By the time Al Gore invented the Internet, the history of that network's privatization had already become complex, an interplay of ordering as well as of disordering principles. The dot-com era's struggle to stake out "mindshare"—to profitably wrap, label and own territories of cyberspace, of cyber experience—can be understood, for example, as largely successful efforts to linearize what we have come to think of as the quintessentially nonlinear field. After its origins in the academy and its widespread adoption by the military, the Internet was transformed in its embrace by the corporation in ways seemingly antithetical to the principles of its conception, at least insofar as those principles valorized a "network" over a "grid" topology. The website portal (Yahoo!, MSN), gave the "centerless" network a center, a point of origin, a frame, a direction, and a hierarchical arrangement of content. The website application gave state (history, narrative, ordered sequence) to the user's supposedly "stateless" sampling of information. Everywhere the "free" network's contents were
privatized, marketing and legal battles fought to own the most encompassing framework for accessing via the new medium, from the browser (Netscape), to the Internet Service Provider (AOL, CompuServe), to the entire desktop (Internet Explorer/Windows Explorer). New technologies were—to use Microsoft's insidious catchphrase—embraced and extended. They were adopted as "open" standards, languages, and methods accessible and sensible to everyone. But these technologies quickly individuated as they were "enhanced." In practice, to use the new technology at all, one was coerced to use the conqueror's particular and widespread dialect, the new, de facto standard.

These orderings are examples of intellectual landrush that have less glamorous precursors and analogues in the careerist academy, long acquainted with the theory of carving out profitable virtual niches in the "free" intellectual marketplace. The successful academic, even of the old school, recognizes something of the inevitability with which order is imposed upon a chaos so that it might be learned and so that it might be owned. The particular and eclectic vicissitudes of individual personality inflect such orderings.

The point is that the social use of adaptive systems in their various incarnations will not be a revolutionary disengagement from linear, hierarchical, and grid systems, but will be defined instead by their necessary, necessarily productive, historical engagement with more conservative paradigms. Emergence, and what we call progress, relies as much upon erecting boundaries as upon dissolving them.

As the interdisciplinary discipline par excellence, and with its traditional love both for totalizing narratives inassimilable by the hard sciences and for those narratives' beautiful interplay with the psychologies of their particular authors, literary studies is particularly well-poised for reception of the new technologies offered by complexity theory. The latter's assimilation as a tool for literary analysis, alongside the various -isms, will necessarily entail both a diminution of its theoretical applicability, strength, purity, and self-evident truth—and an increase in its practical application, reach, rhetorical sophistication, and sex-appeal. It will simultaneously advance and obscure our understanding of physical, literary, and cognitive structures.

With N. Katherine Hayles's work, Mark C. Taylor's is among the most visible, learned, and lucid in this work's important advance wave. His fine The Moment of Complexity: Emerging Network Culture is a popularist account of resonances between recent information theory and recent critical theory, an account that concludes somewhat perplexingly
by equating "Complexity in the University" with "e-Ed," learning and teaching mediated by the Internet. In Taylor’s analysis, the traditional classroom’s infiltration and transfiguration by e-Ed represents a change inevitable, qualitative, and therefore also good. I am uncertain about whether or not the transformations he envisions concomitant an alliance among the practitioners of his e-Ed project (GEN or Global Education Network)—teachers and students, the corporation, and the university—are inevitable ones. The assessment of their desirability seems to me to be based on four tacit assumptions, which it is the purpose of this paper to refute. The emergent is not the good. The university is not itself a work of art. Knowledge is not capital. The dynamical field is not democratic.

Taylor’s portrait of the GEN project’s detractors is of aging, tenured technophobes fearful for the loss of accumulated power that changes to the university’s fundamental structures will entail. As a nontenured PhD in English whose undergraduate training was in Mathematics and Computer Science and who has spent the last six years as the chief software architect for various wireless software companies (as well as for one educational publishing corporation), I hope at least to provide a voice somewhat unique among the naysayers.

**Intrinsic Finality**

Taylor is quite correct to oppose the positive knowledge offered by complexity theory to the entrenched, negative knowledge offered by critical theory and preeminently by deconstruction. Complexity theory takes as its fundamental object of study a motion, latent in and intrinsic to the order of things, toward higher and higher levels of self-organization. Deconstruction can only regard the idea of this motion as "theological," an agency or presence supposedly both free from and determining of the physical signifiers which provide its trace.

The interconnectedness of agents (natural or synthetic) within dynamical network systems, in which minute local fluctuations may lead quickly to vast global changes, makes these systems resistant to description in the terms of classical methodologies. They resist analysis, description of the whole in terms of its component parts, because their significant properties are rather those of the relationships between parts than properties of the parts themselves. Reifications of these relations will define new kinds of entities describable in new schemas of "higher order." No determinate relation exists between the two levels of description; that is, the new descriptors are increasingly formal, increasingly abstract. The new descriptors increasingly efface any determinate connection to their
more material substrates. Weather systems and economies are two examples among many of such systems comprised of components so various and so interrelated that the equations predicting their behavior are easier to model and observe than to solve.

The mathematics of the difference between classical and dynamical systems is given in the transition from relatively simple systems that can be modeled by isolable linear equations—systems obeying principles of superposition such that their component movements may be meaningfully separated and understood separately in order to provide a complete understanding of the whole precisely equal to the sum of these separate parts—to complex, generally unpredictable, nonlinear systems, in which component movements are so interrelated that independent description of them is impossible or meaningless with respect to the system as a whole. The system as a whole exhibits surprising, “emergent” behavior, apparently self-organized epiphenomena.

In the eighteenth century, Kant gave this theology, which he called the doctrine of an “intrinsic finality,” to Nature, some of its consummate expression in the three critiques. For Kant, the products of natural systems, like the emergent entities in dynamical systems, are characterized by their parts’ simultaneous, reciprocal function as both ends and means—to which the imposition of no exterior design or designer is evident. In this, his system’s conception of Nature contrasts with more “mechanistic” conceptions of the world understood as clockwork, as comprising functional components evincing a design from which the existence of an external Creator-god or external purpose might be deduced.

There are two relevant mappings of this distinction between extrinsic and intrinsic finality that are crucial, both to Taylor’s idealization of network over grid culture, of the new over the old, of the post-industrial over the industrial—and to a larger debate between the institution of “Technoscience” and its critics. These are both mappings already performed by Kant himself: first, from the natural system and the natural organism to the work of art; second, from the natural system and the natural organism to the human institution, preeminently to the university.

Although, according to *The Critique of Judgement*, the artwork can never be for human contemplation what the natural product is—in other words, can never be an object of perfect beauty, since the former will always retain the trace of some connection to its author’s hand—intrinsic finality does become the ideal to which aesthetic production aspires. Ideally, the aesthetic image will be “life purified in and reprojected from
the human imagination" (219–20). It will achieve dynamic relations among parts dislodged from their original contexts to be set into the motion of new constellations that are conceived in *withdrawal* from the author’s subjectivity into autonomous, wholly internal relation. An understanding of the artwork in these terms prepares for a modernist aesthetic: the work is no longer *about* anything: it *is* the thing. It does not point to meanings about a world outside itself but creates an autonomous meaning of its own. Here the two modes, intrinsic and extrinsic, or aesthetical and teleological, comprise Kant’s reflective judgment. Reflective judgment attempts to construct a universal that would subsume a particular presentation’s finality in order to construct a unity of the phenomenal manifold. This unity may only be known by the reflective judgment analogically. If, in accordance with a metaphor to the determinative (the non-reflective) judgment, the manifold is considered in terms of its subsumption by a determinate concept which would be its imagined purpose, considered as if its purposiveness were directed toward some supersensible end, its accord with that concept may be considered *objectively*, and the judgment so produced is called *teleological*. If the unity so produced is instead subsumed by no determinate concept, but corresponds instead only to an *indeterminate* Idea—when the manifold is considered as *Zweckmässigkeit ohne Zweck*, or *purposiveness without purpose*, when its finality is considered to be without end—then accord is judged *subjectively*, in terms of its harmony or the harmonic play it occasions with the mental faculties of the observer, and the reflective judgment so produced is called *aesthetic*. The right exercise of the aesthetic judgment is characterized by *disinterest*. It occasions, solely via its form, a play of the faculties that is pleasing apart from any interest in the actual existence of what the work represents or is.

In Kant’s *The Conflict of the Faculties*, conceived at about the same time as *The Critique of Judgment*, the same division separates the ideal praxis of those disciplines in the Academy that must be held accountable by the government to external ends dictated by the law of the land—Theology, Medicine, and Law—from the ideal praxis of the philosophical disciplines, which must be allowed to simply speak the truth as an internal exploration of the disinterested, autonomous exercise of Reason. Here, the profit motive, like any other interest or end external to a discipline’s search for objective truth, obscures its ideal practice. This insistence on academic objectivity stands in opposition to Taylor’s plan for the network culture in which effacement of the nonprofit/for-profit distinction is one of the most important tasks.
Now Taylor becomes quite puzzling when he effects his own version of the two mappings. In his contemporary schema, the concept of the grid plays the outdated role of Nature falsely imagined as exhibiting an external finality (as in the clockwork or mechanistic universe rejected by Kant). The grid imposes a false, external ideal of orderedness upon, not the chaos, but the complexity of experience. Taylor in this context has earlier quoted Mandelbrot, “Clouds are not spheres, mountains are not cones, coastlines are not circles, and bark is not smooth nor does light travel in a straight line” (40). Without wholly rejecting the idea of the grid as something that might still lend a determinate character to experience analogically, the network provides a model much more faithful to the world’s true intrinsic finality—to the organic, near ubiquitous, complexity of self-organizing structures (which we now perceive everywhere in natural and artificial systems). Good. But Kant’s laudable transition from an extrinsic to an intrinsic paradigm as it is described in Taylor’s third chapter becomes, in Taylor’s final chapter, an insidious dichotomy privileging uselessness over usefulness, privileging high art over popular culture when it is translated into the terms of art appreciation—and an elitist preference for peer review over judgment by the marketplace when it is translated into the terms of architecting an academic institution. Although Taylor now considers these translations in Kant suspicious and unjustified application of the architectonic of mental faculties, first to art criticism and second to the university, how are we to account for Taylor’s own precise repetition of the gesture in expansively mapping the adaptive systems paradigm first onto a postmodern aesthetic criticism and next onto his own plan for transforming education into something more like these postmodern aesthetic productions? He condemns both the idea of disinterested production—self-interest à la Mandeville or Adam Smith is more to his taste, self-interest being the local interaction from which the novelty of global behavior emerges—and condemns the interest of faculty who wish to preserve a tenure system. (Academics are too well-paid, profit-seeking, and protective of their consolidated power... they don’t adapt readily enough to new technology or to new ideas... they should take their example from the ascetic, self-sacrificing, and quickly adapting businessman!) How do we explain these seeming inconsistencies? What precisely is the difference here between Kant’s project and Taylor’s?

First, Taylor differentiates in practice between binarisms—which are bad and should be mediated or obliterated—and transitions from one mode in an epistemological duality to its other, which are good and which
take place in history and which should be embraced. The later moment has the character of Hegelian **aufhebung** or of the postmodernist revision of any modernist epiphany: it simultaneously preserves, negates, and transcends the earlier moment just as the network preserves, negates, and transcends the grid (41, 257). The later moment, being later, is therefore more advanced, and being more advanced, better. For Kant, there are eternal verities, but for Taylor, it is fundamental that ideas obsolesce: “In network culture, professors who continue to lecture from tattered notes they have used for years are as obsolete as most of the ideas they continue to promote” (262). This is in fact an assumption tacit but widespread in the practical sciences, one concisely articulated in Marvin Minski’s disparagement of the history of science, “A dynamic science has no need of its past, it forges ahead” (qtd. in Duput 43).

An academic course is a technology, already obsolete by the time of its dissemination. The problem with faculty members who resist the idea of subserving their thought and their teaching to the pressures of a “time-to-market” based economy is that they “do not realize that they remain committed to a model of the university that is over two hundred years old” (258). This unqualified bias toward the new, the possibility for which is the “most important legacy” we can leave to our children, crosses discipline and application. Kant himself is not as bad as, say, Shakespeare, but he is a far sight worse than Duchamps or Schoenberg, who have only comparatively recently become obsolete.

Here, my own tone belies a sympathy with the modernist critical and aesthetical projects of “making it new,” which Taylor claims are identical to the planning of obsolescence, unwillingly having supported the bourgeois industrial project it was meant by the early Modernists to undermine (31). That each generation create and interpret its experience and its inherited experience anew is necessary, not in order to progress but merely in order to remain in the same place, to achieve some independence from the tyranny of received and ossifying structures. The misapplication of this revolutionary ideal to the university relies on an equation of the artwork (specifically of the avant garde artwork) with the academy, an equation for which there is no justification. The injunction for the educator to always be revolutionary is an impediment to education, in which received and even ossifying structures *qua* structure may have a value they do not have for the artist.

This is a second point of distinction between Kant and Taylor. Kant himself, in paralleling the work of the university with the work of the subjective judgment, does *not*, even analogically, juxtapose the univer-
sity with the artwork. The analogy is rather between the faculties of the university and those of the subject, comprised of and mediating between both interested and disinterested agencies. That the university, like the work of art, is enmeshed in a complex market economy is, as Kant well knew, as true of each as it is of the subject. What differentiates the university from the artwork, what makes aesthetical judgment of the university impossible, is precisely what Taylor both complains about in its faculty and offers as the real politik necessitating increased allegiance with the corporate world: the university is characterized by our interest, our practical investment in—apart from its mere form occasioning a pleasing play of the faculties—its actual existence. This is a practical interest in the actual existence of a disinterested faculty.

Although Reason does not dictate the whole of a subject's actions, the subject acknowledges the redemptive possibilities that the actual existence of that faculty offers, loves them, desires their continuance. At a time when the U.S. government, to fortify its economic interests in the oil industry, is able to buy the dissent of a handful of scientists from the near-universal assent of their peers in order to justify the nonratification of the Kyoto treaty, it seems sinful to quote, as Taylor does, these beautiful lines from the Conflict of the Faculties with disparagement:

> It is absolutely essential that the learned community at the university also contain a faculty that is independent of government's command with regard to its teachings; one that, having no commands to give, is free to evaluate everything and concerns itself with the interests of the sciences, that is, with truth: one in which reason is authorized to speak out publicly. For without a faculty of this kind, truth would not come to light (and this would be to the government's own detriment); but reason is by its own nature free and admits of no command to hold something as true. (qtd. in Taylor 242)

To my ears, the axioms with which Taylor begins his final chapter, "Theory without practice is empty; practice without theory is blind" are disturbing ones. It is not, of course, that theory and practice cannot find constructive mediation: Kant's entire ethical theory, like his aesthetics and his metaphysics, rely on the assumption that they can. The great practical scientific advances of the twentieth century—complexity theory eminently among them—lay in the realization of unexpected application for study long thought useless or purely theoretical. Concomitant with these realizations, revolutionary new formulations of the good, the
profitable, are often found. But the ability to conflate a theoretical faculty with a practical one, or the theoretical faculty's receptivity to any imposed good, whether religious, economic, or political—cannot be the sole raison d'être for the former’s existence. One aesthetic privileges that artwork which presents a cohesive epistemology, but the idea of the university is to resist thought’s hegemony—the necessary consequence of any universally accorded, single good, single notion of profit—not by annihilating received structures but by preserving and presenting them in all of their history and multiplicity.

The Mathematical Sublime
Kant, Taylor's strawman for the constrictiveness of grid paradigms, remains the great psychologist of the moment of complexity, which he calls the Mathematical Sublime. The sublime Kant divides into “dynamical” and “mathematical” components, depending upon whether the imagination, overwhelmed by its inability to satisfy the injunction of unifying a sensuous manifold into one intuition, appeals to Reason in its practical or its pure capacity. Ordinarily, it is the dynamical mode, appealing to practical or moral reason that is considered to establish the sublime judgment’s relation to teleology: the mind discovers, in its recoil from the feelings of awe and fearfulness associated with the contemplation of one’s physical subjection to the might of Nature, something not beyond but outside of this indifferent physical realm, something supersensible in the self that is superior to what threatens mere individual, physical life and in this discovery, the excited intuition of a supersensible vocation, the aesthetic experience of moral feeling that overcomes the fear of Nature’s might and teaches us to “regard as small the things about which we are solicitous (goods, health, and life), and [to regard] its might (to which we are no doubt subjected in respect of these things) as nevertheless without any dominion over us and our personality to which we must bow where our highest fundamental propositions, and their assertion or abandonment, are concerned” (101).

As we shall see, the mathematical sublime also admits of a teleology, one that its association with emergent structures in a dynamical field—with the insights of complexity theory—makes more evident to us than it was to Kant.

In Kant, the mathematical mode similarly refers a difficulty of aesthetic comprehension to rescue by pure reason’s cognitive faculties. The difficulty is again resolved with a transition from physical to supersensible reflection, from reflection on the perceived physical sub-
strate to intuition of the supersensible force that determines and comprehends that substrate. This transition is a change of mode effected by the difficulty's reification, just as the transition from linear to nonlinear description of a dynamical system progresses from consideration of physical particulars that cannot be held at once in human comprehension to consideration of emergent global behaviors.

More explicitly concerned with measure than might, there is in the mathematical sublime a synchronic aspect to the experience: discrete intuitions are successively apprehended by the subject's imagination and these apprehensions are then synthesized into a unified comprehension, an idea, of the object. Now, although apprehension may continue indefinitely, there are bounds to what can be so comprehended. As this limit is approached, the original unit taken by the imagination as the standard of the object's measure vanishes and the imagination finds itself overextended, in a kind of abyss in which it fears to lose itself altogether. To its own aggrandizement, the pure cognitive faculty intervenes with the idea of a totality to which these apprehensions may be subrepted. The difficulty is thus itself reified and the reification taken as a triumph, former anxiety transformed into a pleasure.

According to Kant, the Egyptian pyramids considered too closely fail to give the full emotional effect of the sublime because the spectator's eye, moving upwards from one tier to another, only ever relates to one another a linear progression of images, the pyramid's lower tiers to its upper ones, with the former already half-forgotten by the time the upper ones are perceived. The stones are apprehended appropriately, with precision—their texture, their interrelation one atop another—but the whole is only inadequately seen. On the other hand, from too great a distance, the physical stones are only obscurely represented so that their particularity is not seen at all. For sublimity to be felt, Kant insists, one must be at the precise distance to perceive the transition from one order of apprehension to another. The whole annihilates with its magnitude not a measure abstractly understood (mere unit and number), but one which must first be apprehended in its physicality—that is, as sensuous intuition, in its immediacy and detail (90–91).

Vince Darley defines the moment of complexity as the point along a continuum of more and more stochastic data and calculation to predict the behavior of a system by solving its equation set for a variable than it does to actually model the whole system and determine that value at that time by observation. This humbling of reason, at the point when it is overwhelmed by a magnitude of interrelated data, intuits in that humbling a
supersensible force that unifies and determines it. It describes both the moment of emergent structure in complex systems and the Kantian mathematical sublime.

Cognitive scientists increasingly understand our assimilation, our ordering, of the outside world also in terms of such chunking. The chaos of what are at first ununified physical particulars are reified as higher and higher-ordered constellations that themselves become the primorial components of jumps to the yet next higher levels of abstraction and organization. In this way, the entirety of experience is organized into individual epistemology. We may speculate (as they themselves do in other contexts) that the elation with which students of complexity behold the surprising appearances of new types and levels of organization in their models of dynamic systems corresponds to a felt resonance with their own fundamental cognitive processes—and that it is the same elation we feel when, in aesthetic contemplation, the disparate elements of an artwork’s manifold can be subrepted into an “aesthetic idea” that then becomes treasured qua knowledge. Though it remains unarticulated, the motion feels like progress toward the realization of an enlightenment goal: to describe and so to circumscribe and thus to own the entirety of experience. In this way, the motion, not itself the good, nevertheless becomes the symbol of the good and often mistaken for the thing itself. For it allows to be felt a correspondence between “progression” that is strictly formal, strictly internal to a system, and the notion of an external, abstract end that progression is supposed to serve.

I have earlier suggested that among the hard sciences complexity studies, being in a real sense “the sciences of surprise,” is particularly susceptible to ideologies privileging novelty in and of itself—although there is nothing in the science itself to justify the treatment of its subject emergence in any way other than as a natural force, like gravity or the reserves of energy latent in an atom, that might serve ends both desirable and undesirable.

This force, like other natural forces, exhibits a real, intrinsic indifference to human teleologies. Respect for it has prompted the most philosophically engaged practitioners of artificial life to suggest reading Frankenstein as a necessary ethical preliminary to one’s research. The contrary view, the pathetic fallacy that this force for the generation of novelty is good in and of itself, becomes increasingly prevalent as we move from the academic hard sciences to the corporation—and perhaps oddly even more so as we move from the corporation to the academic liberal sciences. Under such a rubric, whatever facilitates emergence,
specifically, the formal increase of connectedness among the agents in some dynamical system and the formal increase of the number of local interactions among those agents—apart from any notion of the content of those interactions—simply becomes desiderata.

As under capitalism, connectedness itself thus becomes a virtue. The executive’s value increases proportionately with the size of his or her rolodex and with the ease and swiftness with which deals are effected. The consumer’s value similarly increases with the volume of completed transactions, which become credit, the fortification of future flow. One’s value is in one’s node-ness, more for what one connects than what one is—which rather impedes the flow of capital.

Indeed, this equation which I have just repudiated—the emergent equals the good—holds splendidly under capitalism, in which the same word is used to mean both “that which conforms to the moral order of the universe” and “that which becomes property in exchange for capital.” Where all flow is encoded as the flow of capital, complexification of the flow with an increase in the connectedness of agents and the frequency of transactions, will exponentially increase the stochasticity of the system and any organized siphoning of the flow within it will prove to be fantastically lucrative for the siphoners.

If you believe in this conflation of knowledge and capital, what Taylor calls “the currency of education,” then mechanical accelerations of the flow of information, coded as a flow of capital via technologies of reproduction and dissemination, will indeed help alleviate the current educational crisis—which is principally a problem of distribution.

You will also appreciate the rights of the student qua customer purchasing his or her degree. Improvements in the technology of education will mean enhancements of the convenience and speed with which this flow might be consumed and tailoring of it to better fit the consumer’s particular consumption preferences. Such enhancements will entail radical changes in the calling-of-shots from producer/teacher to the consumer/student in ways Taylor has already outlined: degree requirements will increasingly be designed by the consumer; course lengths will be shorter, hours more variable. Ultimately, the student’s consumption of knowledge must be understood as completed once the exchange of capital is completed, for they are otherwise not equal—the former’s actual delectation will be a matter of record, like the tourist site one has “checked off” with one’s camera. Taylor is quite right to see peer-review as an early casualty of such a system. With it, the university’s function of guiding
education in any holistic sense as well as its function of certifying competency must also be diminished. As the Nielson corporation tells its constituent households, you needn’t watch any more public television than usual; we are interested not at all in your ideal viewing habits, only in what you actually consume.

Choosing “Yes”

Perhaps it is a shortcoming to be phased out with my generation, but, even in the development of network technologies, with which I have been involved since even before Al Gore’s great reign, I have found purchasing books (those O’Reilly Publications with the animals on the fronts are nice) to be far more expedient in learning new technologies than the perusing of their hyperlinked versions online. I think the imposition of linearity upon their structures indeed has something to do with it—human (or at least my) understanding, relying to some extent on this limited spatiality. Once I have indeed learned something, I find the Internet to be a fantastic research tool for updating, correcting, expanding, and testing that knowledge—although before it can reach the smooth conduit of my high-speed DSL connection, it must compete for clock cycles across the network with the terrabytes of pornography which, by volume, still comprise the greatest, most consistently profitable traffic on the web. Both for my physical subsistence in a market economy and for the intellectual edification offered especially by information that would not otherwise be available to me in this country and in this age where the other news outlets are monopolized by corporate interests, I am sublimely grateful for the Internet. And it may well be that e-Ed obsolesces classroom and office-hours interaction in the same way that the film has obsoled the novel; television, the film; and the video game, television. But I think it would be a mistake to overestimate the democratic properties of the dynamical field per se. From what we currently know, it seems far more routinely to offer possibilities for swift consolidation and leverage of powers gleaned by initial, accidental advantages, after a rather Darwinian fashion. I also think it misguided to overvalorize the qualitative radicalness of the Internet, especially as an educational medium, for reasons that I should like to suggest in conclusion.

Students of complexity theory are at this moment made particularly sensitive to the question of eliminating peer review by the self-publication of Stephen Wolfram’s book, A New Kind of Science, which has become a runaway best-seller, accompanied by a story particularly attractive to the mainstream media about the renegade scientist-author
who used the wealth of his software company’s success to finance a Copernican intellectual revolution that could only be effected outside of the academy and its traditional apparatuses for publishing (and editing) research. The book, proclaiming itself the herald of a host of recent interdisciplinary revelations, very effectively packages discoveries of a paradigm shift the bulk of which have been well known to complexity students for twenty years or more. It is a textbook example in print of a phenomenon legion in electronic media: that proliferation does not equal truth; that free-thought is often indistinguishable from fantasy in its escape from the censure of an editorial agency; that what’s in your mailbox may not be good for you.

Part of the hype of the Web’s early popularity was that it offered a level playing field wherein a small corporation might have the same presence that a multinational once had, an individual as much as an institution. This remains in some small sense true: a pauper may publish. But, from the consumer’s end, in a field characterized by so much noise, it becomes far less a question of accessing information than of how that information will be organized.

Taylor envisions the disadvantaged and dispossessed out there, craving knowledge that the elitist academy currently withholds. In fact, most of the raw information an undergraduate consumes during the course of his or her career is already available—and more or less gathering dust—at the public library, if not already in some form on the World Wide Web. The equally undemocratic advantage the university in fact currently offers its students over the library is in its purport, however arbitrary, to organize, value, and certify the acquisition of some subset of that growing archive. This is a crucial function we consider sacrificing to the play of market forces, which has given us no indication thus far of favoring anything other than expedient fictions (expedient both to extrinsic and to intrinsic ends) on the epiphenomenal layer.

Besides representing the end of a certain kind of chic, geek greed, the “shakeout” of the dot-com era also buried what many in my generation had come to suppose their permanent improvements to the way American companies do business. While it cannot be claimed that the radical corporation is a thing of the past, by and large there is little in the medium itself that has liberated the existing Internet company from adherence to models that can be considered revolutionary only in that they provide a new media and new niches for well-established methods. Taylor is fond of quoting Warhol’s teleological dictum to the effect that “business art is the step after art,” but the unfortunate reality is that the rules of
corporate America are still almost all being written by those who have skipped a step.

Decrying binarisms throughout his smart and stimulating book, Taylor nevertheless concludes by asking us to choose, somewhat primordially, between saying "Yes" and saying "No" to an immersion in network culture, not simply as an object of study, but of emulation—indeed, to the historical inevitability of which we should surrender. We must choose "Yes." "If 'No' does not harbor 'Yes,'" he says, "it should remain unspoken" (270). I have tried to express my reluctance even to harbor such a "Yes." These structures, these complex adaptive systems, and the logics that create them I have found and do find to be beautiful, meaningful, fundamental. They provide extremely powerful means of understanding natural, cognitive, and synthetic systems. The boundaries Taylor questions have no doubt always already been illusory—profit/nonprofit, education/entertainment, University/Marketplace, even Ivory Tower/Real World—but their ideal posings are fundamental to a schema of the academy that I am loathe to let go. In my perhaps already nostalgic belief, liberal education is above all a series of difficulties, of sublime interruptions in the flow of, the easy assimilation of, information. It is as such fundamentally opposed to principles of expediency that must be first in adaptive systems.

Works Cited


