Notes

1. In the interests of full disclosure and of collegial encouragement, I should also note that I am a financial contributor to the archive. At some point last fall when finishing an essay on Whitman, I realized I had depended so heavily on this database that it was only appropriate to support it financially. I would encourage all regular users of the archive to help the editors meet the three-to-one matching requirements of the grant they were recently awarded by the National Endowment for the Humanities. The Web site makes contributing easy by including a link to the University of Nebraska Foundation on the home page.

2. Foucault delineates some of the relations we might expect critics to find between and among texts that are marked by the author's name: "homogeneity, filiation, authentication of some texts by the use of others, reciprocal explication, or concomitant utilization" (107).

3. Virginia Jackson argues that even experimental electronic editions of the writing of Emily Dickinson rely on and perpetuate assumptions about printed lyric poems (50–53).

4. That a good deal of Whitman's early prose is digitally available only to those who have access to the subscription database *American Periodical Series* (*APS*) suggests that there are significant material obstacles to tying the threads that digital media can weave so well. And yet including a bibliographic list of Whitman's prose fiction in *The Walt Whitman Archive* would help counteract its emphasis on Whitman's poetry and might encourage readers with access to *APS* to toggle back and forth between the two sites.

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Whitman, Database, Information Culture

JONATHAN FREEDMAN

I'M WRITING THESE WORDS FROM MY OFFICE AT the University of Michigan, next door to the massive Harlan Hatcher Memorial Library, somewhere in whose bowels (no one knows exactly where) books are being carted off to—well, again, no one knows exactly where—to be digitized by the new thousand-pound gorilla of the American high-tech industry, Google. The cloak-and-dagger quality of the project (also under way at seven other libraries around the world) might strike us as oddly antithetical to the celebratory spirit of Ed Folsom's invocation of database not just as a new way of organizing bits and bytes of knowledge but as the basis of a new genre—a contemporary version of epic—that generates a new process of cultural, social, and (it seems) global community making. Indeed, Google has come in for some trenchant criticism of late, most notably from the Society of Authors, worried about the violation of copyright laws, and from the chief librarian of the Bibliothèque Nationale, Jean-Noël Jeanneney, who complains that Google's endeavor extends the imperatives of the market and of United States cultural imperialism into the information society of the future. But Google's aspiration—and much of its rhetoric—has the same utopian ring as Folsom's. According to Mark Sandler, a researcher at the University of Michigan, the digitizing project

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will replicate and extend the success of a pilot project to digitize ten thousand "low use" monographs, which elicited

> between 500,000 and one million hits per month. In the past, these works were accessible to a base population of 40,000 students, faculty, and staff. That's about four readers for each book included in the project. When electronic versions of these works were made accessible to the entire world, suddenly 40,000 potential readers became 4 billion, and the odds of consumer interest jumped from 4:1 to 400,000:1. (18)

Underneath the cool technologese, the aspiration is clear: today the Harlan Hatcher Library, tomorrow the world!

Let me be clear: I find both projects, Folsom's and Google's, incredibly useful. Surely no one teaching Whitman for the first (or even the seven hundredth) time would want to forgo *The Walt Whitman Archive*, with its easy access to insights into the texts and variants that compose the poet's massive corpus, its masterly biographical sketch, and its multitude of links to the criticism of Whitman's contemporaries (not to mention those sample syllabi!). Just as surely, no one doing research would want to forgo the amazing search capacities that Google puts literally at one's fingertips: hours spent at the library or, at best, searching concordances now telescope into microseconds; the Boolean ability to link heterogeneous subjects and find once-occulted connections and interconnections makes scholarship invigoratingly fun. Yet the rhetoric used in both cases makes me, as utopian rhetoric always does, a tad nervous, and I want briefly to explore the sum and substance of my skepticism. These visions, impressive in their sweep and totalizing in their ambitions, celebrate the contours of experience in an information society—a world in which cascades of data make greater and greater claims on our lives and those of our students. But such a world is paradoxical. On the one hand, it is a space of ever-expanding possibilities, marked by exhilarating new forms and vehicles of knowledge, made accessible to everyone on the planet with an Internet connection. On the other, it generates an ever-increasing need for guidance, classification, or just plain ordering: how else are we going to make sense of all the stuff that bombards us from every possible source? The more data we have access to, the more we need aggregators and entrepreneurs of information like Folsom and the Googlizers; the more we are freed to experience and construct our own world of knowledge through Google searches and Web crawling, the more dependent we become on the ways in which those searches and databases are constructed for us. To celebrate the branching, rooting, rhizomic, proliferating quality of database—to celebrate database as a kind of autonomous form, rooting and branching by a logic of its own—is (in this case, somewhat weirdly) to downplay the inclusions, exclusions, choices that have gone into the making of databases and hence to occlude the possibilities for questioning those choices. Not to get too Frankfurt school about it, but the seeming conditions of our freedom—our increasing access to a world of information—only conceal our greater constraint. *Quis ipsos custodiat* the databasers?

How we might negotiate this conundrum remains an open question, one that I want briefly to address with respect to Walt Whitman, the source of Folsom's enterprise. Folsom's own rhetoric is remarkably Whitmanesque, in its ever-expanding aspirations, its attempt to argue for a new creative form as conveying a new mode of apprehension that reinvigorates the older modality of epic, and its vaunting self-celebration. The same expansive ambition (although not the same concern with new literary forms) is evident in the rhetoric of the Googlizers. There is, I think, a reason for this: the deep continuity between Whitman's experience and our own. No less than we do, Whitman lived in the midst of an information revolution, one that can be (and

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has been) dated as early as the invention of the printing press but that spun with increasing rapidity in mid-to-late-nineteenth-century America, as high literacy rates, extensive (but not universal) education, the rise of steam-driven printing presses, the move to pulp and hence to cheap paper all combined to make the production and dissemination of information a national and—somewhat problematically to foreign copyright holders—a worldwide industry. The United States became an enormous market for letters, a place where books sold in the tens or hundreds of thousands, where new publishing houses like Harper's found innovative ways to publish and market books, where mass-market magazines like *Godey's Lady's Book* and newspapers like the *New York Herald*—or, for that matter, the *Brooklyn Daily Eagle*—circulated news, opinions, advertisements, and announcements, creating in their wake new publics with new demands for new products as periodicals were borne across an expanding nation by the new railroad-augmented postal service.

I rehearse these well-known facts to remind us that Whitman was an intensely engaged participant in this information revolution—a "huckster author," Folsom observes, but much more as well. He was, after all, a reporter, an editor of many newspapers, a published author who was aware of the vicissitudes of copyright,[1] and, most important, a public intellectual whose relation to the cosmopolis—and to the social landscape for which it serves as a prototype—was profoundly mediated by the burgeoning new print media. As he writes in "Song of Myself":

> This is the city, and I am one of the citizens,
> Whatever interests the rest interests me,
> politics, wars, markets, newspapers,
> schools,
> The mayor and councils, banks, tariffs,
> steamships, factories, stocks, stores,
> real estate and personal estate.
> (lines 1075–77)

In Whitman's city, newspapers are not just one potential subject of interest; since virtually every topic Whitman cites as fascinating to his fellow citizens and himself would have been mediated through these papers, the city seems a palimpsest of print—in Folsom's terms, a gigantic database, accessible to all. Whitman's vision is also Google-like in its understanding that the interests of others determine what becomes interesting, the way Google's subjects are ordered by a complex algorithm that records the number of links to (and in) any given Web site, so that what one receives and the order in which one receives it come constructed by the interests and preferences of one's fellow Net citizens.

But what we might, adapting Manuel Castells's term, call Whitman's "informational city" is also a place where the profusion of data renders the conditions of acquiring knowledge—here defined in purely operational terms, as the shaping of data into patterned or ordered structures of significance—problematic.[2] Note how in the lines in which Whitman describes this city, cascading data, heterogeneous objects, events, and social facts are brought together into one amalgamated yet mobile agglomeration: wars, stocks, schools, banks, tariffs, personal and real estate all wheel into one another, jostle about, command attention and then yield it to the next item on the list. The effect is simultaneously to blur the distinction between the items in the catalog—in these lines, at least, a war is of no more consequence than a real estate transaction—and to establish the sense of a contingent, vague, metonymic relation between the objects, topics, and sources of speculation thereby enumerated. Whitman observed, according to Horace Traubel, that "[t]he newspaper is so fleeting, is so like a thing gone as quick as come; has no life so to speak, its birth and death coterminous"—so too the city, or at least the city considered (and responded to) as database (qtd. in Larson 106). The urban locus, and, by extension, contemporary experience itself, is for Whitman

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a space where information *flows*—not only a place (as David Henkin has argued) articulated by buildings and street signs, by vagrant scraps of newsprint and books or pamphlets, but an infoscape where encoded bits of data imprint themselves successively on the avid subject seeking to make sense of the world.

Whitman's poetry offers a phenomenology of experience in a world organized by the relentless flood of information and offers itself as a kind of a mimesis of such a world. It offers as well a critical understanding of the technological changes that make these processes happen in the first place. Information flow is not merely an inevitable result of the extension and burgeoning of print culture but also a consequence of the rise of the telegraph, which facilitated—even demanded—the dissemination of a wide variety of data across a broad swath of the world. As a contemporary British observer wrote:

> The American telegraph, invented by Professor Morse . . . employed in transmitting messages to and from bankers, merchants, members of Congress, officers of government, brokers, and police officers; parties who by agreement have to meet each other at two stations, or have been sent for by one of the parties; items of news, election returns, announcements of deaths, inquiries respecting the health of families and individuals, daily proceedings of the Senate and the House of Representatives, orders for goods, inquiries respecting the sailing of vessels, proceedings of cases in various courts, summoning of witnesses, messages for express trains, invitations, the receipt of money at one station and its payment at another; for persons requesting the transmission of funds from debtors, consultation of physicians. . . . (qtd. in Standage 61)

All these sing across (in Whitman's words) "the wires of the electric telegraph stretched on land, or laid at the bottom of the sea, and then the message in an instant from a thousand miles off"—the rapidity of the development enacted by the elision of the verb in the last clause, a Whitmanism profoundly expressive in the context of database; the verb, being nowhere, is everywhere, the world rendered in process and motion ("Chants" 155).[3] Such a development, Whitman knew, would create not only a new American infoscape but also a transnational (or at least transatlantic) one. Indeed, this possibility of an enlarged global culture made possible by the alliance of print and telegraph is articulated most fully in "Passage to India" (1871), where the "seas inlaid with eloquent gentle wires" are one of the three great world-unifying "modern wonders" that Whitman celebrates, along with the completion of the Suez Canal and of the transcontinental railroad (346).

To be sure, we are now in view of the particular combination of cultural imperialism and desire for universal knowledge that Jeanneney attributes to the Google project. Seeing the genealogical connection here might be one way of culturally placing database and Google rhetoric, of seeing them as American projects, at least in the scope of their imaginative ambitions. But more useful to us now, perhaps, is Whitman's attempt to register in the form as well as the matter of his poetry what it means to live in a world of eddying information. Consider, for example, the device that Folsom appropriately cites as the one that takes Whitman closest to internalizing database into his work: catalog. Here Folsom is on his strongest ground in his Whitmanesque suggestion that database represents the renovation of a different, collective genre into epic, for epic catalog, as Eric Havelock suggested, had an informational agenda, serving, as it were, as the encyclopedia or even the (nonsearchable) database of knowledge for preprint culture. A similar encyclopedic impulse seems to run throughout Whitman's work, as he moves consistently to inventory, name, define, and (partially) order the city, country, and world, enumerating person, place, and thing in long flowing lines that may well remind us of the list rhetoric of the

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celebrator of telegraph culture quoted above. Whitman's catalogs do many things at once: they inventory the manifold and various facets of his habitat (and habitus); they begin to arrange them into some kind of poetic order (much critical ink has been spilled on just how successfully he does so); and by their very proliferation—catalog upon catalog upon catalog—they testify to the impossibility of doing either of these two.[4] Most important for our purposes, Whitman not only asserts but also dramatizes his will to database, the affective charge that accompanies (or perhaps mandates) his desire to enumerate and catalog. Here is a fine example, from "Starting from Paumanok":

> See, pastures and forests in my poems—see,
> animals wild and tame—see, beyond
> the Kaw, countless herds of buffalo
> feeding on short curly grass,
> See, in my poems, cities, solid, vast, inland,
> with paved streets, with iron and stone
> edifices, ceaseless vehicles, and
> commerce,
> See, the many-cylinder'd steam printing-
> press—see, the electric telegraph
> stretching across the continent,
> See, through Atlantica's depths pulses
> American Europe reaching, pulses of
> Europe duly return'd,
> See, the strong and quick locomotive as it
> departs, panting, blowing the steam-
> whistle,
> See, ploughmen ploughing farms—see,
> miners digging mines—see, the
> numberless factories,
> See, mechanics busy at their benches with
> tools—see from among them superior
> judges, philosophs, Presidents, emerge,
> drest in working dresses,
> See, lounging through the shops and fields of
> the States, me well-belov'd, close-held
> by day and night
> Here the loud echoes of my songs there—read
> the hints come at last. (257–65)

This is the poet not just as huckster but as sideshow barker, pointing out the attractions in the tent just behind him; by the same token, it's the poet as cataloger, cramming into his lines an entire social panoply in which the parts imply a social whole. But it's also the poet as modern subject attempting to come to terms with the sheer imperative of including *everything*—the country and the city, the machine and the garden, the factories and the shops, the masses from whom, in democratic culture, emerge the arbiters of knowledge ("philosophs") and wisdom ("judges" in every sense of the word). The poet's response to this informational flood, however, is not only to enumerate and list (and list and list and list); it is also to appropriate. All these manifold objects and beings are identified as belonging to or, at least, placed in the book for which these lines serve as prologue, enticement, and advertisement. The effect is particularly striking with respect to the era's definitive technology. The telegraph and the printing press—which bring the flood of data to the poet's attention and impel his work out into a world of poems, novels, newspapers, ladies' magazines, and the like—are made an effect of Whitman's text, not the other way around: we are invited to come and see these powers and forces "in my poems," not to see the poems as entities shaped and transmitted by the powers and forces that make and unmake them.

Not to put too fine a point on it, I also see this self-valorizing impulse in Folsom's Whitmanism and in the imperial language of Google. I point this out not so much to critique Folsom and the Googlizers as to stress something crucial about psychic responses to the information economy that enmeshes Whitman, Folsom, the Googlizers, and, for that matter, the reader of this piece and me: the need or urge to identify with, and ultimately to introject the power of, the technology that makes database not only possible but necessary. But while Whitman hyperbolizes his will to database, Folsom and the Googlizers veil theirs in favor of privileging the genre or medium itself. In Folsom's account

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of his own work, the dialectic between database and narrative (in which, as in all dialectics, the terms keep collapsing into each other) is less revealing than the simultaneous treatment of *The Walt Whitman Archive* as product of inspired editorship by Folsom and his colleagues and elevation of database into a self-maintaining, self-sustaining, genuinely collective, genre-transcending human agency—including, ultimately, the editors' own agency. So too with Google, which, as Jeanneney observes, orders and arranges its links on the basis of a mysterious, proprietary algorithm preserved with all the magic (and capitalist razzle-dazzle) of the McDonald's special sauce. In both cases, the choices and decisions, inclusions and exclusions, that go into making the database are occluded or even excluded in favor of a veneration of the database as a reified entity entire unto itself, a genre that works, as genres do, by laws and logic of its own. The effects of such a romantic view of information production can be seen when we question some of the choices that the databasers make for us. The creators and maintainers of *The Walt Whitman Archive* don't include much contemporary criticism (largely, one assumes, because of copyright rather than predilection) but link extensively to Whitman-era responses; the result is to institutionalize certain versions of Whitman while effacing others. The opposite tendency is evident in Google's linking technology, which, as Jeanneney observes, is biased by its nature toward pushing forward recent responses (second under "Walt Whitman," after the inevitable *Wikipedia*, is none other than *The Walt Whitman Archive*) and those from the Euro-American (or English-speaking?) world, where the majority of linking subpages originate, while ignoring more recondite, historically distant, or non-Western links. One can choose to quarrel, or not, with both outcomes—I'm fine with the first, worried by the second—and still wish for a little less celebration, a little more transparency.

The ecstatic mode of wholesale identification is only one possible response to the infoworld, even in Whitman—notoriously, a poet of many modes and moods—and I want to close by turning to one of the other responses we have found in his work. In the first passage I quoted, from "Song of Myself," Whitman opens up a different possibility—one also familiar throughout his oeuvre: that of the somewhat skeptical but deeply sympathetic observer, avidly scanning the informational city not only as an end in itself but also as a way to engage with the interests, desires, and needs of other people. Information society brings us this openness to the experiences of others, Whitman suggests: the tidings of "wars," of "stocks, stores, real estate and personal estate," that take us out of ourselves and engage us with the lives of those around us. Whitman pursues these not as a poet or even as an observer but as a *citizen*: an intensely engaged member of a political community who never loses sight of the "personal estate"—the needs of his fellow citizens—as well as the "real estate," structures of economic power and authority. That engaged but slightly distanced, skeptical but sympathetic stance, I've been arguing, gets all but obliterated by the flood of data the Whitmanesque subject is forced to encompass; and it's negated as well by that subject's desire to identify with the technological forces that unleash the flood. But it's a stance worth adopting as we reflect on the brave new world we are entering, one in which we might properly neither sing and celebrate the new art of database nor turn our backs on the new ways of organizing and apprehending knowledge that it brings us but rather affirm the heightened importance of a detached but engaged response (dare I say both in and out of the game?) to the information culture in which we live and to which, no less than Whitman, we are compelled to make imaginative response.

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Notes

1. For a study of just how seriously Whitman took these issues, see Buincki.

2. I'm appropriating Castells's phrase and his emphasis on the city as a "space of flows" but not the specifics of his argument, in which this new species of urban experience (which, in my view, is already there in Baudelaire, or at least Benjamin's Baudelaire, as well as in Whitman) develops in the urban crises of the 1970s, when cities become reorganized as spaces of knowledge and capital production and dissemination.

3. Whitman added these lines in his 1856 edition. In helping with matters like this, *The Walt Whitman Archive* is invaluable.

4. The best treatment of Whitman's catalogs remains that of Buell, who embeds Whitman in the transcendentalist rhetoric of cataloging the world as a way of enumerating and celebrating its multifariousness (166–78). But Buell also begins to get at the problematics I'm trying to address here with his suggestion that what makes Whitman's catalogs unique is their refusal (or, as I would put it, their failure) to organize the world into a determinate form or pattern, a failure for which Whitman more than compensates, in Buell's reading, by his enthusiastic poetry making: "the spirit triumphs over chaos by sheer energy" (178).

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