

SECTION INTRODUCTION:  
MODELLING DATA

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For many years computational systems have been accompanied by the cultural imaginary and technical unleashing of viruses hellbent on destruction. Bugs, worms, trojan horses – these are just some of the common names of malicious code designed to infect and replicate across computers and networks. With discursive attributes derived from the biological sciences, digital viruses obtain an anthropomorphic status that draws a line of equivalence between humans and machines. Both can be treated with sufficient intervention by experts in concert with a general cultural atmosphere alive to security, risk and parasitical capitalism. If viruses distributed across communication networks and through shared devices condition the ontology of the digital, what possibilities emerge for building media-theoretical concepts attentive to technical propensities and social practices of infection? Does data contagion, specifically, alert us to new circuits of distribution and modes of attack?

In the context of the ongoing pandemic, we might probe the tendency in the field of data analytics and strains of digital media studies to fall prey to the correlation fallacy. While we can agree with Bernard Siegert's intervention that 'the map *is* the territory', that maps are generative of epistemic worlds making experience intelligible as reality, we can only do so in recognizing that territory is multiplied across innumerable cartographic articulations. Maps, in short, are not always translatable as territories held in common. Sometimes they are just maps, a set of coordinates whose spatial relations are decoupled from power and knowledge.

In other words, the correlation fallacy of data analytics mistakes the diagram of relations specific to data architectures as equivalent to a world external to these computational systems. Mapping

constellations of Twitter hashtags or visualizing geographies of Google search data, for instance, will not reveal that much about the nuanced variation of material and phenomenological life external to the pervasive and always binary logic of the digital. Instead, a kind of unconscious self-referentiality haunts interface designs, models and claims of transparency and revelation through digital methods.

Moreover, the analytical grip of correlation only holds within a protocological universe of interoperability. Once a system of communication starts to falter, when signals encounter static, the rich uncertainty of contingency enters the stage and all too often glides unseen across the bridge to technical and service areas that enable the theatre of performance. We could understand such instances of contingency meddling with the order of things in terms of what Eugene Thacker ascribes to the negative (*nihil*) immanence of contagion, or moments in which data contagion presents as asymptomatic. What, then, for all those occasions in which the volatility wrought by viruses are indiscernible, in which change and transformation reside beyond thresholds of perception? Are such alien moments cocooned or partitioned by the operational logic of the machine that we assume to know?

Let me be clear, in describing contingency as external to the parametric horizon of the digital, I am not searching for ontological distinctions between humans and algorithms. Such are the conceptual limits of critiques of algorithmic bias by researchers who, as Louise Amoore points out in her book *Cloud Ethics*, frame an accountable human subject outside algorithmic power as the locus of responsibility in the setting of normative standards, regulations and codes of conduct. Amoore opts instead for a machinic concept of subjectivity

always-already enmeshed with data architectures and algorithmic arrangements.

In conceiving the international symposium and this subsequent book as 'contagion design', we have brought together two terms that perhaps sit in an unlikely or awkward relation. Particularly the term design, which we can understand not just as an aesthetic register or style but also as a plan, as a logic of organization underscored with intentionality. We can also think of design in ways that Stephen Healy and Declan Kuch outline in their chapter on 'Contagious Mutuality' – design as feedback loops, recursivity and patterns. How, then, might we extend these kind of attributes of design to the relation between data and contagion?

Essays in the previous three parts of this book address how labour and migration, alternative economies and practices of habit manifest in ways that condition and are affected by pandemic outbreaks. This final constellation of essays offers insights into how data contagion at once disrupts and affirms normative assumptions within positivistic epistemes. There's no question that epidemiology has risen to a science of government. With models enlisted to predict and anticipate virus distribution across space and time, infection rates, variation, latency, thresholds, morbidity, mortality and the like, epidemiology treats data as a tool to inform political decisions on the management of populations and economy.

In an incisive critique of the modulation of biopower in pandemic conditions, Mark Andrejevic identifies the malleability of models and their propensity to adapt and produce flexible environments responsive to the politics of contagion. Rolien Hoyng examines how electronic waste disposal and recycling are governed by

models predicated on AI solutionism, proposing instead an ecological ethics and speculative politics of care attentive to data materialities and waste in circular economies and reverse logistics. Bringing a historical attention to the crisis of nature, Orit Halpern identifies how mid-twentieth century cybernetic models of ecosystems later informed computational determinations designed to restore balance to planetary ecologies. Such perspectives ran up against governments and corporations in pursuit of financialization and volatility, modelling resilience as key to the management of uncertainty. All three essays harness a critique of logics of control and the political economy of optimization.

Contagion traffics through contact and encounter. Contagion is instantiated in the moment in which entities and particles, tissues and surfaces co-mingle. Touch is the prelude to reproduction. Data capture certain features and propensities of how contagion works in the world. To the extent that mathematical calculations of contagion science conjure assurances of certainty invested in logics of control, this final collection of essays build and enlist analytical techniques and conceptual idioms that make intelligible the social, technological and environmental life of data contagion not reducible to the logic of models. The event horizon of contagion signals the contest between data and epistemological and indeed cosmological ways of making sense of a world increasingly defined by contingency made routine. Indeterminacy is the revenge of data contagion.