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A FLOW OF MONSTERS: Luddism and Virtual Technologies

Loud sounds the Hammer of Los, loud turn the Wheels of Enitharmon:
Her Looms vibrate with soft affections, weaving the Web of Life,
Out from the ashes of the Dead

— William Blake, *Milton*

A few years back, perhaps goaded beyond endurance by the bumper slogan "Kill Your Television," a small party of saboteurs assembled during the lunch hour at Sproul Plaza on the Berkeley campus. They set up a neat line of defunct TVs. The public had been invited and sledgehammers thoughtfully provided. A spot of machine-breaking ensued. To the sound of imploding cathode-ray tubes these mild resisters were apprehended by the police *while destroying their own, already broken, property.*

A week after the daylight wreckers smashed the TV sets, and not three hundred yards away, a routine but equally instructive event passed off without histrionics — indeed, without notice. At the back door of the university library, Department of Works operatives trashed dozens of functional computers, rendered obsolete by a newer model. The entire history of sabotage, when set against the maelstrom of capitalism's planned destruction, would scarcely register in the scales.

That even such polite street-theater provoked arrests and the revision of the authorities is a testament to the lingering charge that carries over to our time from the Luddites, those English artisans who went to the gallows for the breaking — not of the means of consumption — but of productive property; in their case, the textile looms. The Luddites were skilled weavers who smashed the mechanical looms that were throwing them out of work and into starvation at the onset of the Industrial Revolution. Their resistance was a social movement that operated clandestinely under the banner of the mythical “General Ludd.” On the basis of capital’s stereotype of the Luddites as mindless, backward-looking wreckers, it is impossible to grasp the dynamic of resistance and accommodation or to explain the fact that the Luddites sometimes broke old frames while leaving new machinery intact. It all depended on the social relations of production and the conditions under which the power looms were to be used by the employer. For example, the Luddites targeted machinery that was being ganged up in batteries or was being automated for operation by children.

To be sure, the breaking of machinery by no means began with the outrages of 1811 against English mill-owners. Yet the weavers who smashed the stocking-frames lent their name to industrial sabotage, a form of direct action that is as old as exploitation itself. In the term “Luddite” there still resonates the *grande peur* of the possessing classes. In 1812, the British state had 24,000 troops and local militia out against the Luddites, more than had gone abroad under Wellington to fight Napoleon. In February of that year, during the parliamentary debate on the introduction of the Framework Bill, by which the government proposed to send the machine-breakers to the hanging tree, Lord Byron rose to speak in passionate, sardonic defense of the monsters who, “in the blindness of their ignorance, instead of rejoicing at these improvements in arts so beneficial to mankind, conceived themselves to be sacrificed to improvements in mechanism.”

E. P. Thompson has traced that savage transition from a “moral economy” to the domination of the commodity. The Luddite weavers were swept aside in the dawn of this continuing catastrophe, in which all the world’s resources — human and otherwise — are cast onto the market. In those years of revolution and counterrevolution, the discourse of political economy, free trade, and laissez-faire legitimated the wholesale

enclosure of the commons, forcing freedom upon laborers rendered landless. It was Thomas More, in *Utopia*, who first bitterly portrayed the enclosures — the devouring of people and land by sheep at the beginning of agrarian capitalism in Europe. Karl Polanyi called this expropriation of communal property a revolution of the rich against the poor — a revolution that decimated the population and turned the soil into dust and the peasants into beggars. The Luddite movement was a moment and mode of resistance to what Polanyi termed “the great transformation” — the vast historical process of enclosure that strives for the communitization of land and labor. But, over time, enclosure was to take on many forms: the privatizing of communal land; the incarceration of production; the corralling of the dispossessed into ghettos, reservations, barracks, prisons, asylums, and schools; the sequestration of the airwaves by media monopolists; and so forth.

The Technics of Modernization

When fabrication was enclosed in the new factories, this marked the realization of the old dream of Francis Bacon, the brilliant prophet of industrialism, whose technocratic fantasy wedding science and empire — *New Atlantis* was a kind of seventeenth-century R&D park — projected the transformation of the world into an open-ended and productive cornucopia.

Later seers of modernity foretold a future of boundless prosthetic enhancements to human powers, among them powers of communication — modes of amplification, replication, and extension. A cascade of inventions was developed to connect the metropolises to colonial outposts for military and commercial intelligence — submarine cable networks, land lines, and imperial wireless chains, among them. A British MP breathlessly announced to the Royal Colonial Institute in 1887: “Stronger than death-dealing warships, stronger than the might of devoted legions, stronger than wealth and genius of administration, stronger even than the unswerving justice of Queen Victoria’s rule, are the scraps of paper that are borne in myriads over the seas, and the two or three slender wires that connect the scattered parts of her realm.” The history of information technologies, however, as Brian Winston shows in *Misunderstanding Media*, has been one of gradual uncataclysmic

development in response to certain persistent social relations: "The same authorities and institutions, the same capital, the same research effort which created today's world is trying also to create tomorrow's."

The infrastructure of empire and the new rail, road, and electro-mechanical links of industrial capitalism, together with brutal dislocations and reconnections forged by urbanization and labor migration, wrought, to be sure, profound changes in conceptions of time and space. Fin-de-siècle American critics had visions of retrieving lost community by the new-fangled "virtual" means — telegraph and telephone. Marshall McLuhan's "global village" is just a late gloss on this trope of communications-as-community. Actually, he took the idea from his Canadian mentor, Harold Innis, who in turn was drawing on Joseph Goebbels' notion of radio as a modern technical means of "retribalizing" Germany. It was the Nazi propagandistic use of the airwaves that drove Bertolt Brecht to his attempt at a radical application of radio.

Cybernetics Redux

More recent information technics — among them holography, xerography, satellites, videotape, videophones, and fiber optics — are currently said to have reached a critical mass such that profound societal transformation is imminent. This is the second go-round for a new world under the banner of cybernetics, which emerged as a theory out of the Second World War — a twenty-four-hour, mechanized conflict coordinated by remote control — in which humans were analyzed as "factors" in the communication feedback circuits of men and machinery.

After the war, the blending of technological optimism and anti-communist Manicheism was embodied in the figure of the Hungarian émigré mathematician, John von Neumann. He designed the architecture for the general-purpose digital computer; he proposed the detonation of nuclear weapons in the Atlantic to improve the African climate; for modeling strategic engagement he developed the logic of game theory, whose premises Gregory Bateson described as "in a paranoid direction and odious."

There was indeed a dark side to the brief American century, figured in film and popular culture. In the shadow of *Sputnik*, Hollywood conjured a bestiary of aliens, cyborgs, dinosaurs, social insects, and

robots. A strain of technological pessimism turned apocalyptic after the U.S. defeat in Vietnam and the capital crisis of the 1970s. But in the last decade the computer — whose precursor, the programmable Jacquard loom, haunted the Luddites — has allowed the bourgeoisie to fall in love once again with the future. This time around, the electronic sublime predicted by the hyperbolists of the information revolution is announced under the sign of "virtuality."

The meaning of "the virtual" is obscure. What is its relation to "the real"? Is it somehow a mimicking? an approximation? a double? the antithesis of the real? Does it inhabit, so to speak, its own space, its own plane? (For a long time it has been a technical term in physics, and in art history in discussions of perspectivism.) In the same semantic field are a number of related notions — actual, counterfactual, specular, replicated, simulated, artificial — whose connections, with respect to the human sensorium and cultural reception, await their analyst.

The new virtuality, whatever its role in the construction of the real, is somehow reckoned a function of the wiring of the computer to video technologies in a global web of telecommunications. The emergence of video itself was accompanied by similar forecasts of distinctively new cultural relationships, some of which — independent production, self-timed viewing — have been significantly taken up. Yet the history of one of the battery of video techniques — the instant replay — is exemplary of the way any technological innovation gets inserted into prevailing social and institutional settings. Before videotape all telecasts were live. The only method of recording was by means of a kinescope — a film photographed directly from the television tube during the live telecast. The result was noticeably inferior in quality to the live original. In the case of videotape, whose industry use goes back to 1956 when the first, hugely expensive, Ampex video-recorder reached the market, the copy was soon technically indistinguishable from live coverage — now only a caption alerts the audience that what they are watching is a recording. One might call the result "virtually real."

The development of high-fidelity videotape predictably proved very attractive to the owners and managers of television. Telecasts could now be reproduced to an acceptably high quality and sold as a commodity. Secondly, video technology finessed the awkward but inherent unpredictability of real-time transmission. Live broadcasts always

threaten to subvert the factitiously smooth *flow* of televisual reality — a flow that becomes naturalized and in a sense seamless, but at the same time rigidly segmented into programs in a way that mirrors a twenty-four-hour production line. “Bloopers” could now be domesticated, even packaged and sold as products in themselves. Thirdly, the prerecording of programs for subsequent editing before transmission represents an enormous tightening of control over the medium and its content. Indeed, video editing approaches the traditional power of the film director in the construction of events. The possibilities for review, selection, and tape-delay have made the video recorder one of the most important instruments of the gatekeepers of news and official history, and not just, or mainly, a weapon of the weak.

Although the instant replay is associated with sport, it did not begin there. Its first historic use occurred when the NBC cameras happened to be hooked up to an Ampex video recorder as Jack Ruby assassinated Lee Harvey Oswald. One hour later, almost 80 percent of American television sets were on, showing a continuous replay of the murder. It impressed not only the watching public but TV executives as well. Just a few weeks later — New Year’s Day 1964 — instant replay was first used at a sports event, the Army-Navy football game.

But no Monday morning logic can account for the fact that the three sets of endlessly replayed video images that have become icons of their epoch involved death and near-fatal violence — the Oswald assassination, the *Challenger* explosion, and the assault on Rodney King. (The death of Kennedy has doubtless been replayed more than all of them, but it was not videotaped at the time, and was only later transferred from Super-8 film.) The mechanical and digital reproduction of these events distilled national nightmares. The networks saw to it that they took on another nightmare quality — recurrence. Replaying on video loop the moment of death or near-death over and over again served no functional, analytic purpose. Compulsive repetition gives the illusion of control over the repressed, yet conveniently meshes with the purposes of those who seek to saturate the audience with their products and symbols. Of course, there is the initial curiosity about “what actually happened” — and the fascination with images of “real” death, instead of the daily simulacra of carnage on film and television. In the case of the shuttle disaster, the incessant replaying of the moment of

disintegration moved beyond curiosity and functional analysis to the point where the commercial reflexes of the news producers, aiming for maximum arousal around a potent symbol of chauvinistic technophilia, converged with deep collective anxieties, indeed paranoia.

Paranoia and Virtuality

The effects of the linking of video to digital technologies is unclear. If we must reject the fantasies of the neocyberneticians, we must likewise reject the salesmen of the apocalypse, whose vision of totalitarian media is rooted in an essentially theological concept of omnipotence. Nevertheless, the case of instant replay prompts an important question. Are there emergent properties of this new constellation of digital machines and imaging techniques that suggest a *causal* relation between their kinds of virtuality and the production of paranoia?

Virtuality in other forms is not new. Nor is there anything new about the production of paranoia, given societies riven by divisions of gender, race, and class. And the best paranooids don’t need machinery; they do it all in their heads. But paranoia comes in different flavors. That is, there is paranoia of and with power — and there is paranoia *against* power.

So we are not to be taken as proposing total novelty of experience in these new virtual spaces. Moreover, that Hollywood’s digital technologists and Sony’s virtual engineers should have brought us *dinosaurs* only seems a paradox. The cinema and the video screen — because they constitute the myth spaces of modernity — were always going to produce totemic monsters from out of deep space, or the sexual lizards, huge yet safely extinct, which body forth, from out of deep time, both the fears and wants of the audience, and the apparatus’s own desire to make itself mythic.

One might posit a continuity with the experience of the peasant in the stained luminosity of the cathedral: grotesque corbel figures and brimstone. What is remarkable now, however, is the qualitative discontinuity introduced by a miniature, personalized, moving image hitched to the microchip. A video screen *breaks the distance* — in favor of an intimate one-to-one virtual relationship. The cyborgs on the virtual screen are then an allegory of the fear of social death and incorporation

into the machine. Even the most skillful teenagers cannot master this program. The monsters pile on, in a parody of post-Fordist speedup. The body is fully in the virtual, but no longer in command. No surplus of skill in twitching a mouse will save the children.

So one primary candidate effect of the virtual technologies is the production of new monstrous viewers, who are incomplete, lacking, overwhelmed *inside*. Its corollary is a politics of resentment and a resentment of politics. The real virtual operation is to split open the subject and make it incomplete. Paranoia then flourishes on the cusp of a plenitude always under total threat — fertile ground for fascism, and no need to explain the looming madness by invoking either manipulators above the fray or Noam Chomsky's propaganda model of the capitalist media (and its inverse, the "information" model).

The information model is, in any case, false, because it parallels Ferdinand de Saussure's view of language, in which the two poles of the circuit of communication — sender and receiver — have equivalent power. Messages, on this account, flow between equals. This is the ideological assumption that has crippled linguistics and the field of communications studies. Moreover, the receivers of messages and images are not in a crucial sense independent of the medium. Television, for example, produces the televisual body — the couch potato. Different mediating technologies, in general, construct different subjects. The computer harnessed by the logic of administrative science, marketing, political advertising, or epidemiology constitutes a "population" quite removed from traditional notions about human groups in a nexus of community, kin, and social memory. All interiority and psychological depth are either effaced or reappear in the guise of "the irrational" and "the subjective." A population, in this "virtual" sense, is not the crowd, mob, people, folk, proletariat, nation, or citizenry of other discourses; its membership is defined by Boolean operation and segmented arbitrarily by age or income or shopping habits or blood group or zip code or some intersection of variables.

Resistance and Critical Paranoia

Actually, a benign virtual space lies there, waiting — the human, critical imagination, where you may find out what you are *not*, and on your

own time. A paranoia against power, moreover, is recommended for resistance to the information enclosures, linked and coordinated by way of satellites, fiber optics, and the technics of silicon — though the resistance will feel, as E. P. Thompson said, like "whistling into a typhoon."

The refusal of television, truculence with smart machinery, the sabotage of genocidal apparatus — these are, to be sure, gestures of vitality, but in no way amount to a Luddite movement. In any case, for millions across the globe, there is no private phone, fax, or TV, let alone a computer or an automobile. And there never will be. This is not a question of progress or modernity delayed. There is nothing unmodern or archaic about the deserted ruins of Ireland, about the "ethnic" killing fields of Rwanda, about the eroded hillsides of Chiapas, about barrios and favelas without basic services or utilities. The pictures from Haiti reveal one of modernity's faces, as much as the footage from South Central L.A. The regnant narrative, whose keywords are "progress," "modernity," and "development," conjures its extinct dinosaurs, such as the Luddites, and its living coelacanths, namely the residual peasantry and a handful of quaint enclaves, "tribes" that constitute our contemporary ancestors. This is the metaphysic of modernity, whether in its classical capitalist form or in the form, until recently, of its Marxist sibling.

Those who criticize the deployment of certain modern technologies and yet flinch at the sobriquet "Luddite" are complicit with the logic of progress, fearful about being branded technophobe, or, finally, losers along with the peasantry and the doomed tribes. But it is a lie that direct action against the instruments of production has always been hopeless or that it somehow entails being "antitechnology," as if that were a possible position *in general*. The Elizabethan gig-mills were successfully suppressed for generations by legislation that followed agitation from below. The Japanese for a time gave up the gun. Captain Swing and the agricultural Luddites who smashed the threshing machines in the 1830s got themselves and their children a reprieve for half a century. The Luddite army of redressers had no leaders, and their machine-smashing was without violence — that is to say, they understood the radical distinction between life and property.

New conditions of work throw up new sites of resistance — production bottlenecks have always been weak spots, and now "just-in-time" inventory creates its own particular vulnerabilities. Most

machines are abuser-friendly; computers, as one German engineer remarked, "do not like tea, coffee, coke or iron powder." On the side of consumption, mass boycotts of selected products terrify the personnel in sales and marketing. Unplugging and unwiring can doubtless be necessary tactics, but it all depends on context. Take the Xerox machine, for example: like those who labored courageously under Stalinist regimes to produce and distribute samizdat when all typewriters had to be registered with the police and every copying machine had an armed guard, dissidents all over the South are desperately short of means of replication. On the other hand, for critics in the Northern academy surfeited with information, there comes a time *when the Xeroxing has to stop*.

This is in no sense to adopt the functionalist philosophy of technology that posits an a priori neutrality for artifacts and technical systems — whereby machines merely have good uses and bad uses. Some things, it needs insisting, are without qualification vicious with respect to the flourishing of life; plutonium technology, for one, and, for another, if Barry Commoner is right, the entire global petrochemistry complex, which he says must be stopped in its tracks before it poisons life on earth. Fortunately, petroleum-based products, especially plastics, are mostly *replacive*; that is, they have been adopted to substitute for other materials such as ceramics, wood, and metal.

Most artifacts are not as stark as plutonium. All, nevertheless, have a *value-slope*; that is, they conduce to certain forms of life and of consciousness, and against others. Artifacts are congealed ideology. The computer, as designed, embodies the command-and-control structure of a hierarchical society. The internal-combustion engine is the preferred power-pack of an individualizing culture; once produced, moreover, it comes to dominate and to reproduce the consciousness of the epoch, typified in freeway gridlock — "all together alone."

The massive inertia in the infrastructure of automobilism will condition all of our lives indefinitely — suburbs, edge cities, malls, ghettos, gated enclaves, the Sixth Fleet. This is not to say that technologies are a sufficient condition for the shaping or foreclosing of the future. It is salutary to note that the previous largest infrastructural project in U.S. history, the railroad system — which primed the long nineteenth-century wave of capital expansion — lies more or less derelict, all within two lifetimes. There is, finally, nothing self-

determining about technology; *contra* the absurd slogan that if something can be made, it will be, "innovation" is continually being blocked by capital flight, state policy, and corporate patent-blighting.

The value-slope of a technology is no easy thing to estimate, and in any case there is never closure with respect to consequences or reception. Small wonder that Theodor Adorno and Walter Benjamin could so fundamentally disagree about the popular revolutionary potential of cinema. Above all, the value-slope cannot simply be "read off" the artifact itself.

The Amish have some lessons for Luddites in this matter, being canny about the threat posed by new technologies to the character and rhythms of their small, face-to-face communities. The Old Order Amish home has no electricity from the grid, no radio, no television, and, since 1909, no telephone. There are, however, community phones, located in small wooden "shanties" at a distance from dwellings; these phones have unlisted numbers and often no bell to signal incoming calls. The Amish have not anathematized the instrument itself; the accommodation suggests that the key issue is the phone's *relation* to domestic space, community boundaries, and, very probably, gender and age hierarchies.

Of course, we refuse the Amish's theocratic rationale for a critical appropriation of technology, but we also reject principles of resistance based on humanism, since it falsely supposes that the relation of the technological to the human is essentially external. Human nature is not autonomous with respect to technology. Mary Shelley's fantasy of revenge at the hands of science's monstrous creature — in this case, the result of Doctor Frankenstein's Promethean efforts to bypass the female entirely, by galvanizing life from a charnel house — contains the truth that Engels insisted upon: the constitutive role of our artifacts and material productions. We make our selves as we make the world.

If that is so, and since the new technologies of the virtual life are set to compound the old system of domination with fresh colonizations, then E. P. Thompson's attempt to rescue the Luddites from the enormous condescension of posterity turns out to be no sentimental affair. And no easy task, either. A Hearst newspaper editorial of December 10, 1994, rhapsodized: "Cyberspace has a potential to democratize information in ways that were unimaginable scarcely a decade

ago," only to continue: "Despite the futile resistance of gape-jawed Luddites, computer technology is here to stay and quill pens are out." A journalist sent to Sproul Plaza to cover the thirty-year reunion of the Free Speech Movement quoted Mario Savio's incendiary call to action against the technocrat's vision of the university as an assembly plant for human capital: "There comes a time when the operation of the machine becomes so odious, makes you so sick at heart, that you can't take part, you can't even passively take part. And you've got to put your bodies upon the gears, and upon the wheels, upon the levers, upon all the apparatus. And you've got to make it stop." (But the writer could not refrain from a typically condescending gloss: he informs us that Savio "intoned in pure Luddite dudgeon." Indeed.)

Not only that — we propose the widest generalizing from the Luddite critique of the machine, to enable a strategic, even a mythic, connection between the lost struggles of the hand-loom weavers against factory discipline and starvation, and contemporary forms of resistance — against the zoning that denatures life in cities, against the mechanization of birth, against racist surveillance and the criminalization of poverty, against the iron cage of bureaucracy, against state borders and identities, against the programming of the wild, so that our world, and our selves, might yet be made over in the textures of William Blake's imagination:

... & hence

The Web of Life is woven: & the tender sinews of life created.

References

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