[49] Senghor's organicist vision of collectivity is more indebted to the Catholic Church's view of a fallen, class-divided society in which each estate honors its obligations than to the German idealist philosophy of freedom. Where Pope Pius XI declares the incompatibility between Christian teachings and socialism (as well as communism), Senghor would later set African socialism against totalitarian forms of Marxism. What is stunning, though, is that Senghor's African socialism has the same features as papal doctrine: the respect for individual rights, the cooperation of estates, the criticism of class struggle, the insistence that private owners of the means of production be understood as trustees designated by a higher public authority, and—of course—the central importance of spiritual cultivation and immortality, or what the young Max Horkheimer would redescribe as a spiritual indulgence meant to pacify fear about bodily suffering and finitude and euthanize the driving forces for real self-help.[50]

Having inherited the idealization of organicist or corporatist social forms from the Catholic Church, Senghor did not then address three other kinds of problems attendant to it as a political theory. First, while providing an antidote to the atomistic tendencies of modern Western society, such political organicism also implied that there were no real agonistic, much less antagonistic, relations among major social groups within African society: in Senghor's view, all conflict could easily be overcome through the village palaver. Senghor implied that African society was already a virtually harmonious organic totality. Second, the conception of human cultures as individual organisms implied a monadic conception of each, and this created a tension in *Négritude*'s thought between an advocacy of the particular and the recognition that cultures are inherently mixed. Third,

the emergence and development of the multitude of forms of life, Darwin brings the concept of the *event* to the sciences."[62]

But surely Darwin's theory is not misread in mechanical terms. Life evolves, to be sure, ever divergently and abundantly. But the process, if not the products, is a mechanical though not machinic one; the materials on which the external and indifferent law of natural selection works are merely mechanical errors in copying. And because Darwinian evolution was understood as blind and mechanical, constrained by past form and indifferently violent, critics sought an alternative cosmology based on ideas of conscious and creative evolution, especially since with the mechanical worldview came the certainty that the universe would run down as a result of inevitable solar cooling.[63] For this reason, Bergson's *Creative Evolution* was widely welcomed.

Darwin's characterization of natural selection, though entirely materialist and mechanical, does have it rise above the design capacities of man. Organisms seemed to be better designed by nonintentional forces than the actual artifacts crafted by man. But this does not follow in principle. Once life is understood not to be a mysterious force but the result of a special arrangement of matter evolved through natural selection, then there should not be any barrier to man, himself, designing life. A fully materialist biology would seem to give man the ability to understand the mechanics of life and design variations in radically new ways, as opposed to natural selection's slow modification and retention of existing organs and forms. Once life is reduced to material components organized by a natural force analogized to human breeding practice, then life should become part of the material world, which the workings of the human intellect can manipulate for any desired end.

Again: once Darwinian theory allowed for a fully materialist theory of life, there were no vitalist barriers to the human engineering of new life forms. It could be improved just like the successive designs of machines. Radical transformations became possible in principle: this was indeed the logical outcome of post-Darwinian materialist biology, if not the next step in evolution itself.

Moreover, as "an engineer designing a horse-less carriage is not obliged to retain structural features that existed solely to adapt the carriage to the horse,"[64] an engineer of life should be free to import and remove wholesale new organs in the radical structuring of wholly new life forms. Like any other form of engineering, the engineering of life need not be slow and stepwise. In fact, there seemed to be no reason why La Mettrie's program

any organic metaphor (and this applies to Kant as well) is conservative in regards to social form. Once developed, an organism maintains its boundaries throughout life; it persists in its being through metabolism. For this reason, Hegel had already insisted on the nonequivalency between political and natural forms. Michael Rosen comes to a similar conclusion about the Hegelian dialectic:

> Here again however it is the disanalogy rather than the analogy between history and organic nature that is important: as individual cultures grow and die, they do so, unlike plants, not as particular examples of a species—realizations of the essentially timeless form that they embody—but as conscious expression (and therefore, developments) of the *form itself*. Thus one culture passes on to its successors a different (and higher form), in a way that in (Hegel's view) the essentially repetitive processes of organic nature do not.[51]

In other words, dialectical development has the quasi-organism go through such radical changes in its structure that it becomes self-transcendent. However, by absolutizing a social form, the organismic metaphor implies that a crisis of social form is the crisis of society itself; the metaphor implies pessimism. For example, the crisis of interwar Europe implied to both reactionary critics and colonial subjects the decline of the West as such. In other words, the organismic metaphor seems to suppress the possibility of conscious change of the social form itself, for the organism manifests development only to the point of the realization of its basic form. Marcien Towa criticized Senghor's vision of African socialism as an attempt to entrap Africans in static, apparently authentic, African forms.[52]

For reasons such as these, it is no surprise that Deleuze and Felix Guattari insisted that critical vitalism be anorganic or nothing at all:

> This streaming, spiralling, zigzagging, snaking, feverish line of variation liberates a power of life that human beings had rectified and organisms had confined, and which matter now expresses as the trait, flow or impulse traversing it. If everything is alive, it is not because everything is organic or organized, but, on the contrary, because the organism is a diversion of life. In short the life in question is inorganic, germinal, and intensive, a powerful life without organs, a body that is all the more alive for having no organs. . . . The organism is that which life sets against itself in order to

Although the idea of an organism as a machine does not figure in Darwin's theory of evolution proper, he had seemed to give a purely mechanical explanation not only of the adaptation of organisms to their environments but also to his explanations of biodiversity, patterns of extinction, the fossil record, and many other phenomena. The forms of life were seen as ground out by the mechanism of natural selection. The environment, presumably having its properties independently of the organism, forces the organism to adapt on pains of extinction.[58]

In his study of the *Frühromantiks—The Romantic Conception of Life: Science and Philosophy in the Age of Goethe*—Robert J. Richards has recently challenged the mechanistic interpretation of Darwinian theory and in a way pulled the rug out *ex post facto* from under Bergson's critique.[59] Richards argues that Darwin's reluctant destruction of a providentialist view of the history of life—as the creation of a caring Creator who watches over each person and all other creatures—need not take the romance out of life. Arguing for the influence of several Romantic thinkers on Darwin's aesthetic appreciation of nature, Richards underlines that if Darwin had intended to describe nature as a vast machine, he would not have paid such careful attention to the diversity and beauty of organic form. Richards contends, "If natural processes were really machine-like ought not the products be identical—same mold, same cookie? But the products of nature, characterized by an underlying theme, to be sure, were yet infinitely varied, exuding the great abundance of life." All this, Richards insists, would "seem inexplicable on the assumption of a nature clanking along in the manner of a nineteenth-century steam engine."[60] Richards argues that Darwin characterizes natural selection as such a creative force, such a higher craftsman, that its ever-novel organic products stand apart from standardized things that result from machine processes. Moreover, each variant of a species also embodies uniqueness, the stamp of a craftlike production rather than what D. H. Lawrence would call "sordid and foul mechanicalness."[61] In short, Darwin already expressed an awareness of the creativity of the evolutionary process without the positing of an *élan vital*, *vis a tergo*, or mysterious force of impulsion. In her stimulating book on the philosophy of life, Elizabeth Grosz also paints Darwinian nature as Romantic genius: "Darwin makes it clear, indeed a founding presupposition, that time, along with life itself, always moves forward, generates more rather than less complexity, produces divergences rather than convergences, variations rather than resemblances." She further contends that "in recognizing the surprising, unpredictable, and mobile force of time on

> limit itself, and there is a life all the more intense, all the more powerful for being anorganic.[53]

Today's critical vitalism is inspired not by holism and stability of form but by the anarchic practice of disorganization. Indeed, critical theory is today even more likely to be motivated by anorganic vitalism than the vision of self-conscious, dialectical changes in social form. But as anachronistic as the latter may be, the former is difficult to decipher.

Deleuzean vitalism is based on the idiosyncratic idea that concrete individual and social organisms are temporary organizations of multiple machines that produce ever new sets of connection not out of a sense of lack but for the sake of production itself. Rather than seeing the organism in Kantian terms as whole and stable as a result of its parts undergoing complex reciprocal self-formative interactions, Deleuze aims to open the organism to reconfiguration.[54] The motivation not to fix life at the level of the biological individual obviously stems from a radical questioning of whether what is alive must be entrapped in the perduring identity of a given organism, a putatively lifeless form exactly because it reifies one particular arbitrary collection of machinelike parts. For this the parts have to be autonomous, more like machine parts of a mechanism. But, against Descartes, these (sub)machines are then made productive, lifelike. Deleuze's view of life thus stands outside the traditional opposition of Cartesian mechanism and Kantian organic form and is in fact best understood less positively than as a rejection of two dominant models of life—the mechanical reductionist and the organic. Life as productive force, as itself overflowing energy and plenitude, becomes an end in itself, not the Romantic vision of complex organic unity at the level of subject or society.[55] The *telos* here is not a unified person who has won greater freedom or the realization of an emancipated society in which institutions conducive to the flourishing of well-integrated individuals have been established. Deleuze revives vitalism but not the German Idealist theory of freedom. His machinic vitalism stands opposed to organicism as well as traditional political theory. Todd May puts this well:

> An organism is a self-regulating whole. Each of its parts supports others, and the whole is the harmony of those parts. We often conceive biological entities as organisms in this sense, and the wonder we feel at them comes from the balance of their living elements . . . there are no such things as organisms, at least in this sense. It is not that there is no balance among various organic parts. Often there is. It is that there is always more to the parts than their balance, a more that can express itself in other directions, with other balances, or with no balance at all. . . . One way to capture this point would be to say that we should think of biological entities not as self-sustaining organisms but as mobile machines that may connect to the environment in a variety of ways, depending on how those machines are actualized. . . . To think machinically is to consider the relations of individuals to society as only one level of connections that can be discussed. One can also discuss pre-individual connections and supra-individual connections. Moreover, these connections can be seen in their fluidity. . . . Machinic connections are productive. . . . Machines do not fill lacks; they connect, and through connecting create.[56]

The idea of "machinic parts" (what are these parts, and how can they be alive outside of the organism?) strains intelligibility. Yet this vision of productive connections by which the center of the self is forever displaced directly influenced the important post-*Négritude* vision of Édouard Glissant. Challenging a vision of Antillean life rooted in a single tradition, Glissant celebrates the rhizomatic connections made in the Antilles, where a global polylinguism has developed that draws life from minor languages, dialects, and hybrids.[57]

So far, in my attempt to disambiguate the meanings of the "mechanical" against which the *Négritude* poets and others rose, I have separated the vitalist reaction to ontological mechanism from the organicist reaction to political mechanism or atomism (and then I introduced the anorganic vitalist response to organicism). However, Bergson's most famous work, *Creative Evolution*, was a revolt against Darwinian mechanism, and the *Négritude* thinkers worked both sides of this historic battle between spiritualism and materialism, French Catholicism and English empiricism, and Bergson and Darwin, as I shall now suggest.

The Natural-Selection Machine

The Darwinian revolution raises three questions in the context of this book: Is it an expression of the mechanization of the worldview? What are we to make of Bergson's vitalist critique of Darwinian mechanism? And how were the *Négritude* thinkers' ideas about race influenced by their understanding of evolutionary theory? I shall address each question in turn.