Openings and Retrospectives

ANTHROPOLOGY ELECTRIC

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In his "Letter to a Harsh Critic," Gilles Deleuze (1997, 7–8) describes two ways of reading a book: "you either see it as a box with something inside and start looking for what it signifies, and then if you're even more perverse or depraved you set off after signifiers. . . . [Or] you see the book as a little non-signifying machine and the only question is 'Does it work, and how does it work?' . . . This second way of reading's intensive: something comes through or it doesn't. There's nothing to explain, nothing to understand, nothing to interpret. It's like plugging into an electric circuit."

This Openings collection is similarly curious to find out what happens when we plug anthropology in. Does it work? This is not an idle question because electricity already works us. The anthropology we practice today would, frankly, be impossible without it. We inhabit artificially illuminated campuses and class-rooms; we carry laptops and video cameras and smartphones with us into our fieldwork. Our professional lives are enabled in countless ways by orderly flows of electrons. At a time in which the politics of energy are becoming an acute "matter of concern" (Latour 2004), when the effects of increasing energy con-

sumption are transforming planetary ecology in deeply troubling ways, it seems timely to inquire more deeply into those powers, to interpret not only what they signify in various settings but also what work they do.

Electricity is a fascinating subject of inquiry because it is in many respects *the* foundational apparatus upon which the experience of modernity has been constituted since the late nineteenth century. Electricity offers artificial light, coolness, and heat—cultivating environments that correspond to human desire— while it powers countless subsidiary appliances and conveniences upon which modern habits have come to depend, not least every single technology participating in the digital revolution. And yet, electricity remains remarkably invisible and inaudible to anthropology, as to the rest of the human sciences. These days, beyond spectacular weather events or spectacular failures like blackouts, electricity hides in plain sight, whether stored in batteries or flowing in the electrical wires that festoon our social landscapes. We conveniently ignore whole electroscapes until something goes awry. The blindness is ancient but also cultivated; being a modern child involves repeated parental warnings to avoid sticking fingers and other objects into electric sockets. Most of us quickly realize that the less direct contact we have with this dangerous, urgent force, the better. And yet, as Deleuze testifies, the lure of electricity somehow never entirely recedes, remaining slyly available as a metaphor for a power that defies metaphorization.

This Openings collection aims to edge anthropology a little closer to that power, to pay attention to the soft hum of electric currents, to the charges and fields we both produce and trans-sect. Electricity, as commonly understood, is always already social. It culminates a centuries-long project of science, engineering, and design to capture the earth's electrical phenomena and domesticate them through generation, conduction, and insulation, taming something like the sudden explosive power of a lightning strike or electrostatic shock into something steady, reliable, and unremarkable. If Brian Larkin (2013, 329) has defined the "peculiar ontology" of infrastructures as being "things and also the relation between things," then the contemporary enabling power of electricity—channeled through grids, power lines, and substations—is infrastructure par excellence. Inspired by recent pushes to bring the material and nonhuman more securely into political theory (Barad 2003; Bennett 2010; Stengers 2010), I hope a turn toward electricity will also help open a way to rethink all-too-human histories of power and enablement.

Cymene Howe and I (Howe and Boyer 2015) have found in research on wind energy and energy transition in Mexico that a material politics of electricity flows through state power. These politics make entities like electrical utilities into

hypercritical nodes of governance, buttressed by cultures of electrical expertise that help to guarantee smooth operation. A conventional national electricity grid enabled by carbon and nuclear fuel, for example, incorporates the logic of base-load electrical supply. Baseload thinking responds to the mass-ness of electrical demand at the level of a region or nation; it also centers a norm that electricity must be available to flow anywhere, reliably, at the moment a switch is thrown. But this constant at-the-readiness also means that baseload supply must be constantly exhausted lest the grid's own infrastructure be damaged. Grid, then, is an apparatus subtly inclined to encourage demand, to expand itself, to solicit further dependency on its powers, which then grow in response. Grid helps to groove political efficacy, subjectivity, and affiliation; it is not just a state instrument, in other words, a tool invented to accomplish a governmental agenda. Rather, grid must be understood as the organization of enabling power that allows any invention of statecraft to occur in the first place.

Figure 1. Grid, La Ventosa, Mexico. Photo by Dominic Boyer.

Nonnuclear, low-carbon energy transition is a threat to grid. Wind and solar energy sources are intermittent and most effective for hyperlocal use. They are thus feared as agents of de-growth and grid disintegration, as opponents of reli-

ability that quite literally (in the case of wind) import turbulent energy into grids, a turbulence demanding recompense. As such, renewable energy production is quite openly coded as threat and disturbance in the baseload discourse of grid engineers and administrators; the resistance of grid and its cultures to renewable energy forms a relatively invisible frontline of energopolitical conflict in the struggle to escape the Anthropocene. This is just one example among others of how electropolitics infuse governance (see also MacDonald 2009; von Schnitzler 2013). Taking inspiration from Timothy Mitchell (2011), we may wish to further investigate "electrical democracy" and electrical statecraft more generally.

My interest in an anthropology electric emerged from earlier work on knowledge and media, perhaps somehow imitating the fact that communicational infrastructure was the first great success of modern electrification via the telegraph. While doing background research on news journalism's digital revolution (Boyer 2013), I was struck at first by the absence of anthropological research on electricity and electrification (but see Winther 2008). Over time, though, I came to realize that we have been thinking with electricity in anthropology for longer than we might imagine. Like Deleuze's metaphor, however, this electric "charge" has largely been conducted through displacements—that is, we have received it only in disguise and often through insulated analogies to electrical science and engineering. I briefly discuss here three epistemic currents that have flown into and through twentieth- and twenty-first-century anthropological knowledge.

The first is Freudian metapsychology. Working at the juncture of neurology, psychology, and clinical practice in the last decade of the nineteenth century, Sigmund Freud became deeply interested in schematizing flows and states of energy. Indeed, it is not an overstatement to say that Freud's model of the psyche was designed specifically to explain energy flows and states. His last unfinished work of neurology, the *Entwurf einer Psychologie* (*Sketch of a Psychology*; Freud 1950) and his first major work of metapsychology, *Die Traumdeutung* (*The Interpretation of Dreams*; Freud 1899), belong to this period. Both works articulate a model of psychic operation as a largely homeostatic energy system managing exogenous and endogenous stimuli to maintain a tolerable load of excitation. In both texts, the crucial interrelationship of primary process and secondary process is defined in terms of energy flows. In the *Entwurf*, Freud discusses the excitation of neuronal tissue by a mysterious force known only as *Quantität* (quantity) and defines primary process as an organism's effort to maximally reduce excitation (generated, for example, by hunger and sexuality) through action. Secondary process, meanwhile, is the capacity of behavioral conditioning to maintain states of excitation for

environmentally approved reasons. In the *Traumdeutung*, Freud moves away from charged tissue toward a more abstract conception of stimulus and energy flow. Nevertheless, primary process continues to represent the psychic apparatus's effort to reduce excitation to maintain homeostasis. But now this is explained as matter of the charging (by what will later become Freud's id and drives) of memories into hallucinatory identifications. The psychic apparatus, irrational to its core, strains to repeat past acts of needs satisfaction, reducing pains of want through the pleasures of imaginary discharge. Yet this primary process is interrupted by the secondary process of socioenvironmental conditioning, which seeks to channel the search for pleasure through the intricacies of language and custom. The fact that the secondary process must continuously seek to repress and deflect the primary process creates a fundamentally entropic condition in the psyche. In instances of psychosis and dreaming, Freud argued, we see how the weakening of secondary defense mechanisms allows the energy flows of the primary process to more directly excite the systems of consciousness and perception (often taking the form of hallucinatory imagination).

We thus find that Freud's model of mind is energic to its core. But were Freud's psychic energy system, its flows and quanta *electrical* in nature? This was never clear, least of all to Freud himself. Electricity was certainly in the air, so to speak. During the same decade, Nikola Tesla was perfecting his wireless telegraphy, speculating publicly about drawing down electricity from the ionosphere and about wireless electric transmission between superhigh-voltage towers set hundreds of miles apart. Closer to Freud's home, the first electric power company had begun operating in Vienna just a few years previously, with all the public cultural fascination with electricity and artificial illumination seen elsewhere in the world (Hughes 1983; Nye 1990). Terms related to electrical research such as *Energie* (energy), *System* (system), *Ladung* and *Entladung* (charge and discharge) appear with frequency in both texts, but Freud stops short of claiming that what he is describing is a form of endopsychic electrical current traversing a neurological or psychological circuitry. Freud was troubled, notably, by the absence of later scientific research that showed how charge could carry between neurons. But he was obviously fascinated by early electrophysiological experiments, which had shown how organic tissue conducted electrical charges.

We could take this ambiguity as a sign of poor concept work. But I would prefer to see it as a symptom of the latent epistemic influence of electricity in the human sciences at the turn of the twentieth century. Endopsychic electricity may well have been the force that Freud was striving to understand. But even if

it was not, the science of electricity offered Freud a method of understanding. Electrical energy charges, flows, and systematicity became key analytic analogies for Freud as he designed his metapsychological schema. And these analogies passed into anthropology through the many researchers, not least several Boasians, who engaged the Freudian model of mind.

A second and more obvious case of electric currency is the impact of cybernetic theory upon concept work in anthropology and other disciplines in the latter half of the twentieth century. Cybernetics emerged from the context of electronic computational engineering in the 1930s and 1940s and was popularized during the now-famous Macy Conferences of 1946–1953, which involved both Gregory Bateson and Margaret Mead as core participants. The cybernetic imagination centered on a model of feedback-driven adaptive systematicity that took shape in wartime experiments on automating artillery systems and cryptography (Pias 2003; Boyer 2013). The key computational problem was how closed machinic systems could manage dynamic, real-time environmental inputs and react accordingly. Adaptive control systems were the solution. Cybernetics generalized this breakthrough in computational engineering, porting the idea of adaptive systematicity over to biotic, social, and cultural forms of order. It fit well with the logic of Keynesian technocracy and became an influential way of understanding and designing forms of social control. By the 1960s, signs multiplied that anthropology was borrowing from the cybernetic imagination as well. Claude Lévi-Strauss, for example, was obviously thrilled by the promise of cybernetic analysis to reveal the metastructures of language and the computational powers and operations of minds both savage and modern (e.g., Lévi-Strauss 1951). In his 1966 essay "The Impact of the Concept of Culture on the Concept of Man," Clifford Geertz (1973, 44), guided still by Parsonian systems theory, proposed a model of culture not as concrete behavior patterns but rather as a "set of control mechanisms—plans, recipes, rules, instructions (what computer engineers call 'programs')—for the governing of behavior." Culture thus became for Geertz something like (note, again, the analogical move) an adaptive software program that governed the behavior of *homo sapiens* hardware. I have discussed elsewhere how much anthropological culture theory of the 1960s and 1970s exhibited a kind of cybernetic unconscious in which electronic computational models simmered just beneath recognition (Boyer 2013). But it is important that we understand that the intuitiveness of adaptive systematicity also belonged to a distinct era of electronic computation—an era in which electrified machinic engineering and imagination made it somehow plausible to consider culture also operating like an

artillery system, inputting external signal data and readjusting its semiotic arma-
ments accordingly (e.g., Sahlins 1976).

As a final example, one can connect the decline of culture theory in an-
thropology to the emergence and institutionalization of new environments of
electronic computation and information. The 1980s, 1990s, and 2000s witnessed
the rise of personal computation, the Internet, browsers and search engines,
mobile communication devices, social media, Wi-Fi, and cloud computing. Such
developments in electronic media have guaranteed that our informational "sys-
tems," such as they are, overlap and bleed into each other continuously. Like
Arjun Appadurai's (1990) famous "scapes," there is complexity and motion but
no longer the presence of a clear position outside of electronic information that
would justify thinking in terms of bounded systems. Put another way, our infor-
matic sensibilities are now also ecological—the system has been overwhelmed by
environment and flow. As Deleuze (2004, 270) put it elsewhere, "the system is
leaking all over the place."

We might ask why the writings of figures like Deleuze and Michel Foucault
have been so influential and intuitive in anthropological concept work over the
past three decades. Why do we routinely plug into their thinking? I argue that
they illuminate contemporary anthropological knowledge so widely because they
were among the first philosophers to attempt to think with the new electronic
information environments, to critique cybernetic systematicities in favor of "open
systems" of operation, code, force, and flow (Deleuze 1992). Marshall McLuhan
(1964) had already made this connection explicit. For McLuhan, it was impossible
to think any longer outside the servomechanisms of electronic computation and
the cool, participatory flows of multisensory electronic experience. The "post" in
poststructuralism gestures in this direction; it is precisely the difference of seeking
to think beyond the bounded systematicities of early electronic computation and
toward the transversal orbits, hyperlinks, servers, and networks of digital
information.

These are snapshots of how one might rethink the evolution of anthropological
theory through its changing electric environments. They could contribute to a
broader effort to explore how electricity has come to enable particular aspects of
anthropological method. Meanwhile, each of the contributions to this Openings
collection helps us to see how paying attention to electricity advances anthropo-
logical analysis now. Mike Anusas and Tim Ingold examine the "charge" against
electricity, asking us whether we should restrict our analytical engagement with
electricity to its co-optation by corporate industry and neoliberal statecraft or

whether we must think more expansively about electricity as a phenomenon of matter and life for which "the period of electricity's incarceration within the grid amounts to no more than the blink of an eye." Akhil Gupta turns his attention to the global South, where the fastest growth in electrical demand is coming from expanding middle classes whose path toward development appears poised to accelerate the "eco-suicidal" path paved by the global North. Among other issues, Gupta explores the potential of the South to constitute innovative new approaches to sustainability that better "match the quality of energy to its end use." Tanja Winther and Hal White also argue for bringing material-social entanglements of electricity more fully into discussions of modernity and development. They offer fine-grained insight into the effects of electrification, particularly how the arrival of electric light creates new conditions of possibility for social power, the geography of everyday movement, and relations between states and communities. Finally, Canay Özden-Schilling examines several cultures of expertise surrounding electricity, discussing her research with electricity traders, economists, and electrical engineers and revealing how the material and infrastructural qualities of electricity alter conventional understandings of commodities, economics, and markets.

As implied by the prospect of an opening, I view these contributions as sparks toward a broader conversation regarding electricity in anthropology and the human sciences. I hope we convince you to plug in.

NOTE

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