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HARDT AND NEGRI'S INFORMATION EMPIRE: A CRITICAL RESPONSE

MARK POSTER

MARK POSTER TEACHES AT UCI BOTH IN THE DEPARTMENT OF FILM AND MEDIA STUDIES AND THE HISTORY DEPARTMENT. HIS RECENT BOOKS ARE *WHAT'S THE MATTER WITH THE INTERNET*? AND *THE INFORMATION SUBJECT*.

ABSTRACT **Hardt and Negri's *Empire* contains dystopian gestures toward information technology. In this essay I examine these aspects of their important work, without ignoring their more positive understandings of the topic. I hope to sustain three arguments about networked digital information humachines that counter the dystopian thesis: (1) They are an evolving, unavoidable and central aspect of globalization; (2) they contain countless dangers and afford considerable resources for highly dangerous prevailing agglomerations of power; (3) they offer serious points of resistance to those powers and may serve as a base for developing auspicious, decentralized, multicultural global networks. These theses are mutually related, sustainable only together.**

THE VIRTUAL AND THE MATERIAL

The global information and communication network does not present itself in the manner with which we are familiar from the experience of earlier media. Instead of flows of information from a discrete number of fixed points that are produced by known economic entities, regulated by established nation states and announced by published schedules of programming, the Net is an amorphous, myriad constellation of ever-changing locations and facilities that are subject to fundamental alteration by anonymous, undesignated, unsalaried and unauthorized users. The defeat of copy protection on DVDs by a program said to be posted to the Net by a fifteen year old in Norway (Jon Johansan) and the creation of a program to exchange files by an eighteen-year-old American (Shawn Fanning) sent the film industry and the music industry respectively reeling into hysterical disorder. The Davids in this case are small and young; the Goliaths are huge, powerful and rich, having at their disposal resources that habitually undermine democracy, a world-historical institution. The examples are well known and could be multiplied many times in the relatively short history of the global network. Their implications need to be examined seriously because they are both unprecedented and point to unique properties of the Net. Here I want only to mention them as a reminder of the truly unprecedented circumstance of networked computing.

Digital machines, however much they have been supported by military institutions around the world and however much they have been appropriated for pecuniary reasons by economic organizations, have been developed in the university and have been designed, as the dictates of cybernetic theory prescribe, to transfer information as quickly and efficiently as possible and with minimal interference or noise from any source. The culture of computer programming consequently developed with no attention at all to questions of who is authorized to speak, when, to whom and what may be said on these occasions. Such rules, we can reasonably speculate, have accompanied every instance of human communications since this inception with the emergence of the human species. But these restraints are not true of the design of digital machines. Certainly there was an oversight here and it is a fateful one indeed. Despite their initial financing by a military branch of the United States government, these machines have not been designed to kill people and they have not been designed to generate income, although under certain conditions they can do both. In order to accomplish their purposes of speed and efficiency, digital machines departed from the comparatively slow regions of spoken voice and writing by translating numbers, then text, then images and sound into an electronic level governed by physical rules that are far different from those of voice and writing. When one participates in the Net, in whatever capacity and regardless of the apparent normality of the practice, one cannot avoid its highly novel, underlying material structure. Online the user

may not care about this or may not be conscious of it but using a networked computer means deploying zeros and ones moving, in principle, near the speed of light.

The consequence of culture transformed into electronic digits is that the world has turned upside down with many of our assumptions about time and space, body and mind, human and machine, subject and object, gender, race and class put into question. When an unknown high school student from a remote part of the world e-mails us with questions about a term paper, or when we receive a virus that destroys weeks of work, or when a long forgotten relative communicates with us out of the blue to renew the ties of kinship, or when hundreds of spam messages appear in our inboxes, in these and countless other instances we are at the tip of the iceberg, for better or for worse, of new conditions of culture. We are as close, in time and space, to a high school student in Taiwan as we are to a long-lost relative in Des Moines and to a neighbor next door. When these events occur we are as helpless in defining the communicative action as a hammer is when being deployed to bang a nail into wood. When a word-processing program automatically corrects our spelling errors or indicates a grammatical flaw in our writing, we are as ignorant as a second-grader and as bright as the dictionary and the grammar book. So consequential is the bundling of culture with digital machines that many observers refuse to apply the term reality to it in favor of the vague adjective "virtual."[1] Nothing has really changed in all of this but everything is somehow different or virtual.

Digital conditions of culture mean that the creation of works, their unlimited reproduction and infinite distribution are functions at the disposal of everyone who has access to networked computers. Digital culture enables the transformation of any text, image or sound so that fixed objects like books and films – a fixity that has been taken for granted by all of us – are no longer default features of art. Digital conditions of cultural life also bypass physically determined identities, including disabilities (even paraplegics can work on computers), bodily characteristics, ethnic origins, national citizenship. And all of this in principle occurs with no external authority or censor. I use the term "humachines" to designate the combined interface of humans and machines. Networked digital information humachines is a phrase that presumes the intertwining of humans and machines to such an extent that properly speaking one cannot locate a position that resembles that of a subject nor that of an object. Networked digital information humachines thus vastly transform the fundamental conditions of culture and vastly expand those who may participate in it. Complaints that the Net inundates everyone with information overload should be understood as the statement of those who are comfortable with earlier restrictions on who speaks, to whom, when, as well as with the content of what may be said. These guardians of culture, as we know, have been predominantly though by no means exclusively middle-aged, middle-class, white males. For this grouping

in particular perhaps the cultural conditions are challenging but nonetheless even they will have to endure them. And, let us recall, all of this change depends upon the condition of the digital – the shift to the electronic format of zeros and ones or the on/off switch. It is pointless to bemoan or to celebrate the new conditions; one must instead work to comprehend critically its limits and affordances.

A VIRTUAL EMPIRE?

To translate these cultural conditions into an understanding of their implications for planetary politics and to relate the spread of networked digital information humachines to other globalizing trends and to do so from a critical perspective is a daunting task. If the job is intimidating it is also essential. We must then express our gratitude to Michael Hardt and Antonio Negri for their effort to begin this discussion with their work simply entitled *Empire*.[2] While others such as Castells have presented critical overviews of the economic and social aspects of globalization, Hardt and Negri are among the leaders in theorizing the political dimension of that phenomenon. Their work has deservedly excited widespread interest and, as might be expected, much criticism.[3] In what follows I attempt to revise the Hardt and Negri thesis in light of my understanding of networked digital information humachines.

Hardt and Negri define empire as "a new form of sovereignty ... that effectively regulates ... global exchanges..." (2000: xi). Certainly, global exchanges have increased dramatically in the late twentieth century and certainly some new form of power is in process of formation that will attempt to control them. How developed this new form of power has become is surely debatable. For some, it is too soon to begin to define such power. To Hardt and Negri's credit, they persevere nonetheless. Like Marx who theorized industrial capitalism in the mid-nineteenth century when it barely existed as a form of economic organization and activity, Hardt and Negri investigate empire as an emergent phenomenon. Only the most hidebound positivist, who insists on examining only those realities that are numerically extensive, would deny the world-historical significance of what Hardt and Negri study. Even if very little actual power exists outside the realm of nation states in post-national configurations that Hardt and Negri term "empire," what happens in this germinating realm is far more significant than the ongoing party politics of Tweedledum and Tweedledee as they are breathlessly and scrupulously reported in every major media in every nation state, and this 24/7. But there is a problem: Hardt and Negri at times appear to suggest that empire is a "political subject," indicating to me that already there is a theoretical difficulty in their formulation since, as I have argued, the information component of global exchanges does not fit into the subject/object dichotomy.

Hardt and Negri's empire is different from earlier large political groupings of power since it is truly global and thereby "deterritorializes"

older political forms such as the nation state. Also unlike the nation state, empire is "decentered" or not specifiable by markers of land. "Empire," they contend, "manages hybrid identities, flexible hierarchies, and plural exchanges through modulating networks of command" (ibid.: xiii). Empire is then postmodern but it is also, as they argue, virtual. For Hardt and Negri, empire "appears in the form of a very high tech machine: it is virtual" (ibid.: 39). They metaphorically transfer the attributes of "a very high tech machine" to their concept of empire. But the term "high tech" or even "very high tech" is too vague. Do they mean a nuclear reactor or a linear accelerator? Probably not. One senses in their use of this term a basic unfamiliarity with "high tech." For there is nothing necessarily "virtual" about "high tech." If they mean that empire is not territorial in the sense that the nation state was territorial, then they may be referring to the organizational quality of empire that is like some high tech corporations (not machines) because these firms structure themselves non-hierarchically and are not centered. Such companies consist of networks in multiple locations that are flexible and easily alterable. Hardt and Negri might intend therefore to characterize empire as a virtual corporation.[4] If "high tech machine" refers to the Internet, then its material structure is not at all virtual consisting of quite material myriad wires, cables, satellites connected to millions of computers, each of which is indeed locatable in space. The Internet is virtual not in its lack of territoriality but its departure from space/time configurations associated with earlier forms of communication. It affords virtual presence in the sense that it reduces distance and time factors in communication to zero. The vagueness and almost total lack of examples about information technology in Empire seriously obscure the efficacy of its argument.[5]

The conceptual sloppiness of Hardt and Negri in using the term virtual is more than a minor oversight. Networked digital information humachines are central to their argument concerning empire and their deficient understanding of digital technology seriously detracts from their work. They argue that the crucial aspect of empire is the formation of new subjectivities, which, in turn, might be the basis for a new counter-empire. These subjectivities, they assert, are at least in part a direct consequence of networked digital information humachines, "in this new world of communicative media and networks, the mechanisms of modern sovereignty were no longer sufficient to rule the new subjectivities" (ibid.: 251). Or again: "today we participate in a more radical and profound commonality than has ever been experienced in the history of capitalism. The fact is that we participate in a productive world made up of communication and social networks, interactive services, and common languages. Our economic and social reality is defined less by the material objects that are made and consumed than by co-produced services and relationships. Producing increasingly means constructing cooperation and communicative commonalities" (ibid.: 302). Instead of specifying

the precise mechanisms by which "new subjectivities" are formed through "media and networks," Hardt and Negri, predisposed as neo-Marxists to a production-based model, discover a postmodern economy centered on new media: "In postmodernity the social wealth accumulated is increasingly immaterial; it involves social relations, communication systems, information, and affective networks" (ibid.: 258). Here again one must object to the characterization of postmodern social wealth as "immaterial."

There is nothing immaterial about networked digital information systems. In fact, as I argued above, it is precisely the new form of materiality, its electronic and machine-level language that enables these systems to work the way they do. Only ignorance about new media allows one to characterize them as "immaterial." One cannot develop a critical theory of new media if one begins from the assumption that they are somehow immaterial. Only by recognizing the *specificity* of the materiality of new media can one assess the potentials for critique that might be developed around them. Instead, Hardt and Negri, beholden to a Marxist opposition of labor power and information technologies, attempt to attribute to labor the qualities of new communication systems. They write: "The only configurations of capital able to thrive in the new world will be those that adapt to and govern the new immaterial, cooperative, communicative, and affective composition of labor power" (ibid.: 276). In such a scenario, the critique of capital in the "new world" of empire is comfortably returned to the labor process and confined therein. This analysis misses precisely what is new about networked digital information systems: the human (labor) is connected with the information machine in a manner that disrupts the subject/object binary and calls for new categories of thought. These must be developed before critique may be elaborated.[6]

The critical theory of empire does, it must be acknowledged, heed the integration of humans with machines in the condition of postmodernity. Hardt and Negri are well aware of the theory of the cyborg, at least in Donna Haraway's version, which they cite (Haraway 1985). Their exposition of cyborg theory pretends to account for altered conditions but remains rooted in a subject theory of the human. They write: "Interactive and cybernetic machines become a new prosthesis integrated into our bodies and minds and a lens through which to redefine our bodies and minds themselves. The anthropology of cyberspace is really a recognition of the new human condition" (ibid.: 291). However, if cyborg theory is correct there can be no "anthropology of cyberspace" as they claim but rather a post-anthropology of the human/machine interface.[7] If, as Hardt and Negri contend, "In the passage to the informational economy, the assembly line has been replaced by *the network* as the organizational model of production . . ." (ibid.: 295, emphasis in original), then one must contrast the relation of humans to machines in the industrial period of the Fordist assembly line, where dead labor is alienated

from living labor, with that of the network, where humans monitor and work with computers (Zuboff 1988). And one must ask if there is not a fundamental shift, in the age of empire, to a realm beyond production, as it appears in the age of industry, to one that might be more appropriately characterized as a realm of culture? Production may be understood as the use of tools to transform natural materials into commodities. Contemporary work, at least in the technologically advanced societies, increasingly takes the contrasting form of designing objects, inventing sales pitches, monitoring computers that regulate production, and deploying programs that administer the movement of the objects from the factory to the consumer. These symbol-manipulating practices might well be termed "culture."[8]

The understanding of networked digital information humachines must not become the basis for a new totalization or metanarrative. However compelling the new media may be they do not constitute the only basis for understanding contemporary conditions and they are not the only component of the larger process of globalization. While networked digital information humachines are implicated in other aspects of globalization such as the demographic and the economic, they must not be confused with them. Finance capital, for instance, may have changed a great deal by going online, but there remain fundamental features of it that are not affected by digitalization. Hardt and Negri expand too easily and too much the reach of new media and they do so with language derived from the analysis of an earlier social world. They write: "Empire takes form when language and communication, or really when *immaterial labor* and cooperation, become the dominant productive force. The *superstructure* is put to work, and the universe we live in is a universe of *productive linguistic networks*" [emphasis added] (2000: 385). This kind of talk does as much to obscure the processes it refers to as to point to new avenues of investigation. "Superstructure," "immaterial labor," "productive linguistic networks" – these terms conceal more than they reveal about the mechanisms of power at play in networked digital information humachines. The planetary system that is rapidly emerging is enabled by discourses and practices that are coupled with specific technologies, as well as by complex movements of populations and economic reorganizations.

DISCIPLINE AND CONTROL

At the heart of *Empire* rests an analysis that derives not from Marx but from Foucault and Deleuze. Hardt and Negri narrate the emergence of empire as a change in mechanisms of power from societies of discipline to societies of control. The thesis that a new mode of political power is coming into being – empire – replacing the nation state, requires a new mode of social regulation. Just as Foucault succeeded in defining the technology of power commensurate with the nation state, Hardt and Negri contend, Deleuze accomplished the same task for empire. Networked digital information humachines

again play a central role in this process. Hardt and Negri's ability to theorize these media is crucial to the success of their effort.

Foucault, especially in *Discipline and Punish* (1977) and to a somewhat lesser extent in *The History of Sexuality: Volume 1* (1978), outlined the combination of discourses and practices that effectively constructed the modern subject. The prison, the workshop, the school, the hospital, the military all relied on confining architectures to operate on the individual, in varying ways, so as to instill a form of discipline by which the subject, acting independently and regarding him- or herself as free, conformed to the utilitarian calculus of modern industrial, democratic society. Discipline imposed upon the body and the mind of each subject a "rational" regime of possible action in which identity was fixed, stable and unified. Here we have Freud's description of the self-understanding of the ego in Victorian morality as allegedly "the captain of the soul" and the proud individualist of Western society, thinking himself autonomous. This individual, to some the glowing achievement of Western civilization, might participate in law, democracy, private enterprise economics and nuclear families but only on the *cultural* premise of discipline, of having been constructed as a subject in specific architectural spaces. Foucault, quoting Samuel Beckett, dreamed of an escape from such disciplined identity formations into another language system, in which the basic premise would be "What does it matter who speaks?"[9]

A decade later, Deleuze opined that discipline no longer required spaces of confinement. Borrowing a term from William Burroughs, Deleuze dubbed the new system of power, "control societies." Deleuze writes, "*Control societies* are taking over from disciplinary societies. 'Control' is the name proposed by Burroughs to characterize the new monster . . ." (Deleuze 1995: 178, emphasis in original). In *Naked Lunch*, a meditation on drug addiction, Burroughs obsesses about control both by addicts and by the US government (Burroughs 1993). Deleuze's use of the term does not seem to fit easily with that of Burroughs, especially because the French philosopher relates "control" to the widespread deployment of computers by government and corporations, a technology that was at best nascent in 1959 when *Naked Lunch* appeared. Burroughs, in his introduction, asserts that drug addiction and especially the "hysterical" response it evokes in the government are leading social concerns: "The junk virus is public health problem number one of the world today" (ibid.: 11). Virus as metaphor might equally claim adjectival place with control in the sense Deleuze indicates. He writes, for example, "control societies function . . . with information technology and computers, where the passive danger is noise and the active, piracy and viral contamination" (Deleuze 1995: 180). The metaphor of the virus has the advantage of suggesting the networked quality of domination whereas control is a less precise term and might equally apply to other social systems.[10]

Nor does Deleuze do much in characterizing the control aspect of the control society. In his brief piece from 1990, the much-discussed

essay "Postscript on Societies of Control," Deleuze emphasizes instead the absence of confining spatial arrangements in the exercise of domination afforded by the use of computer technology. "What has changed," in the formulation of Deleuze's argument by Hardt and Negri, "is that, along with the collapse of the institutions, the disciplinary dispositifs have become less limited and bounded spatially in the social field. Carceral discipline, school discipline, factory discipline, and so forth interweave in a hybrid production of subjectivity" (Hardt and Negri 2000: 330). Beyond the negative trait of the absence of "major organizing sites of confinement" (Deleuze 1995: 177), control societies are, in this text, maddeningly undefined. Deleuze discusses the control society again in "Having an Idea in Cinema" (Deleuze 1998), but is again both brief and vague only adding to his previous discussion that, since "information is precisely the system of control" (ibid.: 17), "counter-information" becomes a form of resistance (ibid.: 18). All of which suggests to me that Deleuze's understanding of networked digital information humachines remains rudimentary. It is hard to imagine what "counter-information" might be for example. Would it be information that refutes other information, or information that calls information in general into question?

It might seem logical to conclude from the opposition of societies of discipline/societies of control that Deleuze places himself in opposition to Foucault or at least as discerning forms of domination unthought by the historian of the Panopticon. Yet such is not at all the case. Instead Deleuze proclaims agreement with Foucault, citing Burroughs again as the fulcrum of the matter. Deleuze writes, "Foucault agrees with Burroughs who claims that our future will be controlled rather than disciplined" (Deleuze 1992: 164). But Deleuze gives no evidence that Foucault anticipated a transformation to societies of control, relegating discipline to the garbage can of history. It would appear that Deleuze was unwilling to position himself as the thinker who went beyond Foucault even as, in the same paragraph cited above, Deleuze compellingly characterizes the break between the two orders of domination. In the following passage Deleuze insists that Foucault adopts the notion of societies of control: "the disciplines which Foucault describes are the history of what we gradually cease to be, and our present-day reality takes on the form of dispositions of overt and continuous *control* in a way which is very different from recent closed disciplines" (ibid., emphasis in original).

Deleuze's stadial theory, moving from discipline to control, is also far too linear in character. Elements of "control" existed in Europe in the early modern period as the state hired spies to keep track of suspected miscreants. Equally forms of "discipline" proliferate in the twenty-first century as the United States, for example, erects more and more prisons under the so-called "get tough" policies of recent and current administrations. The shift from discipline to control is also Eurocentric, overlooking the very different disposition of these state strategies in the South. François Vergès points out that "In postcolonial Reunion, these two strategies have concurrently occurred.

New types of sanction, education, and care have constructed a web of control around the Creoles, and along with the creation of a vast social network of control, there has been a multiplication of prisons, a criminalization and psychologization of politics" (Vergès 1999: 219). Deleuze's model thus contains problems at numerous levels.

In an essay from 1998, Michael Hardt attempts to explicate the concept of societies of control beyond what Deleuze has given us. He asserts that, as the chief new form of power, "The metaphorical space of the societies of control is perhaps best characterized by the shifting desert sands, where positions are continually swept away; or better, the smooth surfaces of cyberspace, with its infinitely programmable flows of codes and information" (Hardt 1998: 32). Smooth surface is opposed to striated planes, categories one recalls from A Thousand Plateaus (Deleuze and Guattari 1987) that designate respectively homogeneous and heterogeneous spaces (ibid.). But Hardt overlooks the side of cyberspace that resists the power formation of the control society, all kinds of spaces in which copyright law, fixed identities, censorship and so forth are continuously evaded and challenged. Cyberspace is hardly Hardt's smooth surface of transparency and control but a highly differentiated field of resistance, conflict and uncertainty. This field is not best understood as one of "counter-information" because that term privileges something that would be "hegemonic information," and presumes that all information is designed specifically in relation to it. A Zapatista website counters the Mexican nation state, a file-sharing site resists copyright, a gay site in Singapore violates local regulations against non-heterosexual gatherings – but in none of these is information, digital or otherwise, called into question.

For Hardt, control societies are "smooth" because civil society has collapsed, rendering the social lacking in mediations (Hardt 1998). Hardt analyzes the dialectic of civil society from Hegel to Foucault, concluding that "What has come to an end, or more accurately declined in importance in post-civil society, then, are precisely these functions of mediation or education and the institutions that gave them form" (ibid.: 36). Foucault's disciplinary institutions have lost their ability to position and give identity to individuals. Replacing the spaces of confinement, according to Hardt, is the media. But again one must object: the media is also mediating, albeit in a different form from the older establishments. What is lacking in Hardt's understanding of the move from discipline to control is precisely an analysis of the media as technologies of power. Surely the media is different from prisons, education and so forth but one must understand the specificity of the media as structuring system, as well as pay attention to the difference of media from one another. Television, print and the Internet are each a disciplinary institution, in this sense, different from each other but also similar to prisons in that they construct subjects, define identities, position individuals and configure cultural objects. True enough, media does not require spatial arrangements

in the manner of workshops and prisons but humans remain fixed in space and time, at the computer, in front of the television set, walking or cycling through city streets, or on a subway with headphones and an mp3 player or a cell phone. I refer to this configuration of the construction of the subject as a "superpanopticon" to indicate its difference from modern institutions (Poster 1990). The term "control society" bears the disadvantage of losing an ability to capture the new technologies of power.

Hardt ignores versions of civil society different from Hegel's where institutions mainly support the state. Jürgen Habermas, for example, argues that places such as coffee houses and salons constitute a form of civil society by promoting the formation of critical reason, suspending thereby some inequalities that prevent free speech (Habermas 1989). In this case a public sphere is formed within civil society that fosters resistance to formal institutions of the state. One might well argue that some media promote such a public sphere. If television detracts from critical reason by short-circuiting dialogue in its broadcast model of transmission, the Internet in part at least provides interactive spaces where critical reason might flourish. Usenet, chat rooms, e-mail, listservs, instant messaging and other functions of cyberspace arguably promote interactive dialogue that might contribute to a new civil society, a new public sphere. I have claimed that this position overlooks important differences between proximate speech and life online such as body positioning and space/time configurations (Poster 2001). Yet the issue of new technologies and civil society is at least worth considering. One may argue, along with Jodi Dean, that media afford contexts for differential public spheres, ones not limited by the Western regime of rationality (Dean 2001). The absence of this question in Hardt and Negri's book is regrettable.

POSTMODERN IDENTITIES

An index of the ambivalence of Hardt and Negri about the role of new information technologies in control society is the opposing depictions the reader finds in Empire of the postmodern self. Hardt and Negri first assume the Marxist stance against the liberatory potentials of the postmodern figure of multiple subjectivity. Hardt and Negri compliment postmodern theory for its critique of modernity but fault it as confused about "the forms of power that today have come to supplant it." The postmodernists, in their eyes, "are still waging battle against the shadows of old enemies . . ." (2000: 142). Hardt and Negri conclude with a strong judgment against postmodern theory:

> The affirmation of hybridities and the free play of differences across boundaries, however, is liberatory only in a context where power poses hierarchy exclusively through essential identities, binary divisions, and stable oppositions. The structures and logics of power in the contemporary world are entirely immune

> to the "liberatory" weapons of the postmodernist politics of difference. In fact, Empire too is bent on doing away with those modern forms of sovereignty and on setting differences to play across boundaries. (ibid.: 142)

In other words, postmodern theory's affirmation of contingent identities is just what the doctor ordered for empire.

If postmodern identities are conservative in the context of empire, then why, one might ask, do Hardt and Negri pin their hopes of resistance on precisely such mobile, fragmented selves? In their controversial and deeply flawed concept of the multitude as revolutionary agent, they paradoxically include as characteristics of this agent typical postmodern traits.[11] First, they make the very postmodern move of privileging language in the question of politics: "The first aspect of the telos of the multitude has to do with the senses of language and communication . . . The control over linguistic sense and meaning and the networks of communication becomes an ever more central issue for political struggle" (ibid.: 404). They then characterize the multitude in the postmodern terms of Homi Bhabha as hybrid: "The hybridization of human and machine is no longer a process that takes place only on the margins of society; rather, it is a fundamental episode at the center of the constitution of the multitude and its power" (ibid.: 405). A most confusing picture then emerges in their text of the multitude or revolutionary agent as both symptoms of postmodern conditions and as cause of the transformation of empire.[12]

This confusion, I contend, results from the inability of Hardt and Negri adequately to theorize networked digital information humachines (and media more generally). Their understanding of empire continually verges toward an analysis of new media but splits into an identification of the Internet with empire and a utopian attribution of cyberspace to the multitude. Empire fails, in my view, to open a double analysis of the work of new media in global processes, one that would indicate how existing forces such as the nation state and the globalizing economy attempt to appropriate new media to their ends and at the same time analyze how the unique communicational architecture of the Internet affords potentials for global forms of political organization from below.

In the end Samuel Beckett's "What does it matter who speaks?" poses the challenge of a planetary system of humachines. Until we develop a critical theory that is able to pose this question in our media context we cannot expect to contribute significantly to the formation of a discursive of postnational democratic forms of power.

CONCLUSION

Hardt and Negri search for resistance to empire in the countenance of a subject: the multitude. They write, "The new transversal mobility of disciplined labor power is significant because it indicates a real

and powerful search for freedom and the formation of new, nomadic desires that cannot be contained and controlled within the disciplinary regime" (2000: 253). A critical theory of globalization, to the extent that it explores media, must look not for a revolutionary subject but for a matrix of dispositifs, for a cluster of technologies of power that constructs humachines that might, after they are extensively deployed, act in a fashion that transforms empire into a planetary system outside the nation-state/capitalist market and toward what might still be labeled radical democracy (Laclau 1990). Hardt and Negri has given us instead an updated Jacobinism/Leninism, the movements that overthrew precapitalist regimes and brought us into modern society. The question of how to get beyond modern society can by no means simply assume that a new subject needs to be put into place. Instead the issue rests with humachines and their historical trajectory.

The term "humachine" requires some explanation. I use this awkward term to designate not a prosthesis but an intimate mixing of human and machine that constitutes an interface outside the subject/object binary.[13] I address the relation of this interface or assemblage to globalization because I continue to sense that those most articulate writers about the former (John Perry Barlow, Nicholas Negroponte and even Pierre Lévy for example) do not give one confidence of a critical adroitness regarding globalization. By the same token, those most impressive thinkers who write about the economic and political aspects of globalization (as we have seen regarding Hardt and Negri) appear shaky and uncertain about the technological side of digital information humachines.[14] In pursuit of the double objective of new media and globalization, I offer by way of conclusion three arguments about networked digital information humachines for future analysis:

1. They are an evolving, unavoidable and central aspect of globalization;
2. they contain countless dangers and afford considerable resources for highly dangerous prevailing agglomerations of power;
3. they offer serious points of resistance to those powers and may serve as a base for developing auspicious, decentralized, multicultural global networks.

These theses are mutually related, sustainable only together.

One problem must be indicated from the outset. "Networked digital information humachines" are neither subjects nor objects. The global economy, by contrast, may be understood as the sum of countless human practices in which machines are used as tools, as a myriad of rules, institutions and habits that to some extent change over time. Language theory of the past century has been important in conceptualizing this relation because it is one of the few models that captures the mutual construction of speaker and cultural system at

the point of enunciation. Neither determinism nor transcendentalism is helpful in articulating the practices of networked digital information humachines. There is no determinism and no freedom, properly speaking, in this cultural and practical world. Instead, in addition to the linguistic theories of structuralism and poststructuralism, one would do best to rely upon a theory of autopoiesis such as that of Humberto Maturana and Francisco Varela (Maturana and Varela 1980) or the concept of emergence in Steve Johnson's sense (Johnson 2001), however much these categories might differ from one another. The phrase "networked digital information humachines" presupposes the presence of humans and machines, subject to certain constraints to be sure and as we shall see, but impervious at important levels to critiques from vantage points that presume a stable field of subjects that act upon the world and objects that are manipulated by that action, in short, to many modernist perspectives. Critical perspectives on the cultural and communication aspects of globalization might benefit from a concept like "humachines" in avoiding paradigms that rely upon fixed subject/object positions and their interrelation. The concept of the "humachine" is, I suggest, less intertwined with Western traditions of thought and might permit and encourage the intervention and contribution of non-Western points of view.

NOTES

1. This argument is made by Villalobos-Ruminott 2001: 39.
2. Hardt and Negri affirm the tentative nature of their intervention in a response to critics of *Empire* in Hardt and Negri 2001.
3. See, for example, the special double issue of *Rethinking Marxism* (Mustapha and Eken 2001).
4. Abbe Mowshowitz has early on theorized the virtual in relation to social organization. See for example Mowshowitz 1992.
5. Marcel Swiboda and Kirt Hirtler for example argue that "Whilst it is conceivable and even tangible that the technologies of informatics, communications and bio-power harness great creative potential and may provide the means for an ontological survey of subjective production . . . Hardt and Negri do not seem to provide any thoroughgoing examples of how this co-operation or collectivity is presently taking shape." They want "accounts of more concrete instances in which 'subjective cooperation' is presently taking shape and how the very practices of technologically enhanced knowledge-production might proceed" (Swiboda and Hirtler 2001: 139).
6. For an analysis of the material structure of the Internet see Galloway 2001.
7. For more developed explorations of this question see for example Guattari 1993 and Hayles 1999.
8. See Resnick and Wolff 2001 and Dyer-Witheford 2001 for discussions of the concept of immaterial labor.

9. Beckett's text (1974) reads a bit differently from Foucault's. In this highly cryptic text, Beckett writes, "What matter who's speaking, someone said what matter who's speaking" (ibid.: 16).
10. See for example the argument in Beniger 1986.
11. In a recent defense of the concept of multitude, Negri continues to characterize it as "postmodern" (Negri 2002). For a critique of the concept of multitude in relation to the question of representation, and therefore of media in general see Passavant and Dean 2000).
12. Hardt and Negri trace the concept of the multitude back to Spinoza, specifically in his book on politics (see Negri 1997; Hardt and Negri 2000). On the concept of the multitude see also Montag 1999 I am indebted to Sean Hill for bibliographic suggestions on this question.
13. For another effort to theorize the relation of new media to the subject/object binary see Stroehl 2002.
14. See for example the essays in Ramonet 2002. The authors collected in this volume can do little more than bemoan every aspect of developments within media, old and new.

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