

BOOK REVIEW

New Robot Revolution, Multi-Agency and the Machinic: Review of Gerald Raunig's *A Thousand Machines*

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Gerald Raunig
A Thousand Machines
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First, a couple of anecdotes: While I was working on a class lecture a few days ago in my office, a “flash mob” showed up on the quadrangle in front of my window and danced to their iPods for a while before dispersing. Flash mobs were (briefly) a concern for police and other authorities in places like Minsk (Shirky, 2008, p. 165), Philadelphia (Urbina, 2010) and elsewhere, where the alarmingly sudden presence of people loosely coupled through their text messaging or blogging triggered fears of anarchy. But, watching them dance, I remembered another, similar term: flash crowds—the sudden surge of internet traffic associated with, for example, a denial-of-service attack. The similarity is not just incidental—they appear to both derive,

ultimately, from a 1973 short story by science fiction author Larry Niven.

The second happened last month, when someone sent me a link to Malcolm Gladwell’s *New Yorker* article on twitter (Gladwell, 2010). Skeptical of recent press on “twitter revolutions” in Iran and Moldova, he finds profound differences between the “weak-tie” networks that Twitter stimulates and, say, US civil rights activists who risked their lives during “Freedom Summer” in Alabama. In fact, he goes further, suggesting that this turn to Twitter activism will ultimately have a deleterious effect on more direct action. He warns,

It shifts our energies from organizations that promote strategic and disciplined activity and toward those which promote resilience and adaptability. It makes it easier for activists to express themselves, and harder for that expression to have any impact. The instruments of social media are well suited to making the existing social order more efficient. They are

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not a natural enemy of the status quo. If you are of the opinion that all the world needs is a little buffing around the edges, this should not trouble you. But if you think that there are still lunch counters out there that need integrating it ought to give you pause. (Gladwell, 2010)

While Gladwell's critique is, perhaps, a necessary corrective to the exaggerated predictions on the effects of Twitter on the public sphere, I would argue that both of these anecdotes betray a deep confusion. In the first, it's unclear whether the "flash crowds" and "flash mobs" had ultimately human or machine origins—a murky casuistry. In the second, it's a question of semantics—is direct action against segregation in the south during the civil rights era being "replaced" by "twitter activism"? Or (as I would contend) does "social activism" in social media mean something different than other forms of social activism? In the first, it's a confusion of what came first: the human or the machine. In the second, it's a question of whether or not the machine can replace the human—whether twitter-enabled weak ties are a substitute for strong ties. Yet both, ultimately, follow the same spurious line of inquiry.

That is, both indicate a failure to come to grips with heterogeneous multiagent systems, by which I mean systems made up of varying combinations of intelligent, autonomous agents, including both human and non-human. As intelligent systems are extended into varying levels of integration with other information systems, heterogeneous systems are now commonplace (outside of special situations like simulations). But human agents also need to be part of this theorizing, and not just as end-users (Silaghi, 2005). There are very good reasons for considering humans in this as well, rather than simply (as is often the case), modeling agent behavior on understandings of analogous human sociality. For example, it has been almost two decades now of what are often called "mixed reality" games—that is, games that unfold in both real and virtual space using a variety of information and communication technologies (Vogiazou et

al., 2007). But the truth is that our everyday reality has already become a mixed reality.

In those games, human agents learn to exploit the interstices of the real and virtual—in other words, to maximize advantage from the coupling of diverse multi-agents. But this is the case in our everyday worlds as well, where loosely or tightly coupled systems of agents enable all sorts of novel social and physical life. Indeed, the synergy between multi-agent systems research and human-computer interaction has been one of the more productive directions over the last 10 years (Trajkovski & Collins, 2009).

In other words, human action today is best understood as a multiagent system composed of humans and intelligent, non-human agents acting together or *contretemps*; this "multi-agent systems thinking" may lead to new ways of conceptualizing old problems, and discarding ultimately unproductive distinctions. First, in the example of the "flash crowds", the question of which was first becomes irrelevant. Just as agents model other agents as part of their environments, so human agents may model non-human agents in multi-agent systems composed of both. In the second, the question of whether or not "twitter activism" is inferior or superior to "traditional activism" could be put to rest as well. "Twitter activism" is not simply a more distributed, infinitely scalable, traditional activism. Instead, it's an entirely different system, made up of different agents exhibiting emergent properties. But identifying MAS research as a productive line of research in the social sciences is just a beginning. One of the biggest challenges is to conceptualize MAS behaviors.

In a way, this way of extending our understanding of intelligent (machine) agents into human agency, and, *ceteris paribus*, our understanding of human agency onto non-human agents realizes one of the most cherished dreams of cybernetics. This was the essential idea that living and non-living systems could both be analyzed utilizing insights into communicative circuits and circular causality. Could we

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