

## 11 Rethinking Repair

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"There is a crack in everything. That's how the light gets in."

Leonard Cohen, *Anthem*

What world does contemporary information technology inhabit? Is it the imaginary nineteenth-century world of progress and advance, novelty and invention, open frontiers and endless development? Or the twenty-first-century world of risk and uncertainty, growth and decay, and fragmentation, dissolution, and breakdown?

This chapter is an exercise in broken world thinking. It asks what happens when we take erosion, breakdown, and decay, rather than novelty, growth, and progress, as our starting points in thinking through the nature, use, and effects of information technology and new media. Broken world thinking is both normative and ontological, in the sense that it makes claims about the nature of technology and its relationship to broader social worlds, some of which may differ from deep-rooted cultural assumptions. But it is also empirical and methodological, an argument and provocation toward doing new and different kinds of research, and new and different kinds of politics, in media and technology studies today.

There are two basic components of the approach advocated here. The first is an appreciation of the real limits and fragility of the worlds we inhabit—natural, social, and technological—and a recognition that many of the stories and orders of modernity (or whatever else we choose to call the past two-hundred-odd years of euro-centered human history) are in process of coming apart, perhaps to be replaced by new and better stories and orders, but perhaps not. We know, now irrefutably, that the natural systems we have long lived within and relied on have been altered beyond

return (though not necessarily beyond repair, in the sense articulated here); by any reasonable expectation, we are now living, as Bill McKibben (2010) has argued, on a sort of Earth 2.0 in which many of the old socionatural bets are off. The instabilities of the postwar economic order and the social relations attendant upon it have recently come home to roost (as many of us are reminded as we watch friends, neighbors, and family members fall out of the hopes, comforts, and securities of the middle class). The form and possibility of the “modern infrastructural ideal” (Graham and Marvin 2001) is increasingly under threat, as cracks (sometimes literal ones) show up in our bridges, our highways, our airports, and the nets of our social welfare systems. For these and other reasons, broken world thinking asserts that breakdown, dissolution, and change, rather than innovation, development, or design as conventionally practiced and thought about are the key themes and problems facing new media and technology scholarship today.

Attached to this, however, comes a second and more hopeful approach: namely, a deep wonder and appreciation for the ongoing activities by which stability (such as it is) is maintained, the subtle arts of repair by which rich and robust lives are sustained against the weight of centrifugal odds, and how sociotechnical forms and infrastructures, large and small, get not only broken but *restored*, one not-so-metaphoric brick at a time. On this road we travel the path from despair to admiration, even reverence, and are confronted above all by the remarkable resilience, creativity, and sheer magnitude of the work represented in the ongoing maintenance and reproduction of established order.

Here, then, are two radically different forces and realities. On one hand, a fractal world, a centrifugal world, an always-almost-falling-apart world. On the other, a world in constant process of fixing and reinvention, reconfiguring and reassembling into new combinations and new possibilities—a topic of both hope and concern. It is a world of pain and possibility, creativity and destruction, innovation, and the worst excesses of leftover habit and power.

The fulcrum of these two worlds is *repair*: the subtle acts of care by which order and meaning in complex sociotechnical systems are maintained and transformed, human value is preserved and extended, and the complicated work of fitting to the varied circumstances of organizations, systems, and lives is accomplished. Repair in this connotation has a literal and material dimension, filled with immediate questions: Who fixes the devices and

systems we “seamlessly” use? Who maintains the infrastructures within and against which our lives unfold? But it also speaks directly to “the social,” if we still choose to cut the world in this way: how are *human* orders broken and restored (and again, who does this work)?

Some of these effects are captured in the language of “articulation work” so usefully described by Susan Leigh Star and Anselm Strauss (1999). Articulation is about fit, or more precisely, the art of fitting, the myriad (often invisible) activities that enable and sustain even the most seemingly natural or automatic forms of order in the world. Articulation supports the smooth interaction of parts within complex sociotechnical wholes, adjusting and calibrating each to each. In building connections, it builds meaning and identity, sorting out ontologies on the fly rather than mixing and matching between fixed and stable entities. Articulation lives first and foremost in practice, not representation; as its proper etymology suggests, it’s a creature of bones, not words. When articulation fails, systems seize up, and our sociotechnical worlds become stiff, arthritic, unworkable.

The same broad features characterize the work of repair—itsself a facet or form of articulation work (and vice versa). Repair is about space and function—the extension or safeguarding of capabilities in danger of decay. But it is also an inescapably timely phenomenon, bridging past and future in distinctive and sometimes surprising ways. Repair inherits an old and layered world, making history but not in the circumstances of its choosing. It accounts for the durability of the old, but also the appearance of the new (a different way of approaching the problem of innovation, as will be discussed: behind and prior to the origin stands the fix). Above all, repair occupies and constitutes an *aftermath*, growing at the margins, breakpoints, and interstices of complex sociotechnical systems as they creak, flex, and bend their way through time. It fills in the moment of hope and fear in which bridges from old worlds to new worlds are built, and the continuity of order, value, and meaning gets woven, one tenuous thread at a time. And it does all this quietly, humbly, and all the time.

So the world is always breaking; it’s in its nature to break. That breaking is generative and productive, in ways that will be sketched later in this chapter. It is also consequential, and many of the things we care about as media and technology scholars turn out to be implicated in precisely such moments. And it is always being recuperated and reconstituted through repair. The question then becomes what we make of these facts, and what we do next.