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# Vibrant Matter

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## The Agency of Assemblages

*Thing-power* perhaps has the rhetorical advantage of calling to mind a childhood sense of the world as filled with all sorts of animate beings, some human, some not, some organic, some not. It draws attention to an efficacy of objects in excess of the human meanings, designs, or purposes they express or serve. *Thing-power* may thus be a good starting point for thinking beyond the life-matter binary, the dominant organizational principle of adult experience. The term's disadvantage, however, is that it also tends to overstate the thinginess or fixed stability of materiality, whereas my goal is to theorize a materiality that is as much force as entity, as much energy as matter, as much intensity as extension. Here the term *out-side* may prove more apt. Spinoza's stones, an absolute Wild, the oozing Meadowlands, the nimble Odradek, the moving deodand, a processual minerality, an incalculable nonidentity—none of these are passive objects or stable entities (though neither are they intentional subjects).<sup>1</sup> They allude instead to vibrant materials.

A second, related disadvantage of *thing-power* is its latent individualism, by which I mean the way in which the figure of "thing" lends itself to an atomistic rather than a congregational understanding of agency.

While the smallest or simplest body or bit may indeed express a vital impetus, *conatus* or *clinamen*, an actant never really acts alone. Its efficacy or agency always depends on the collaboration, cooperation, or interactive interference of many bodies and forces. A lot happens to the concept of agency once nonhuman things are figured less as social constructions and more as actors, and once humans themselves are assessed not as autonyms but as vital materialities.

In this chapter I will try to develop a theory of *distributive* agency by examining a real-life effect: a power blackout that affected 50 million people in North America in 2003. I will offer an analysis of the electrical power grid as an agentic assemblage. How does the agency of assemblages compare to more familiar theories of action, such as those centered around human will or intentionality, or around intersubjectivity, or around (human) social, economic, or discursive structures? And how would an understanding of agency as a confederation of human and nonhuman elements alter established notions of moral responsibility and political accountability?

Two philosophical concepts are important to my response to these questions: Spinoza's "affective" bodies and Gilles Deleuze and Félix Guattari's "assemblage." I will therefore offer a brief exposition of these concepts before I turn to an account of the power blackout that tries to take the out-side seriously and tries to remain faithful to the distributive quality of "agency."

### Affective Bodies

Spinoza's conative bodies are also *associative* or (one could even say) social bodies, in the sense that each is, by its very nature as a body, continuously affecting and being affected by other bodies. Deleuze explicates this point: the power of a body to affect other bodies includes a "corresponding and inseparable" capacity to be affected; "there are two equally actual powers, that of acting, and that of suffering action, which vary inversely one to the other, but whose sum is both constant and constantly effective."<sup>2</sup> Spinoza's conative, encounter-prone body arises in the context of an ontological vision according to which all things are "modes" of a common "substance."<sup>3</sup> Any specific thing—"a shoe, a ship, a cabbage, a king" (to use Martin Lin's list)<sup>4</sup> or a glove, a rat, a cap, and

the human narrator of their vitality (to use my list)—is neither subject nor object but a “mode” of what Spinoza calls “*Deus sive Natura*” (God or Nature).<sup>5</sup>

Spinoza also says that every mode is itself a mosaic or assemblage of many simple bodies, or, as Deleuze describes it, there are for Spinoza no “existing modes that are not actually composed of a very great number of extensive parts,” parts that “come to it from elsewhere.”<sup>6</sup> It is interesting that Lucretius, too, saw mosaicism as the way things essentially are: “It is right to have this truth . . . surely sealed and to keep it stored in your remembering mind, that there is not one of all the things, whose nature is seen before our face, which is built of one kind of primordia, nor anything which is not created of well-mingled seed.” Lucretius links the degree of internal diversity to the degree of power possessed by the thing: “And whatever possesses within it more forces and powers, it thus shows that there are in it most kinds of primordia and diverse shapes.”<sup>7</sup> Spinoza, as we shall see, makes a similar point.

For Spinoza, both simple bodies (which are perhaps better termed *protobodies*) and the complex or mosaicized modes they form are conative. In the case of the former, conatus is expressed as a stubbornness or inertial tendency to persist; in the case of a complex body or mode, conatus refers to the effort required to maintain the specific relation of “movement and rest” that obtains between its parts, a relation that defines the mode as what it is.<sup>8</sup> This maintenance is not a process of mere repetition of the same, for it entails continual invention: because each mode suffers the actions on it by other modes, actions that disrupt the relation of movement and rest characterizing each mode, every mode, if it is to persist, must seek new encounters to creatively compensate for the alterations or affections it suffers. What it means to be a “mode,” then, is to form alliances and enter assemblages: it is to mod(e)ify and be modified by others. The process of modification is not under the control of any one mode—no mode is an agent in the hierarchical sense. Neither is the process without tension, for each mode vies with and against the (changing) affections of (a changing set of) other modes, all the while being subject to the element of chance or contingency intrinsic to any encounter.<sup>9</sup>

Conative substance turns itself into confederate bodies, that is, complex bodies that in turn congregate with each other in the pursuit of the enhancement of their power. Spinoza believes, for example, that the

more kinds of bodies with which a body can affiliate, the better: “As the body is more capable of being affected in many ways and of affecting external bodies . . . so the mind is more capable of thinking.”<sup>10</sup>

The key idea I want to take from Spinoza’s rich and contestable philosophy, an idea I will put to work for a vital materialism, is this: bodies enhance their power in or as a *heterogeneous assemblage*. What this suggests for the concept of *agency* is that the efficacy or effectivity to which that term has traditionally referred becomes distributed across an ontologically heterogeneous field, rather than being a capacity localized in a human body or in a collective produced (only) by human efforts. The sentences of this book also emerged from the confederate agency of many striving macro- and microactants: from “my” memories, intentions, contentions, intestinal bacteria, eyeglasses, and blood sugar, as well as from the plastic computer keyboard, the bird song from the open window, or the air or particulates in the room, to name only a few of the participants. What is at work here on the page is an animal-vegetable-mineral-sonority cluster with a particular degree and duration of power. What is at work here is what Deleuze and Guattari call an assemblage.

### What Is an Assemblage?

At the end of the twentieth century, the arena in which stuff happens—what the military calls the “theater of operations”—seemed to many people to have expanded dramatically. “Globalization” had occurred and the earth itself had become a space of events. The parts of this giant whole were both intimately interconnected and highly conflictual. This fact—of the coexistence of mutual dependency with friction and violence between parts—called for new conceptualizations of the part-whole relation. Organicist models, in which each member obediently serves the whole, were clearly out. A host of new ways to name the kind of relation obtaining between the parts of a volatile but somehow functioning whole were offered: network, meshwork, Empire.<sup>11</sup> My term of choice to describe this event-space and its style of structuration is, following Deleuze and Guattari, *assemblage*.

Assemblages are ad hoc groupings of diverse elements, of vibrant materials of all sorts. Assemblages are living, throbbing confederations that are able to function despite the persistent presence of energies that

confound them from within. They have uneven topographies, because some of the points at which the various affects and bodies cross paths are more heavily trafficked than others, and so power is not distributed equally across its surface. Assemblages are not governed by any central head: no one materiality or type of material has sufficient competence to determine consistently the trajectory or impact of the group. The effects generated by an assemblage are, rather, emergent properties, emergent in that their ability to make something happen (a newly inflected materialism, a blackout, a hurricane, a war on terror) is distinct from the sum of the vital force of each materiality considered alone. Each member and proto-member of the assemblage has a certain vital force, but there is also an effectivity proper to the grouping as such: an agency of the assemblage. And precisely because each member-actant maintains an energetic pulse slightly "off" from that of the assemblage, an assemblage is never a stolid block but an open-ended collective, a "non-totalizable sum."<sup>12</sup> An assemblage thus not only has a distinctive history of formation but a finite life span.<sup>13</sup>

The electrical power grid offers a good example of an assemblage. It is a material cluster of charged parts that have indeed affiliated, remaining in sufficient proximity and coordination to produce distinctive effects. The elements of the assemblage work together, although their coordination does not rise to the level of an organism. Rather, its jelling endures alongside energies and factions that fly out from it and disturb it from within. And, most important for my purposes, the elements of this assemblage, while they include humans and their (social, legal, linguistic) constructions, also include some very active and powerful nonhumans: electrons, trees, wind, fire, electromagnetic fields.

The image of affective bodies forming assemblages will enable me to highlight some of the limitations in human-centered theories of action and to investigate some of the practical implications, for social-science inquiry and for public culture, of a theory of action and responsibility that crosses the human-nonhuman divide.

### The Blackout

The *International Herald Tribune*, on the day after the blackout, reported that "the vast but shadowy web of transmission lines, power generat-

ing plants and substations known as the grid is the biggest gizmo ever built. . . . on Thursday [14 August 2003], the grid's heart fluttered. . . . complicated beyond full understanding, even by experts—[the grid] lives and occasionally dies by its own mysterious rules."<sup>14</sup> To say that the grid's "heart fluttered" or that it "lives and dies by its own rules" is to anthropomorphize. But anthropomorphizing has, as I shall argue in chapter 8, its virtues. Here it works to gesture toward the inadequacy of understanding the grid simply as a machine or a tool, as, that is, a series of fixed parts organized from without that serves an external purpose.

To the vital materialist, the electrical grid is better understood as a volatile mix of coal, sweat, electromagnetic fields, computer programs, electron streams, profit motives, heat, lifestyles, nuclear fuel, plastic, fantasies of mastery, static, legislation, water, economic theory, wire, and wood—to name just some of the actants. There is always some friction among the parts, but for several days in August 2003 in the United States and Canada the dissonance was so great that cooperation became impossible. The North American blackout was the end point of a cascade—of voltage collapses, self-protective withdrawals from the grid, and human decisions and omissions. The grid includes various valves and circuit breakers that disconnect parts from the assemblage whenever they are threatened by excessive heat. Generating plants, for example, shut down just before they are about to go into "full excitation,"<sup>15</sup> and they do the same when the "system voltage has become too low to provide power to the generator's own auxiliary equipment, such as fans, coal pulverizers, and pumps."<sup>16</sup> What seems to have happened on that August day was that several initially unrelated generator withdrawals in Ohio and Michigan caused the electron flow pattern to change over the transmission lines, which led, after a series of events including one brush fire that burnt a transmission line and then several wire-tree encounters, to a successive overloading of other lines and a vortex of disconnects. One generating plant after another separated from the grid, placing more and more stress on the remaining participants. In a one-minute period, "twenty generators (loaded to 2174 MW) tripped off line along Lake Erie."<sup>17</sup>

Investigators still do not understand why the cascade ever stopped itself, after affecting 50 million people over approximately twenty-four thousand square kilometers and shutting down over one hundred power plants, including twenty-two nuclear reactors.<sup>18</sup> The U.S.-Canada Power

Outage Task Force report was more confident about how the cascade began, insisting on a variety of agential loci.<sup>19</sup> These included *electricity*, with its internal differentiation into “active” and “reactive” power (more on this later); the *power plants*, understaffed by humans but overprotective in their mechanisms; *transmission wires*, which tolerate only so much heat before they refuse to transmit the electron flow; a *brush fire* in Ohio; Enron *FirstEnergy* and other energy-trading corporations, who, by legal and illegal means, had been milking the grid without maintaining its infrastructure; *consumers*, whose demand for electricity grows and is encouraged to grow by the government without concern for consequences; and the *Federal Energy Regulatory Commission*, whose Energy Policy Act of 1992 deregulated the grid, separated the generation of electricity from its transmission and distribution, and advanced the privatization of electricity. Let me say a bit more about the first and the last of these conative bodies in the assemblage.

First, the nonhuman: electricity. Electricity is a stream of electrons moving in a current, which is measured in amperes; the force of that current (the pressure pushing it through the wires) is measured in volts. In a system like the North American grid, electrical current and voltage are constantly oscillating like a pair of waves.<sup>20</sup> When the two waves are in phase with each other (rising and falling at exactly the same time), one has so-called active power, or the type of power used most heavily by lamps, blow-dryers, and other appliances. But some devices (such as the electric motors in refrigerators and air conditioners) rely also on so-called reactive power, where the waves are not in sync. Reactive power, though it lends no help in physically rotating a motor, is vital to the active power that accompanies it, for reactive power maintains the voltage (electricity pressure) needed to sustain the electromagnetic field required by the system as a whole. If too many devices demand reactive power, then a deficit is created. One of the causes of the blackout was a deficit of reactive power. To understand how the deficit occurred, we need to consider the other actants, including the Federal Energy Regulatory Commission.

In 1992 the commission gained U.S. congressional approval for legislation that separated the production of electricity from its distribution: companies could now buy electricity from a power plant in one part of the country and sell it to utilities in geographically distant locations.

This greatly increased the long-distance trading of electric power—and greatly increased the load on transmission wires. But here is the rub: “As transmission lines become more heavily loaded, they consume more of the reactive power needed to maintain proper transmission voltage.”<sup>21</sup> Reactive power does not travel well, dissipating over distance, so it is best if generated close to where it will be used.<sup>22</sup> Power plants are technically quite capable of producing extra amounts of reactive power, but they lack the financial incentive to do so, for reactive-power production reduces the amount of salable power produced. What is more, under the new regulations, transmission companies cannot compel generating plants to produce the necessary amounts of reactive power.<sup>23</sup>

Reactive power, vital to the whole grid, proved a commodity without profit and thus came in short supply. Here emerged what Garrett Hardin has called a tragedy of the commons. Though rational for each user of reactive power to increase its demand for the free commodity, the aggregate effect is irrational in that it destroys the wellspring: in a world of finite resources, “freedom in a commons brings ruin to all.”<sup>24</sup> The reactive power deficit was an effect unanticipated by human advocates of the regulations that created a huge, continent-wide market in energy trading. Their actions produced unintended consequences; or, to put the point in a vital materialist vocabulary, they were subject to the “slight surprise of action.” The phrase is Bruno Latour’s, and it refers to an effectivity proper to the action itself, arising only in the doing and thus in principle independent of any aim, tendency, or characteristic of the actants: “There is no object, no subject. . . . But there are events. I never act; I am always slightly surprised by what I do.”<sup>25</sup>

Neither, says Latour, is the slight surprise of action confined to human action: “That which acts through me is also surprised by what I do, by the chance to mutate, to change, . . . to bifurcate.”<sup>26</sup> In the case at hand, electricity was also an actant, and its strivings also produced aleatory effects. For example, “in the case of a power shipment from the Pacific Northwest to Utah, 33% of the shipment flows through Southern California and 30% flows through Arizona—far from any conceivable contract path.”<sup>27</sup> And in August of 2003, after “the transmission lines along the southern shore of Lake Erie disconnected, the power that had been flowing along that path” dramatically and surprisingly changed its behavior: it “immediately reversed direction and began flowing in a giant

loop counterclockwise from Pennsylvania to New York to Ontario and into Michigan.”<sup>28</sup> Seeking to minimize the company’s role in the blackout, a spokesman for FirstEnergy, the Ohio-based company whose East-lake power plant was an early actant in the cascade and an early target of blame, said that any analysis needed to “take into account large unplanned south-to-north power movements that were part of a phenomenon known as loop flows, which occur when power takes a route from producer to buyer different from the intended path.”<sup>29</sup> Electricity, or the stream of vital materialities called electrons, is always on the move, always going somewhere, though where this will be is not entirely predictable. Electricity sometimes goes where we send it, and sometimes it chooses its path on the spot, in response to the other bodies it encounters and the surprising opportunities for actions and interactions that they afford.

In this selective account of the blackout, agency, conceived now as something distributed along a continuum, extrudes from multiple sites or many loci—from a quirky electron flow and a spontaneous fire to members of Congress who have a neoliberal faith in market self-regulation. How does this view compare to other conceptions of what an agent is and can do?

### The Willing Subject and the Intersubjective Field

I have been suggesting that there is not so much a doer (an agent) behind the deed (the blackout) as a doing and an effecting by a human-nonhuman assemblage. This federation of actants is a creature that the concept of moral responsibility fits only loosely and to which the charge of blame will not quite stick. A certain looseness and slipperiness, often unnoticed, also characterizes more human-centered notions of agency. Augustine, for example, linked moral agency to free will, but the human will is, as Augustine reveals in his *Confessions*, divided against itself after the Fall: the will wills even as another part of the will fights that willing. Moreover, willing agents can act freely only in support of evil: never are they able by themselves to enact the good, for that always requires the intervention of divine grace, a force beyond human control. Agency, then, is not such a clear idea or a self-sufficient power in Augustine.<sup>30</sup>

Neither is it in Immanuel Kant. He aspired to define agency in terms of the autonomous will of the person who submits to the moral law (whose form is inscribed in human reason). But, as William Connolly has explored, Kant, too, eventually found the will to be divided against itself, this time by an innate “propensity” for evil, wherein the will obeys maxims that derive from the inclinations.<sup>31</sup> It is not merely that the will fights against the pressure of an unwilled “sensibility”: the propensity for evil lives inside the will itself. Human agency again appears as a vexed concept, though its snarls and dilemmas are easy to skate over when the alternatives are reduced to either a free human agency or passive, deterministic matter.

Some neo-Kantian accounts of agency emphasize intentionality (the power to formulate and enact aims) more than the moral will, but here the question is whether other forces in the world approximate some of the characteristics of intentional or purposive behavior on the part of humans.<sup>32</sup> An acknowledgment of something like this, of a kind of thing-power, may be at work in the “agency-versus-structure” debate in the social sciences, according to which structures are described as powerful entities that work with and against human purposes. But the category of “structure” is ultimately unable to give the force of things its due: a structure can act only negatively, as a constraint on human agency, or passively, as an enabling background or context for it. Active action or agency belongs to humans alone: “All agree that agency refers to the intentional choices made by men and women as they take action to realize their goals,” even though “these actors are socially constituted beings embedded in sociocultural and ecological surroundings that both define their goals and constrain their actions.”<sup>33</sup> Actors are “socially constituted,” but the “constitutive” or productive power of structures derives from the human wills or intentions within them. There is no agency proper to assemblages, only the effervescence of the agency of individuals acting alone or in concert with each other. Structures, surroundings, and contexts make a difference to outcomes, but they are not quite vibrant matter.

The same point applies, I think, to the phenomenological theory of agency set forth by Maurice Merleau-Ponty. His *Phenomenology of Perception* was designed to avoid placing too much weight on human will, intentionality, or reason. It focused instead on the embodied charac-



ter of human action, through its concept of motor intentionality,<sup>34</sup> and on the agentic contributions made by an intersubjective field.<sup>35</sup> Diana Coole, taking up Merleau-Ponty's task, replaces the discrete agent and its "residual individualism" with a "spectrum" of "agentic capacities" housed sometimes in individual persons, sometimes in human physiological processes or motor intentionality, and sometimes in human social structures or the "interworld": "At one pole [of the spectrum of agentic capacities] I envisage pre-personal, non-cognitive bodily processes; at the other, transpersonal, intersubjective processes that instantiate an interworld. Between them are singularities: phenomena with a relatively individual or collective identity."<sup>36</sup>

Coole's attempt to dislodge agency from its exclusive mooring in the individual, rational subject provides an important touchstone for my attempt to extend the spectrum even further—beyond human bodies and intersubjective fields to vital materialities and the human-nonhuman assemblages they form. For though Coole's spectrum gives no special privilege to the human individual, it recognizes only *human* powers: human biological and neurological processes, human personalities, human social practices and institutions. Coole limits the spectrum in this way because she is interested in a specifically political kind of agency, and for her politics is an exclusively human affair. Here I disagree, and as I will argue in chapter 7, a case can be made for including nonhumans in the demos. The prevention of future blackouts, for example, will depend on a host of cooperative efforts: Congress will have to summon the courage to fight industry demands at odds with a more common good, but reactive power will also have to do its part, on condition that it is not asked to travel too far. A vital materialism attempts a more radical displacement of the human subject than phenomenology has done, though Merleau-Ponty himself seemed to be moving in this direction in his unfinished *Visible and Unvisible*.

That text begins to undo the conceit that humanity is the sole or ultimate wellspring of agency. So does Latour's *Aramis*, which shows how the cars, electricity, and magnets of an experimental Parisian mass transit system acted positively (and not just as a constraint) alongside the activities of human and intersubjective bodies, words, and regulations.<sup>37</sup> Latour's later work continues to call for people to imagine other roles for things besides that of carriers of necessity, or "plastic" vehicles for

"human ingenuity," or "a simple white screen to support the differentiation of society."<sup>38</sup>

The vital materialist must admit that different materialities, composed of different sets of protobodies, will express different powers. Humans, for example, can experience themselves as forming intentions and as standing apart from their actions to reflect on the latter. But even here it may be relevant to note the extent to which intentional reflexivity is also a product of the interplay of human and nonhuman forces. Bernard Stiegler does just this in his study of how tool-use engendered a being with an inside, with, that is, a psychological landscape of interiority. Stiegler contends that conscious reflection in (proto)humans first emerged with the use of stone tools because the materiality of the tool acted as an external marker of a past need, as an "archive" of its function. The stone tool (its texture, color, weight), in calling attention to its projected and recollected use, produced the first hollow of reflection.<sup>39</sup> Humanity and nonhumanity have always performed an intricate dance with each other. There was never a time when human agency was anything other than an interfolding network of humanity and nonhumanity; today this mingling has become harder to ignore.

### Efficacy, Trajectory, Causality

Theodor Adorno claimed that it was not possible to "unseal" or parse a concept into its constituent parts: one could only "circle" around a concept, perhaps until one gets dizzy or arrives at the point at which nonidentity with the real can no longer be ignored. What also happens as one circles around a concept is that a set of related terms comes into view, as a swarm of affiliates. In the case of agency, these include (among others) efficacy, trajectory, and causality.<sup>40</sup>

Efficacy points to the creativity of agency, to a capacity to make something new appear or occur. In the tradition that defines agency as *moral* capacity, such new effects are understood as having arisen in the wake of an advance plan or an intention, for agency "involves not mere motion, but willed or intended motion, where motion can only be willed or intended by a *subject*."<sup>41</sup> A theory of distributive agency, in contrast, does not posit a subject as the root cause of an effect. There

are instead always a swarm of vitalities at play. The task becomes to identify the contours of the swarm and the kind of relations that obtain between its bits. To figure the generative source of effects as a swarm is to see human intentions as always in competition and confederation with many other strivings, for an intention is like a pebble thrown into a pond, or an electrical current sent through a wire or neural network: it vibrates and merges with other currents, to affect and be affected. This understanding of agency does not deny the existence of that thrust called intentionality, but it does see it as less definitive of outcomes. It loosens the connections between efficacy and the moral subject, bringing efficacy closer to the idea of the power to make a difference that calls for response. And this power, I contend along with Spinoza and others, is a power possessed by nonhuman bodies too.

In addition to being tied to the idea of efficacy, agency is also bound up with the idea of a trajectory, a directionality or movement away from somewhere even if the toward-which it moves is obscure or even absent. Moral philosophy has figured this trajectory as a purposiveness or a goal-directedness linked to a (human or divine) mind capable of choice and intention, but Jacques Derrida offers an alternative to this consciousness-centered thinking by figuring trajectory as "messianicity." Messianicity is the open-ended *promissory* quality of a claim, image, or entity. This unspecified promise is for Derrida the very condition of possibility of phenomenality: things in the world appear to us at all only because they tantalize and hold us in suspense, alluding to a fullness that is elsewhere, to a future that, apparently, is on its way. For Derrida this promissory note is never and can never be redeemed: the "straining forward toward the event" never finds relief. To be alive is to be waiting "for someone or something that, in order to happen . . . must exceed and surprise every determinate anticipation."<sup>42</sup> In naming the unfulfillable promise as the condition of the appearance of anything, Derrida provides a way for the vital materialist to affirm the existence of a certain trajectory or drive to assemblages without insinuating intentionality or purposiveness.

A third element in the agentic swarm is perhaps the most vague of all: causality. If agency is distributive or confederate, then instances of efficient causality, with its chain of simple bodies acting as the sole impetus for the next effect, will be impossibly rare. Is George W. Bush the efficient cause of the American invasion of Iraq? Is Osama bin Laden?

If one extends the time frame of the action beyond that of even an instant, billiard-ball causality falters. Alongside and inside singular human agents there exists a heterogeneous series of actants with partial, overlapping, and conflicting degrees of power and effectivity.

Here causality is more emergent than efficient, more fractal than linear. Instead of an effect obedient to a determinant, one finds circuits in which effect and cause alternate position and rebound on each other. If efficient causality seeks to rank the actants involved, treating some as external causes and others as dependent effects, emergent causality places the focus on the process as itself an actant, as itself in possession of degrees of agentic capacity. According to Connolly,

emergent causality is causal . . . in that a movement at [one] . . . level has effects at another level. But it is emergent in that, first, the character of the . . . activity is not knowable in . . . detail prior to effects that emerge at the second level. [Moreover,] . . . the new effects become *infused* into the very . . . organization of the second level . . . such . . . that the cause cannot be said to be fully different from the effect engendered. . . . [Third,] . . . a series of . . . feedback loops operate between first and second levels to generate the stabilized result. The new emergent is shaped not only by external forces that become infused into it but also by its own previously under-tapped capacities for reception and self-organization.<sup>43</sup>

This sense of a melting of cause and effect is also expressed in the ordinary usage of the term *agent*, which can refer both to a human subject who is the sole and original author of an effect (as in "moral agent") and also to someone or something that is the mere vehicle or passive conduit for the will of another (as in "literary agent" or "insurance agent").

If ordinary language intuits the existence of a nonlinear, nonhierarchical, non-subject-centered mode of agency, Hannah Arendt makes the point explicitly by distinguishing between "cause" and "origin" in her discussion of totalitarianism. A cause is a singular, stable, and masterful initiator of effects, while an origin is a complex, mobile, and heteronomous enjoiner of forces: "The elements of totalitarianism form its origins if by origins we do not understand 'causes.' Causality, i.e., the factor of determination of a process of events in which always one event causes and can be explained by another, is probably an altogether alien and falsifying category in the realm of the historical and political sciences. Elements by themselves probably never cause anything. They



become origins of events if and when they crystallize into fixed and definite forms. Then, and only then, can we trace their history backwards. The event illuminates its own past, but it can never be deduced from it."<sup>44</sup>

For Arendt, it is impossible to discern in advance the cause of totalitarianism. Instead, like all political phenomena, its sources can only be revealed retroactively. These sources are necessarily multiple, made up of elements unaffiliated before the "crystallization" process began. In fact, what makes the event happen is precisely the contingent coming together of a set of elements. Here Arendt's view is consonant with a distributive notion of agency. But if we look at what spurs such crystallizations for her, we see her revert to a more traditional, subject-centered notion. Whereas the theorist of distributive agency would answer that anything could touch off the crystallization process (a sound, a last straw, a shoe, a blackout, a human intention), Arendt concludes that while the "significance" of an event can exceed "the intentions which eventually cause the crystallization," intentions are nevertheless the key to the event. Once again, human intentionality is positioned as the most important of all agential factors, the bearer of an exceptional kind of power.<sup>45</sup>

### Shi

Why speak of the *agency* of assemblages, and not, more modestly, of their capacity to form a "culture," or to "self-organize," or to "participate" in effects? Because the rubric of material agency is likely to be a stronger counter to human exceptionalism, to, that is, the human tendency to understate the degree to which people, animals, artifacts, technologies, and elemental forces share powers and operate in dissonant conjunction with each other. No one really knows what human agency is, or what humans are doing when they are said to perform as agents. In the face of every analysis, human agency remains something of a mystery. If we do not know just how it is that human agency operates, how can we be so sure that the processes through which nonhumans make their mark are qualitatively different?

An assemblage owes its agentic capacity to the vitality of the materialities that constitute it. Something like this congregational agency

is called *shi* in the Chinese tradition. *Shi* helps to "illuminate something that is usually difficult to capture in discourse: namely, the kind of potential that originates not in human initiative but instead results from the very disposition of things."<sup>46</sup> *Shi* is the style, energy, propensity, trajectory, or *élan* inherent to a specific arrangement of things. Originally a word used in military strategy, *shi* emerged in the description of a good general who must be able to read and then ride the *shi* of a configuration of moods, winds, historical trends, and armaments: *shi* names the dynamic force emanating from a spatio-temporal configuration rather than from any particular element within it.

Again, the *shi* of an assemblage is vibratory; it is the mood or style of an open whole in which both the membership changes over time and the members themselves undergo internal alteration. Each member "possesses autonomous emergent properties which are thus capable of independent variation and therefore of being out of phase with one another in time."<sup>47</sup> When a member-actant, in the midst of a process of self-alteration, becomes out of sync with its (previous) self, when, if you like, it is in a reactive-power state,<sup>48</sup> it can form new sets of relations in the assemblage and be drawn toward a different set of allies. The members of an open whole never melt into a collective body, but instead maintain an energy potentially at odds with the *shi*. Deleuze invented the notion of "adsorbsion" to describe this kind of part-whole relationship: adsorbsion is a gathering of elements in a way that both forms a coalition and yet preserves something of the agential impetus of each element.<sup>49</sup> It is because of the creative activity *within* actants that the agency of assemblages is not best described in terms of social structures, a locution that designates a stolid whole whose efficacy resides only in its conditioning recalcitrance or capacity to obstruct.

The *shi* of a milieu can be obvious or subtle. It can operate at the very threshold of human perception or more violently. A coffee house or a school house is a mobile configuration of people, insects, odors, ink, electrical flows, air currents, caffeine, tables, chairs, fluids, and sounds. Their *shi* might at one time consist in the mild and ephemeral effluence of good vibes, and at another in a more dramatic force capable of engendering a philosophical or political movement, as it did in the cafés of Jean-Paul Sartre's and Simone de Beauvoir's Paris and in the Islamist schools in Pakistan in the late twentieth century.

### Political Responsibility and the Agency of Assemblages

The electrical grid, by blacking out, lit up quite a lot: the shabby condition of the public-utilities infrastructure, the law-abidingness of New York City residents living in the dark, the disproportionate and accelerating consumption of energy by North Americans, and the element of unpredictability marking assemblages composed of intersecting and resonating elements. Thus spoke the grid. One might even say that it exhibited a communicative interest. It will be objected that such communication is possible only through the intermediary of humans. But is this really an objection, given that even linguistic communication necessarily entails intermediaries? My speech, for example, depends on the graphite in my pencil, millions of persons, dead and alive, in my Indo-European language group, not to mention the electricity in my brain and my laptop. (The human brain, properly wired, can light up a fifteen-watt bulb.) Humans and nonhumans alike depend on a "fabulously complex" set of speech prostheses.<sup>50</sup>

Noortje Marres rightly notes that "it is often hard to grasp just what the sources of agency are that make a particular event happen" and that this "ungraspability may be an [essential] aspect of agency."<sup>51</sup> But it is a safe bet to begin with the presumption that the locus of political responsibility is a human-nonhuman assemblage. On close-enough inspection, the productive power that has engendered an effect will turn out to be a confederacy, and the human actants within it will themselves turn out to be confederations of tools, microbes, minerals, sounds, and other "foreign" materialities. Human intentionality can emerge as agentic only by way of such a distribution. The agency of assemblages is not the strong, autonomous kind of agency to which Augustine and Kant (or an omnipotent God) aspired; this is because the relationship between tendencies and outcomes or between trajectories and effects is imagined as more porous, tenuous, and thus indirect.

Coole's account of a spectrum of agentic capacities, like the kind of agency that is subjected to structural constraints, does not recognize the agency of human-nonhuman assemblages. And this is in part because of the difficulty of theorizing agency apart from the belief that humans are *special* in the sense of existing, at least in part, outside of

the order of material nature. To affirm a vitality distributed along a continuum of ontological types and to identify the human-nonhuman assemblage as a locus of agency is to unsettle this belief. But must a distributive, composite notion of agency thereby abandon the attempt to hold individuals responsible for their actions or hold officials accountable to the public? The directors of the FirstEnergy corporation were all too eager to reach this conclusion in the task force report: no one really is to blame. Though it is unlikely that the energy traders shared my vital materialism, I, too, find it hard to assign the strongest or most punitive version of moral responsibility to them. Autonomy and strong responsibility seem to me to be empirically false, and thus their invocation seems tinged with injustice. In emphasizing the ensemble nature of action and the interconnections between persons and things, a theory of vibrant matter presents individuals as simply incapable of bearing *full* responsibility for their effects.

The notion of a confederate agency does attenuate the blame game, but it does not thereby abandon the project of identifying (what Arendt called) the sources of harmful effects. To the contrary, such a notion broadens the range of places to look for sources. Look to long-term strings of events: to selfish intentions, to energy policy offering lucrative opportunities for energy trading while generating a tragedy of the commons, and to a psychic resistance to acknowledging a link between American energy use, American imperialism, and anti-Americanism; but look also to the stubborn directionality of a high-consumption social infrastructure, to unstable electron flows, to conative wildfires, to exurban housing pressures, and to the assemblages they form. In each item on the list, humans and their intentions participate, but they are not the sole or always the most profound actant in the assemblage.

Though it would give me pleasure to assert that deregulation and corporate greed are the real culprits in the blackout, the most I can honestly affirm is that corporations are one of the sites at which human efforts at reform can be applied, that corporate regulation is one place where intentions might initiate a cascade of effects. Perhaps the ethical responsibility of an individual human now resides in one's response to the assemblages in which one finds oneself participating: Do I attempt to extricate myself from assemblages whose trajectory is likely to do harm? Do I enter into the proximity of assemblages whose conglom-

erate effectivity tends toward the enactment of nobler ends? Agency is, I believe, distributed across a mosaic, but it is also possible to say something about the kind of striving that may be exercised by a human within the assemblage. This exertion is perhaps best understood on the model of riding a bicycle on a gravel road. One can throw one's weight this way or that, inflect the bike in one direction or toward one trajectory of motion. But the rider is but one actant operative in the moving whole.

In a world of distributed agency, a hesitant attitude toward assigning singular blame becomes a presumptive virtue. Of course, sometimes moral outrage, akin to what Plato called *thumos*, is indispensable to a democratic and just politics. In the years leading up to the publication of this book, these were some of the things that called me to outrage: the doctrine of preemptive war, the violation of human rights and of the Geneva Accords at Guantánamo Bay, the torture of prisoners in Iraq and in accordance with a policy of so-called extraordinary rendition, the restriction of protesters at President Bush's public appearances to a "free speech zone" out of the view of television cameras, the U.S. military's policy of not keeping a count of Iraqi civilian deaths. Outrage will not and should not disappear, but a politics devoted too exclusively to moral condemnation and not enough to a cultivated discernment of the web of agentic capacities can do little good. A moralized politics of good and evil, of singular agents who must be made to pay for their sins (be they bin Laden, Saddam Hussein, or Bush) becomes unethical to the degree that it legitimates vengeance and elevates violence to the tool of first resort. An understanding of agency as distributive and confederate thus reinvoles the need to detach ethics from moralism and to produce guides to action appropriate to a world of vital, crosscutting forces.

These claims are contestable, and other actants, enmeshed in other assemblages, will offer different diagnoses of the political and its problems. It is ultimately a matter of political judgment what is more needed today: should we acknowledge the distributive quality of agency to address the power of human-nonhuman assemblages and to resist a politics of blame? Or should we persist with a strategic understatement of material agency in the hopes of enhancing the accountability of specific humans?

## Edible Matter

It is not controversial to say that trash, gadgets, electricity, and fire are relevant to politics, or to say that though such things do not qualify as political stakeholders, they form the milieu of human action or serve as means or impediments to it. But do the categories of context, tool, and constraint capture the full range of powers possessed by nonhuman bodies? In this chapter I will focus on one subset of those bodies, the kind that you can eat. I will treat food as conative bodies vying alongside and within an other complex body (a person's "own" body). To the roles of context, tool, and constraint (or background, resource, and limit) I will add the role of actant. Food will appear as actant inside and alongside intention-forming, morality-(dis)obeying, language-using, reflexivity-wielding, and culture-making human beings, and as an inducer-producer of salient, public effects. We can call the assemblage formed by these human and nonhuman bodies "American consumption" and name as one of its effects the "crisis of obesity."

My case for food as a participant in this assemblage has two prongs. The first seeks support in scientific studies of the effects of dietary