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John Durham Peters, Florian Sprenger, and Christina Vagt, **Action at a Distance**, Minneapolis: University of Minnesota Press, 2020, 104 pp., $18.00 (paperback).

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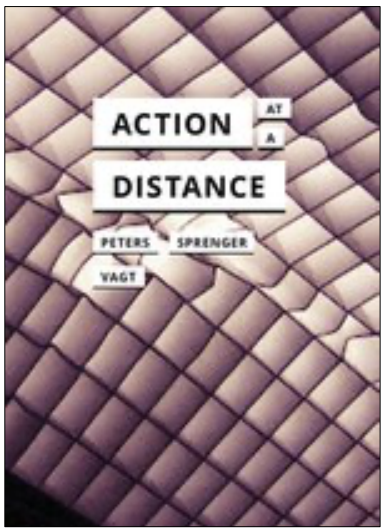

"What is an ansible, Shevek?"

"An idea." He smiled without much humor. "It will be a device that will permit communication without any time interval between two points in space. The device will not transmit messages, of course; simultaneity is identity. But to our perceptions, that simultaneity will function as a transmission, a sending. [. . .] It is really a very simple matter. Like a kind of telephone."

—Ursula K. LeGuin*, The Dispossessed*, 1974, p. 334

In Ursula K. LeGuin's (1974) novel, *The Dispossessed*, Shevek, a physicist from a communalist society on a desert world, feels the progress of his work is stymied. He absconds to his planet's twin, rich and temperate but ruled by technocratic capitalists. Shevek completes his project but only at great personal cost: In the climactic scene of the novel, he asks the ambassador from Earth to broadcast his theorems across the habitable worlds, enabling simultaneous communication and the knitting together of humanity.

The dream of the ansible—a communication device able to cut across the constraints of space-time—long predates LeGuin's coining of the term. In their essay collection, ***Action at a Distance***, authors John Durham Peters, Florian Sprenger, and Christina Vagt each offer a perspective on the contradictions and complexities of this ambition and its attempted instantiation in the history of communicative practice.

Each essay, as Sprenger and Vagt note in their introduction, explores "historical constellations in which the mediality of transmission and the materiality of communication are debated as questions of acting at a distance—an action, it turns out, whose agency lies in a medium" (p. xi). The book's overarching thesis is thus that mediation's "challenging and dis-unifying potential" comes from "the distance that mediation implies, the meanwhile, the difference and the in-between" (p. xii). Because the materiality of mediation is impossible to overcome, our messages will always be torqued by the particulars of the stuff of the world. The essays in *Action at a Distance* ask us to consider not simply the means through which we connect but also how those mechanisms cannot help but be freighted with multiple resonances as they come and go.

The principle underpinning the ansible is quantum entanglement, the recently experimentally proven yet "weird" (p. 43) and "spooky" (p. xi) phenomenon by which elementary particles are found to be inextricably linked in replicating each other's every move, even if far apart. A similar sense of the uncanny pervades Florian Sprenger's essay "Temporalities of Instantaneity: Electric Wires and the Media of Immediacy" (translated pellucidly by Erik Born), which examines the career and legacy of Stephen Gray, an

18th-century English dyer and scientific enthusiast drawn to the study of electric charge. Gray's experiments are a springboard for Sprenger's own meditations on the belief and desire in electrical action at a distance, and on the conductive cable as electrical modernity's mediator par excellence. "The media history of the cable," Sprenger observes succinctly, echoing Nicole Starosielski's (2015) work on contemporary undersea Internet infrastructure, "is a history of the phantasm of immediacy" (p. 4). The cable is "phatic": It precedes any message, and so is presupposed by all (p. 5).

Especially striking in Sprenger's historical vignettes are the arrays of seen and unseen media through which Gray's "'elecktrik virtue'" (p. 1) is passed: Feathers hover with static charge, a schoolboy is suspended so that charge flows from his fingertips, and the back garden is transformed into a proxy for potentially infinite space through copper wire. For Gray, Sprenger notes, "electric transmission appears to be timeless" (p. 18); the utopian dream of the telegraph as a unifier of countries and people was grounded in the fantasy of instantaneity. Yet despite an electrical cable functioning seemingly as "a medium of immediacy" (p. 14), electricity itself is not free from the laws of physics. Even if only for an instant, the lag in transmission makes electric simultaneity impossible.

John Durham Peters' "A Cornucopia of Meanwhiles" surveys a plethora of historical and literary "meanwhile structures," defined as "techniques of shuttling between two points in space at the same time that are too far apart for the unaided human senses" (p. 30). Peters challenges Benedict Anderson's (1983) contention in his influential *Imagined Communities* that modernity's temporal condition is grounded in the novelty of such "meanwhile structures," and the production of "homogenous, empty time" (p. 31). "Were there no robust meanwhile structures before the eighteenth century?" (p. 32) Peters wonders, and proceeds to prove Anderson wrong.

In assembling a heterogenous chronicle of such moments—the prophet Ezekiel levitated to Jerusalem, the goddess Athena's seeming omnipresence in *The Odyssey*, and Tang poets imagining two lovers simultaneous gazing at the moon—Peters details the pitfalls of what he terms the "dialectic of buffering" (p. 39). "Information is never free," Peters avers, using a particularly grisly episode from the book of Samuel to illustrate his point. The lag between the receipt of a message and its sending is, rhetorically and materially, its cost. At times the pound of flesh extracted by the circumstance is literal, or at least psychological: pity the 19th-century German physicist F. W. Brandes, whose efforts to construct a retrospective weather map for the whole of Europe provided him with so many data points on the simultaneous climatic conditions of different locales that the task left him "on the verge of total despair" (p. 46). Synchronization, Peters "concludes, always takes time, affects space, and consumes energy or power" (p. 49). As in Sprenger's piece, here, temporal flow is the ultimate adversary of simultaneity: "banking time" through processes like memory, Peters concludes, is thus "a way to span space" (p. 30) and achieve a measure of transcendence.

Christina Vagt's "Physics and Aesthetics: Simulation as Action at a Distance" is perhaps the most intriguing piece of the collection in its appositeness. Vagt situates the computational modeling and graphical simulation of biological processes, like the opening of the cone of an Australian Banksia tree and the unfurling of a zooplanktonic Tunicate's filtering mechanism, as "aesthetic procedures that create their own specific objects of study," thereby mediating human understanding of the world through mathematical objects (p. 52).

In this case, the action at a distance involves the uncertainty inevitable in the way simulation operates conceptually in biological science. "The discretization of the object," Vagt suggests, "can only take place in its absence" (p. 72). It is not possible to simulate without some recourse to measuring the material of the beings being examined, yet such measuring cannot be performed on living things. As such, computational models are irremediably and irredeemably abstracted from the things they simultaneously simulate and instantiate.

It is difficult to do justice to Vagt's erudite and suggestive essay in a few paragraphs, incorporating as it does the philosopher Henri Bergson's conception of the human intellect's "cinematographic mechanism" of discretized vision (p. 60), Peter Galison's description of the rise of the "computer-as-nature" in the post–World War II culture of cybernetics (p. 52), and the particular heat tolerance of Banksia pods. Yet Vagt's insight that "computer simulations are able to deal with materials by focusing on patterns and structures instead of substances and qualities" (p. 72) has resonance beyond biology: Because modeling always acts at a conceptual distance, the modeler must be wary of abstraction's pitfalls. Computational models are media of "investigation and speculation" (p. 76), but through their abstractions also enable asymmetries in power and control (Kalluri, 2020). Though simulation appears to overcome the problem of temporality noted by Sprenger and Peters, by allowing for analyses to be run and processes to be repeated *ad infinitum*, simulations also have costs, both material and social: Humans subject to the decisions prompted by such models cannot reset their lives if the simulation is faulty, fallible, or forced.

Action at a Distance is both an astute diagnosis and indispensable analysis of mediation's key problematic. Simultaneity, LeGuin suggests, is identity; yet despite LeGuin's utopian vision, a plethora of recent controversies and catastrophes have made it clear even quasisimultaneous communication at a distance is no panacea for what ails humanity. The double-bind Shevek feels in making the least-worst choice—to share his theories rather than allowing them to be monopolized—resonates in the quandry the authors of *Action at a Distance* pose. Today, the ansible seems almost within technical reach. What is less clear is what we should say to each other, and how we ought to say it, to bridge the chasms dividing us.

References

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