

In Information's Shadow: Considering Failure as Noise, Misinformation, Error and Breakdown

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Abstract

This panel brings together several presentations on the topic of information failure, particularly through tropes of noise, misinformation, error, and breakdown. The four speakers will follow a “Pecha-Kucha” style of presentation (thirty slides at twenty seconds a slide) followed by group discussion. Leah Lievrouw will consider noise by linking recent discussions of big data with information systems theorists Bertalanffy, Shannon, and von Foerster. Colin Doty will discuss misinformation within recent debates over vaccine safety. Patrick Keilty will provide a textual analysis of *Desk Set* (1957) to demonstrate the way that error is gendered female in representations of technology. Lastly, Lilly Nguyen will provide a semiotic analysis of technological breakdown, drawing from ethnographic fieldwork of software in Vietnam.

Keywords: failure, noise, breakdown, error, misinformation

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This panel brings together several presentations on the topic of failure in information and technology. Failure represents the shadows of the information studies field, typically seen as a negative and undesirable quality to be eliminated entirely. Across these four presentations, this panel demonstrates the sticky persistence of failure in spite of narratives of efficacy and transparency that typically accompany discourses of information and technology. In turn, this panel provides new discussion of an overlooked topic in the study of information and technology. These four presentations represent a broad range of approaches to failure, particularly through tropes of noise, misinformation, error, and breakdown. Following the “Pecha-Kucha” style of presentation, authors will present their talks through a series of slides at rapid pace: thirty slides, at twenty seconds for each slide. This presentation format is highly visual, informal, and conducive to group discussions and interaction. The panel will conclude with thirty-minute interactive discussion.

In the first presentation, Leah Lievrouw places a historical and theoretical account of big data to consider error and breakdown through tropes of noise. Drawing from information and systems theorists like Ludwig von Bertalanffy, Claude Shannon, and Heinz von Foerster, she asks do big data foster emergence and non-linearity, or seek to eliminate them? Thinkers like Bertalanffy, Shannon, and von Foerster rejected reductionist explanations of natural and social phenomena in favor of complex, holistic views. Instead of simple cause-effects models of change, they proposed non-linear accounts in which change emerges continuously and unpredictably from the many, complexly interrelated elements of a system and its environment -- a principle that von Foerster called “order from chaos.” Contemporary big data capture, storage, and analytics would seem to provide the ideal opportunity to observe the emergent, non-linear, unpredictable changes of state hypothesized by systems thinkers. Big data advocates insist that data volume and new analytics both capture and make an ever-greater proportion of data available and comprehensible. That is, big data techniques convert huge swathes of previously unusable data into information, effectively reduce or eliminate noise, and vastly extend the possibilities for prediction. Yet some experts see the term

as over-hyped and misunderstood. Skeptics interpret the same developments as simply shifting the boundary between the intelligible and meaningful, on one hand, and an ever-expanding domain of randomness and noise, on the other. As one blogger recently put it, “big data is only big when the amount or complexity takes you out of your comfort zone.”

Colin Doty explores notions of failure in misinformation, particularly through evidence evaluation in beliefs about vaccine safety. The current anti-vaccination movement has placed doubt and fear onto vaccines. Anti-vaccine activists insist on the hazards of child vaccination. Such ideas have become increasingly popular thus challenging once long-held medical practices. Through the case of misinformation in child vaccination, Doty asks at what point does error and breakdown actually occur? On the one hand, misinformation arises from error in evidence evaluation by those who believe and consume the information. On the other hand, misinformation is also caused by unvetted amateurs who produce information without editorial oversight. Both approaches may oversimplify the problem. Where exactly are the errors and breakdowns that cause misinformation? How do we identify what is misinformation and what is not? How do the processes of creating information and misinformation differ from each other? And how are they similar? Likewise, how do the processes of evaluating information and misinformation differ from each other, and how are they similar?

Patrick Keilty provides a textual analysis of *Desk Set* (1957) to demonstrate the way that error is gendered female in representations of technology, particularly during the computational boom after World War II. In the film, Bunny Watson, played by Katharine Hepburn, is a reference librarian at a large corporation. Spencer Tracy plays Richard Sumner, an early computer scientist who has been hired to introduce a computer, “EMERAC,” an allusion to IBM’s ENIAC, into the all-women reference library. Throughout the troublingly sexist narrative, Richard repeatedly insists that EMERAC can only make a mistake “if the human element makes a mistake first.” For Richard, EMERAC is a flawless system for retrieving knowledge, while the “human element,” nearly always gendered female, functions as the unstable variable of knowledge retrieval, in need of computational improvement. Thus, the film creates a dichotomy in which the method of the computer — privileged by the corporation’s financially conscious, all-male executives—displaces the method of the erroneous (and female) human. Complicating this concept of error, the film creates parallels between women’s information and administrative labor and EMERAC’s efficiency. As Mary Flanagan has it, Bunny becomes a metaphoric “bride” in the end and defeats the efficient machines of her bachelor suitor. Bunny’s methodological and meticulous, almost machine-like command of knowledge, by the end of the movie, allows her to beat the very machines sent to replace her., Bunny beats the machine in an uncanny way, saving the day with her genuine human knowledge, her way of connecting events and facts in a sensible order. In the end, the machine spins out of control, while Bunny remains cool and knowledgeable, displacing the concept of error from human to machine. Yet, to the extent that EMERAC is personified as a temperamental “girl,” the concept of error remains gendered female.

Lilly Nguyen’s presentation will provide a semiotic analysis of technological breakdown to explore the cultural and political implications of failure in technology-driven economic development. Drawing from ethnographic fieldwork in Vietnam, her talk will describe the start-up organizations and entrepreneurial communities there. Many members of these communities were foreigners and members of the Vietnamese diaspora who came to Vietnam with the intent of helping to “develop” the country. These people saw potential among the young workers but also saw deficiencies and failures, leading one entrepreneur to describe the country as “ghetto” during an informal conversation. This kind of complaining was regular banter for this community. Moreover, this “ghetto” quality ascribed to Vietnam pointed to a specific feature of modern life there: persistent breakdown. The talk will start with a technical view of breakdown — of machine failure, of disrupted network connections—to further describe the ways that such technical breakdown is then extrapolated to signify racial inferiority, political deviance, and modern deficiency.