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THE ERASURE AND CONSTRUCTION OF HISTORY

FOR THE INFORMATION AGE

Positivism and Its Critics

The true history of information and communication in the twentieth century may be understood as a series of struggles around the reification and commodification of knowledge. Indeed, the common picture or image of "information" today as a commodity value, as well as a historical value of progress in modernism in general, and capitalist modernism in particular (e.g., "the information age"), may be understood in terms of the dominance of modernist and capitalist modes of production. One symptom of the historical and social success of the common picture of information may be the historical loss of critiques of it, as can be found in Martin Heidegger's and Walter Benjamin's writings. Ironically, another symptom may be the loss of early positivist models of information, as in the work of the European documentalists Paul Otlet and Suzanne Briet—lost to that same amnesia that positivism has to historical differences in general. The same mechanisms of historical canceling that have buried Heidegger's critiques of information and have diluted the

critical Marxist power of Benjamin's texts have reduced Otlet's and Briet's historical presence to that of being mere "forerunners" to more successful instrumentalizations of language, human agency, and culture along the lines of theories and ideologies of information, as found, for example, in information theory and post-World War II cybernetics. One might propose that such historical erasures of contrary views and "forerunners," as well as the unwillfulness of information historians to see the history of information in anything other than American and English language enterprises and texts, contributes to the problem of forming a critique of the ideology of information in late modernity. By recovering such erasures, however, we can see that the "information age" has previously occurred and that its global destiny was neither innately assured nor without substantial critiques. We can also see that our own "information age" has a history, one that has been produced and one that valorizes, as well as negates, certain meanings for "information" knowledge, and language today.

We must recall that historical erasure has both intellectual and practical effects. Intellectually, it has led to a difficulty in finding vocabulary and critical tools to counter the utopian ideologies of information and communication that are manifest in such terms as "the information age" and "the information society."¹ Both Heidegger's and Benjamin's works, although rooted in different intellectual traditions, share a critique of positivist historiography. They also share a central concern with the way in which mass information and communication technologies reinforce positivist historiography and, subsequently, work to create actual history by shaping the historical resources at hand for social agents. Putting aside truisms about the differences between Heidegger's work and the work generated by the Frankfurt school, Heidegger's and Benjamin's works both share a common concern with the technically formed *image* of reproduction in information and the power of that image to cancel out the very powers of design that construct and organize that image in society and culture.

Both Heidegger and Benjamin were concerned with the relationship between informational or communicational hegemony and the political canceling out of the potentials of human historicity. The reason for this common concern is that both share a skepticism toward the representational image understood as information—or in other words, as fact or "presence"—and both saw that history,

when understood essentially as a representational phenomenon, leads to a vast scaling down of human possibilities. To attempt a historical and philosophical recovery of information during the twentieth century therefore requires that we reenter Heidegger's and Benjamin's discourses from the aspect of their critiques of the aesthetic form of social production, representation, and history.

Although the intellectual effects of historical erasure mushroom with the passage of time, there are also the individual, practical effects of historical erasure that now need to be recounted. As both Heidegger and Benjamin's work teaches us, "history" is not just an intellectual category but one of politics and of existence itself. Before continuing further with an intellectual history, let us pause in memoriam to paint a picture of some of the issues of the informationally and communicationaly governed administrative state and its national and transnational ideologies that affected a set of individuals who shared a common time and space. Certain historical trajectories can be seen in microcosm in this narrative, and the narrative will also serve to introduce the analysis that will follow.

For his Arcades project, Walter Benjamin utilized both graphic and written artifacts at the Bibliothèque Nationale. There he also utilized as a resource George Batalle, who was active in his own battles against fascism through his critical and literary writings and through the Paris-based College of Sociology and who, as a librarian at the Bibliothèque Nationale, would save through the war years much of what we now have of Benjamin's writings. As a researcher, Benjamin would most certainly have frequented the Salle des Catalogues et des Bibliographies (i.e., the reference room) in order to find information for his project. At the Salle des Catalogues et des Bibliographies was a librarian, a little bit younger than Benjamin, named Madame Suzanne Briet. Briet had founded the Salle des Catalogues et des Bibliographies, and she later carried on some of the ideas of the father of European documentation. Paul Otlet, as vice president of the Fédération Internationale de Documentation. In time, she acquired the nickname "Madame Documentation."² (Later, in her autobiography, Briet acknowledges Batalle's presence at the Bibliothèque Nationale only by describing his "blue eyes and burning heart," and adding what an English reader at the library once said about him: "Good-looking boys know nothing" [English in the original]).³

After the war, Briet advocated in her manifesto *Qu'est-ce que*

la documentation? such ideas as the cyborg integration of human beings and machine technologies and the technical and cultural necessity of "scientific" information management, systematicity, and standards (because, for Briet, documentation is a "cultural technique" and "our" culture is one of "science" that needs to be spread globally to impoverished nations).⁴ Briet's social-political resurrection of a culture of information from its submersion in the militarism of World War II was only partially successful on a historical scale: a more total theoretical integration of human agency within mechanical and social engineering was occurring at this time across the Atlantic with the Josiah Macy Jr. cybernetics conferences. Against this success, Briet and, indeed, the history of European documentation was largely forgotten. Benjamin, on the other hand, did not live to see any of these events, because his image disappeared off the map in 1940 as he apparently committed suicide after being blocked from crossing the border into Spain as part of an attempt to flee to the United States.

The lesson to be learned here is that both advocates and critics of the information age tend to disappear from the historical record with the development of that age. Why the information age, as both a subject of historiography and as an ideological praxis, increasingly erases its predecessors and its critics so that it tends to ahistorically reappear, as the "new" of modernity itself, is a curious problem. I would suggest that this problem involves the very concept of information, which is a product of a series of cultural positions and actions that I will trace in the pages following.⁵

Paul Otlet

Paul Otlet is generally considered to be the founder of European documentation. The active history of European documentation spans the years from the founding of the International Institute of Bibliography in Brussels in 1895 by Paul Otlet and Henri La Fontaine (winner of the Nobel Peace prize in 1913) to its eclipse by information science after World War II.⁶ Although European documentation still exists in the form of such organizations as the Fédération Internationale de Documentation, the period just before and after World War II saw the publication of several defining texts by leading figures in documentation: the *Traité de documentation* (1934) and

Monde (1935)⁷ by Paul Olet, and the small but important manifesto by Suzanne Briet, *Qu'est-ce que la documentation?* (1951). The distinguishing characteristic of European documentation, in contrast to both librarianship in Europe and to what would subsequently become information science in the United States, was the systems approach through which European documentation understood the relationship between information technology and social systems. For European documentation, the technical retrieval of materials was linked to their social and institutional use and goals for documentary production. In contrast to the (particularly European) tradition of librarians and librarians, which defined themselves in terms of the historical collection and preservation of books, European documentalists emphasized the integration of technology and technique toward specific social goals.

The founders and leaders of European documentation advocated documentation as an upcoming profession, distinct from librarianship, both serving and leading the development of "science" in modernity. As an organized system of information techniques and technologies, documentation was presented as a central player in the historical development of global modernity. Within the context of a global "scientific" culture of modernity, documentation was understood as not simply bibliographical technique but, in the words of Suzanne Briet, as "a cultural technique for our time."⁸

Olet was a prolific writer. With his global vision, Olet in his writings tended toward not only large treatises on documentation but also on such topics as the creation of world universities and the creation of a world monetary fund. The late nineteenth century in western Europe was a period of industrialization, aided by the development of national and international standards and the formation of associations to assist in their development.⁹ Olet's bibliographic and organizational works were part of these trends, driven by his passion on the issue of world peace.

For Olet, world peace was obtainable through international knowledge and communication. To further this goal, La Fontaine and Olet began in 1895 to build a world bibliography, the *Repetoire Bibliographique Universel* (RBU), that would eventually find its home in what Olet called the Palais Mondial, or Mundaneum, in Brussels, an institution that he hoped would be the foundation for a world center for knowledge and culture. By the time that the right-wing Belgian government forced its closure in 1934, the RBU had

collected eighteen million items, organized by the universal decimal classification (UDC), a scheme that Olet had constructed based on Melvil Dewey's decimal classification.¹⁰

As W. Boyd Rayward has suggested, the basis for Olet's philosophy and collection practice lies in his notion of the "monographic principle."¹¹ For Olet, knowledge was essentially positivistic or "factual." For example, the monographic principle operated in the RBU by the process of cutting up texts into "atomic" units and then linking them together through the UDC. For Olet, the construction of such atomic, linked chunks of knowledge aided world peace because elementary, factual, "scientific" knowledge could thus be collected and made available to all the leaders of the world, and eventually—through new information and communication technology—to all the world's people. This sharing of factual knowledge would prevent wars because all facts would be available and known by all people and, consequently, there could be no disagreement that could not be settled by an appeal to documented facts. The monographic principle was thus part of the world encyclopaedia movement that included such luminaries as H. G. Wells.¹²

The apotheosis of this movement occurred at the World Congress on Universal Documentation, which was associated with the 1937 World Exhibition in Paris. Olet, Briet, and Wells all attended the congress.¹³ For Olet, as for Wells, peace rested in the creation of a "world mind" or "world brain" constructed through documentary collection and transmission.¹⁴ History, for Olet, was the progressive development of ever-accumulating knowledge and clarity. For Olet, all that was lacking at the time was the storage, retrieval, and communication of this progressive store.

Olet, as other European documentalists, understood the term "document" to refer to signifying materials of all sorts: paper-based texts, physical artifacts, images, newsreels, radio, and the emerging medium of television.¹⁵ In his book *Monde*, Olet proposes that the world would best be served by the collection and distribution of "facts" through machines that resemble today's personal computers. He believed that the "ultimate problem of documentation" was that of creating a documentary process and a mechanical device that would present to each person, in the comfort of his or her own armchair, an omniscient, yet personal, vision of the world. At one stroke, this device would solve the problem of positivist science (to form a representational knowledge of all things in the world);

the problem of documentary technique (to organize all the knowledge of the world); and the problem of international society (to make available to each person all the knowledge of the world).¹⁶ To these lofty ends, Olet envisioned a multimedia device that, "acting at a distance . . . would combine the radio, the television [*les rayons Roentgen*], cinema, and microscopic photography," projecting the information of the world onto an "individual screen" (390-91). Such a device would provide for each person a true and complete picture of all knowledge in a manner that would best be understood by each person, thus eliminating conflicts over differing interpretations and providing the grounds for true and complete communication. Indeed, such a device "would become the liberator of each person, its operation being controlled by each person himself, and the things [in their representations] being placed in a convenient order for each person" (390-91).

Olet's optimism about the global dissemination of truth is based on two elements: first, his belief that knowledge is composed of atomic units of indisputable facts that merely need to be technically distributed to be completely understood, and second, that the dissemination of this knowledge would be done by "honest men," because propaganda is based not on persuasion or ideology but on "errors and falsehoods" (389-90) that are refuted by bringing them up against reality.

Ironically, of course, it was the production of a sense of "factual" or "commonsense" beliefs that brought about the possibility of total war in 1937. The reduction of the world to "facts" merely means the acceptance of prejudice and the denial of interpretation; the realm of scientific facts becomes confused with easily manipulated "commonsense." Olet's grandiose later works such as *Traité de documentation* and *Monde* display elements of overkill in their arguments and examples, and they take on the rhetorical form of pleading in an attempt at political engagement. By 1937 it was difficult to distinguish mass information and communication from hegemonic forms of government control and from military operations. Olet's positivist epistemology of knowledge had been transformed, through mass technology and social organization, from a populist utopia to a military machine. Of course, the weakness of Olet's argument did not lie just in an empirical absence of "honest men" but in his naive understanding of the nature of language, knowledge, truth, and science. For totality was indeed made present for masses of

people through information and communication technology, and that totality had the smell of death. Language and knowledge as absolute truth was formed by the repetition of the same message across the hermeneutic differences of space and time. The very success of technical reproduction, from the stabilization of meaning at the level of the signifier to the control of meaning's effects in social space and history, resulted in leveling the problem of interpretation in language and canceling the generation of meaning by temporal and spatial differences. It was this leveling of interpretation and this canceling of the importance of spatial and temporal differences for the generation of meaning that Martin Heidegger criticized in the name of truth. On the other hand, it would be these social effects that Suzanne Briet would valorize in the name of "science."

Martin Heidegger

Heidegger's first explicit engagement with knowledge as a process of technical / technological reproduction occurs in his 1938 public lecture, "The Age of the World Picture."¹⁷ Although the roots of Heidegger's critique reaches back to *Being and Time*'s construction of the phenomenological grounds for the destruction of metaphysics, "The Age of the World Picture" raises the problem of positivist thought as a social and cultural problematic on a global scale. Seen within the context of fascist totalitarianism, Stalinist totalitarianism, and the military alliance of democratic capitalist countries in Europe and in America, Heidegger's essay engaged national and global subjectivity at the point "not of random world views, but only of those that have already taken up the fundamental position of man that is most extreme, and have done so with utmost resoluteness."¹⁸ Likewise, Heidegger's critiques of "science," reaching from "The Age of the World Picture" through "The Question Concerning Technology" (1951) up until at least "The End of Philosophy and the Task of Thinking" (1966), must be understood as critiques that not only address technical and institutional senses of the term "science" but also "science" as a cultural phenomenon, denoting the organization of both technical and technological agents according to predetermined objectives and logical processes.

For Heidegger in "The Age of the World Picture" and throughout his later critique of systems analysis and cybernetics, modern

industrial science follows a procedure of representation wherein the object is understood solely in terms of instrumental reason, and representation is itself erased by a methodological framing that defines the object in terms of presence alone. In modern science, the being, as object (*Gegenstand*), is torn or sketched out (*reissen*) of a phenomenological context, and is then treated managerially, as a resource (*Bestand*) that is ready at hand (*vorhanden*) for further use. Modern industrial research, whose culture Heidegger sees as shaping intellectuals and the university, is characterized as a network of exploitative intellectual and practical activities performed on beings in the name of initial representations of them as resources.¹⁹ The "busyness" of the research process easily merges into the busyness of research, and "thinking" becomes appropriated as a partner with modern industrialism. For Heidegger, modern research is the self-involved production of concepts and further research, even, and especially, in the absence of critical or self-reflexive thought on the grounds or validity of the initial *reissen*. What is lost in this modern method of human existence is the consideration of the nature of beings themselves in critical relation to human understanding and judgments. For Heidegger, modern research stresses the causal production and reproduction of ideas and products from initial representational frames (*Gestell*), rather than the creation and critical deployment of concepts for the happening of the event of truth in the world.

In poststructural terms, this shift from *truthing* to *information* in terms of *Gestell* and the process of enframing (*gestellen*) involves a shift in educational values (the shift from philosophy's emphasis on primary textual engagement to secondary readings and technique acquisition), as well as a shift in temporal and historical values. The temporal shift that Heidegger sees in modernity's understanding of time as duration and causal effect involves the loss of human "ek-static" senses of time (as identified in *Being and Time*). For Heidegger, the "scientific" method of modern industrial production stands in opposition to human existence as *Dasin*, and it defines freedom in terms of the "free time" given by historical determinants to *Dasin* in exchange for *Dasin*'s labor, rather than as an historical potentiality or as a potentiality for creating history. Modern research, as a method of time management, manages time in terms of industrial production, not in terms of the "ek-static" freedom that Hei-

degger claims is the very root of *Dasin*'s historicity and of the event of truth.

It is important to note that for Heidegger the *process* of enframing is not simply a repressive logic of the industrial age but rather an exploitation of *Dasin*'s essential mode of being in the world. As Heidegger explains in "The Question Concerning Technology," enframing (*gestellen*) is the manner by which human beings appear in the world, a manner that is as originary as the way that mountains jut forth as a mountain chain ("Gebirg"). The danger that Heidegger points to is not that of the frame (*Gestell*) of representational understanding itself, but of the blindness that humans have to the grounds for that framing, namely that of being itself. In other words, for Heidegger the problem is the forgetfulness of the fact that this mode of appropriating the world is something already *given* to human beings, not something that is the fruit of their domination over nature. This insight is important because it situates technological thinking within a broader ontological and historical condition of truth than its own production, and thus it marks an excess to technology and man on which technology and man are dependent and cannot control or exceed.

Of course, this attempt to think a more primordial condition to metaphysical subjectivity is a theme that runs throughout Heidegger's oeuvre. In "The Question Concerning Technology," it occurs most forthrightly in the very important but often overlooked beginning of that essay where Heidegger grounds human creative activity in what cannot be called other than a metaphysically grounded materialist critique of production. By returning to Aristotle's four causes (*aiton*: formal, material, efficient, and final), Heidegger argues that this concept is mistranslated by the Latin *causa*. In the Latin and subsequent Western metaphysical tradition, Aristotle's four *aiton* are no longer aspects of the object to which the object is indebted (*Verschulden*) for its creation, but rather such *aiton* are now causes for the production of the object. Heidegger chooses the example of a silver chalice to illustrate his argument, where the chalice can be spoken of according to the four *aiton* as four aspects (*aiton*, *Aussehen*): the chalice is indebted to silver for its appearance as substance or matter (*Stoff*); it is indebted to the idea of what a chalice is for its formal aspect; it is indebted to a cultural context of ritual for its final aspect; and it is indebted to the silversmith for bringing

together the other three ways of indebtedness in order to bring it forth as an object. For Heidegger, the object comes forth as presence according to these four ways of being coresponsible (*Veranschulden*): "The four ways of being responsible bring something into appearance. They let it come forth into presencing (*An-Wesen*)."²⁰ In contrast, in the Latin-influenced Western metaphysical tradition, the final cause dominates the other causes in terms of being a goal or an end (*telos*) for production, to which all the other causes contribute (foremost, the efficient cause). For metaphysically defined production, the historical indebtedness of the object is only relevant in order to predict the uses that a thing should have for a given end. The four aspects of a thing are no longer responsible for a thing but are now used up as resources for an instrumental production that may or may not have anything to do with historical debt or cultural placement. Material, culture, history, and effective agency are mere means to an envisioned end.

The importance of Heidegger's critique of the Latin interpretation of *aiton* is that it reasserts a mutual social, historical, natural, and intellectual indebtedness to the concept of production. In Heidegger's works such as his 1959 "The Way to Language," language is understood as the exemplary instance of indebtedness. Consequently, modern forgetfulness is characterized as the instrumental understanding and production of language, so that "information theory conceives of the natural aspect of language as a lack of formalization" (*Die Informationstheorie begreift das Natürliche als den Mangel an Formalisierung*).²¹ Against systemic and cybernetic understanding of beings and language in terms of *Gesetz*, modern industry, and modern research production, Heidegger's understanding of the nature of being and truth takes refuge in the hermeneutic difficulties and the temporal and spatial horizons of poetry as a still-evident hinge that joins being and production. By the 1960s in "The End of Philosophy and the Task of Thinking," however, Heidegger expresses the fear that the arts, too, are becoming transformed into information-producing mechanisms:

No prophecy is necessary to recognize that the sciences now establishing themselves will soon be determined and steered by the new fundamental science which is called cybernetics.

This science corresponds to the determination of man as an acting social being. For it is the theory of the steering of the possible plan-

ning and arrangement of human labor. Cybernetics transforms language into an exchange of news. The arts become regulated-regulating instruments of information.²²

Heidegger's work is noteworthy in relation to the history and historiography of information because it attempts to counter a metaphysics of presence, understood in terms of information, by a critique grounded in material production and the hermeneutic properties of being, history, and language. Its political failure, though, may be that as a discourse grounded in a philosophical critique of subjectivity it refuses a vocabulary that would be necessary for fully engaging the *productive* grounds for information in terms of the differences and antagonisms intrinsic to those grounds. Although it is useful to point to the material grounds for the production of information, and it is useful to counter Orlé's type of information utopia that is based on a grand sense of subjectivity (i.e., the "world-brain"), Heidegger's critical discourse is so primarily grounded that it can only be oppositional, not antagonistic, to the equally primordial claims of information positivism, and thus it seems to occupy the position of being a countermetaphysics to positivism. Politically speaking, this counterworld picture thus remains within the confines of the speculative because it lacks the very engagement that might break apart those productive mechanisms that are the basis for positivism's own speculative vision. Although Heidegger's critique loses none of its philosophical vision. Al- by its method of critique, it does lose much of its social power, and it would be hard to deny, particularly in regard to the public lectures, that Heidegger's critique was, indeed, socially intended. In contrast, Benjamin's critique, examined below, takes up a materialist and antagonistic criticism of the ideology of information, remaining concerned with issues of historicism and historicity but without isolating these values in a countermetaphysics.

Before preceding to Benjamin's work, let us return to European documentation immediately following World War II in the form of Suzanne Briet's work. In examining Briet we can see how Orlé's atomic understanding of documents and documentation was transformed into a type of cultural systems theory, which was the very understanding of information that Heidegger most feared would occur.

Suzanne Briet (1894–1989) was one of the foremost leaders in early documentation just before and after World War II. Her publications range from *Qu'est-ce que la documentation?* (1951) to biographical work on the nineteenth-century poet Arthur Rimbaud (to whom she was related) to an autobiography formally composed in an avant-garde manner according to alphabetical entries. She created and was in charge of the Salle des Catalogues et des Bibliothèques at the Bibliothèque Nationale from 1934 to 1954, and she was active in international circles, including serving as vice president of the Fédération Internationale de Documentation and holding assignments with UNESCO. Toward the end of her career as a librarian, she took a Fulbright-supported tour of libraries in the United States. Briet was one of the first women librarians at the Bibliothèque Nationale, and she was president of the Union of European Women.²³

Briet's work represents an attempt to understand global information from the viewpoint of networked technological and social production. For Briet, Olet's dream of universal bibliography was simply that, a dream. According to Briet, "*Documentation* lost nothing in alleviating itself of a Universal Bibliographic Catalog which everyone had treated as a dream and which did not offer a comparable attraction to the most localized of collective catalogs."²⁴

While casting aside Olet's desire for a universal bibliographical reflection of mankind, Briet's vision did not, however, discard the dream of global information. For Briet, documentation was a movement at the forefront of what she termed "science." For Briet, the documentalist must not only be deeply involved in the exchange of materials within "scientific" cultural production but, further, he or she must lead the individual scientist "like the dog on the hunt—totally before [the researcher], guided, guiding."²⁵ Science, for Briet, was not only a term for industrial, technical knowledge, but more generally it was a term for knowledge as a modern cultural phenomenon. Hence, as Briet repeats throughout *Qu'est-ce que la documentation?*, documentation is a "cultural technique" for our time. In *Qu'est-ce que la documentation?* in particular, Briet states that documentation is a exemplary symbol for science, even as science is the dominant cultural event in modernity, which documentation both occurs within and leads. Science and documentation are terms that

are metonymically linked to one another by the shared attributes of "rapidity" and "precision" in Briet's texts. Her texts link rhetoric, history, culture, and technology by these common tropes for modernist progress.²⁶

For Briet, the practice of documentation is also characterized by the integration of technically defined human agents and mechanical technology at a systems level. In *Qu'est-ce que la documentation?* the French term *technique* covers both human and mechanical technique and the integration of human and mechanical agency. In this manner, Briet praises the work done on cybernetics at the Massachusetts Institute of Technology, and she states that future man, as a *homo documentator*, must be prepared to assimilate machines so as not to be overtaken by them.²⁷ The human assimilation of technical machines requires that humans adapt themselves to the relatively narrow, reduced terms of mutual and interlinking standards that are native to machines. Briet's remarks suggest that the necessity for such standardization lies in the necessity for smooth communication between humans and machines within the historical progress and growth of science. Documentation advances at the forefront of science at both cultural and technical levels, demanding that documentalists advance like "new types of missionaries . . . in the wake of the driving force of the exploration vessel flying the United Nations flag" (41).

As Heidegger's critique of modernity suggests, however, the phenomenon of language remains a hurdle to global standardization. Unlike Olet's vision being embodied in a world city, Briet's vision is network based, and thus it relies to a much greater degree on formal levels of standardization in order to join heterogeneous agencies because there is no one geographical and cultural space within which all materials can be centrally valued. For this reason, Briet engages as a central issue in the advancement of science the problem of language. She solves the problem of multiple languages by explaining that certain European-based languages (English, French, and Spanish) are the basis for the spread of science. Because German has "retreated," Russian is no longer in the forefront, and "the Orientals always speak their language and another language." Thus "the major languages, that is to say, English, French, and Spanish tend to spread and to become the indispensable interpreters of civilized people."²⁸ Briet's science therefore advances on the heels of documentation, which in turn advances on the heels of a linguistic colonialism led

by the dominant nineteenth-century colonial powers and the victorious postwar capitalist nations.²⁹

Briet's work is historically important as an advance over Olet's understanding of documentation and information in that it attempts to give documentation and the notion of "information" a cultural definition rooted in political economy. By grounding her vision for information in an industrially based technical-cultural system, Briet's international vision matched the scale of Olet's greatest dreams and some of Heidegger's greatest fears about information. At the same time, Briet's texts also embedded the global information age in a technology of networks and in a micropolitics of power.

Walter Benjamin

A good starting point for entering Benjamin's project of critically engaging the "information age" of the late 1920s and the 1930s occurs through the problematic of experience in his work of that period. "Experience" in Benjamin's work is expressed by two German terms: *Erlebnis* and *Erfahrung*.³⁰ As Hans-Georg Gadamer has pointed out, the term *Erlebnis* is of recent origin, only becoming common by the 1870s.³¹ Gadamer claims that its origins in German writings lie in Goethe's poetic texts, where the term emphasizes both the factual unit of experience and the manner by which units of experience metonymically symbolize the subject's life as a whole.³² By the end of the nineteenth century, Gadamer argues, both the term and concept of *Erlebnis* thoroughly permuted both Dilthey's life philosophy and his attempts to reintroduce the subject back into "scientific" modes of historiography.³³ Gadamer ultimately claims that the concept of *Erlebnis* may, perhaps, lie in Rousseau's writings, particularly in his *Confessions*.

The importance of this genealogy is that it establishes, especially in light of Theodor Adorno's charge that Benjamin had aestheticized and ahistoricized the role of fetishism in capitalism,³⁴ the likelihood that, at least in terms of the concept of *Erlebnis*, Benjamin's Arcades project was not amiss in critiquing capital's cultural and historical production through an examination of Baudelaire's poetics and the conception of experience and time that are expressed therein.

Benjamin sees Baudelaire's narratives of his life experiences (*Erleb-*

nis) in the midst of industrialized nineteenth-century Paris as reactions to the trauma inflicted on traditional, pre-capitalist societies and the subject's relatively assigned location within those societies.³⁵ Likewise, but in an opposing scale of values, to Baudelaire's expressions of alienation, mass media and public information serve the dual function of distancing the reader or viewer from the violence of industrialization by generalizing its conditions and suggesting that such modern industrial rhythms are but moments within society's progressive march toward utopia.³⁶ The "self" here is both a refuge and a product of industrial capitalist production. By combining Marxism's explanation of alienation in terms of commodity fetishism with Freud's explanation of trauma, Benjamin arrives at a theory of the cultural commodity as dream, part of a larger process of subsumption and acculturation. And by understanding the experience of the fetishized object as commodity in terms of the ideological construction of historical experience,³⁷ Benjamin arrives at a conception of bourgeois historical production as located in particular symbols or "images" of industrial production. The role of mass communication and information, then, is to mediate between material production and historical form via the attribution of meaning to objects and signs. In other words, the historical role of communication and information technologies in capitalism is that of ideological production.

Benjamin's Arcades project concentrates on the remainder that is left out of, and left after, bourgeois dreams of history and cultural meaning. In modernity, experience in the sense of *Erfahrung* constitutes a point of excess in modern production. Wing in the areas of the now supposedly private and inexpressible, Benjamin returned to this *Abfall* (trash or remainder) of history through decaying symbols of industrialism (the arcades) and the complex and contradictory experiences of workers. Benjamin's critical undertaking was to destroy the productive grounds for this division of experience wrought by capitalism's destruction of tradition, while also recognizing those values that are denied by the logic of modern progress. In "The Work of Art in the Age of Mechanical Reproduction" (1935), Benjamin asserts that the violence of technical reproduction can be turned against itself by exploiting the difference between technological reproduction and its commoditization in culture. Benjamin's optimism regarding the revolutionary potential of communication and information technology lies with *neuer* tech-

nologies. In "On Some Motifs in Baudelaire,"³⁸ as well as in footnote 19 of "The Work of Art in the Age of Mechanical Reproduction," for example, Benjamin makes clear that the revolutionary value of cinema in his time was that of harnessing the rhythm of industrial life for purposes other than that of perpetuating the dream of progress. New technologies had the potential of exploiting the difference between material and idea, between industrialization and utopian ideology. In this way, the fundamental antagonism of workers and capitalists would find a mass form in technological production, and this would essentially be seen at the level of social construction.

In contrast to Briel's utopian picture of a seamless flow of "scientific" industrially produced "information," Benjamin envisioned a picture of progress shattered by the rhythms of industrialization posed against itself. By exploiting the possibility for a temporal form of montage and defamiliarization in film, the linear narrative of bourgeois historical progress could be strained to the breaking point. In this way, the dialectical image of progress that is founded on the subsumption of matter by ideology could not only be held at a "standstill" but could be reversed, so that technological production outstripped its own subsumption by ideological narrative. For Benjamin, the promise of new media technologies was not that of linking the world into supposedly seamless networks or systems of information and communication that would give the illusion of global efficiency but, rather, of politicizing and artistically shattering the ideological goal of the illusion of a positive global totality. As Benjamin wrote in relation to the fascist project of nationalist subsumption: in response to politics' reorganization of life according to an aesthetics of representation and positive totality, "communism responds by politicizing art."³⁹ Benjamin understood that new information and communication technologies can play a role in this politicization of art because their new speeds and rhythms exist, at least for a while, in tension with old social forms of media and aesthetic meaning. Benjamin's observations in this regard and his hesitancy in applying such antagonistic potential to information and communication technologies without regard to their historical and cultural specificity may be instructive to us when we attempt to analyze the mass deployment and use of new information and communication technologies today.

I have presented here several dialectics of positions around the social meaning and use of new information and communication technologies during the first half of the twentieth century in western Europe. Through a historical recovery of the European documentalists we gain a better understanding that not only have the dreams and tropes of the "information age" occurred previous to this digital "information age," but we come to better understand the critical position of such writers as Heidegger and Benjamin against the types of technological utopianism that is reflected in the documentalists' writings. In reflection on our own time, we may be struck by both the prevalence of tried-and-true modernism in our own age and the striking disappearance of those critical positions espoused by Heidegger and Benjamin.

The question remains, then, how does the repetition of "the information age" continue the dream of modernity, and what is the role of historical erasure in that continuance? How is it that the European documentalists were forgotten within a history that repeated their claims? And how is it that academic research has largely ignored or mystified social critiques on the information age, even within the inherited presence of Heidegger and Benjamin?

How is it that amidst an information explosion the very historical foundations and critical commentary on that explosion are lost to time? Or is it the case, as Heidegger and Benjamin propose, that within that very explosion time itself has been lost through a certain type of construction of history?

Notes

All translations are mine unless indicated otherwise.

1 For two collections of historical studies on information science, see Michael K. Buckland and Trudi Bellardo Hahn, eds., *Historical Studies in Information Science* (Metford, N.J.: Information Today, 1988); and Mary Ellen Bowden, Trudi Bellardo Hahn, and Robert V. Williams, eds., *Proceedings of the 1988 Conference on the History and Heritage of Science and Information Systems* (Metford, N.J.: Information Today, 1989).

2 Michael K. Buckland, "The Centenary of Madame Documentation":

- Suzanne Briet, 1894–1989," *Journal of the American Society for Information Science* 46, no. 4 (1995): 235–37.
- 3 Suzanne Briet, *Entre Aïse et Meuse . . . et au-delà: Souvenirs* (Charleville-Mézières: Société des Écrivains Ardennais, 1976).
- 4 Suzanne Briet, *Qu'est-ce que la documentation?* (Paris: EDIT, 1951).
- 5 In my *The Modern Invention of Information: Discourse, History, and Power* (Carbondale: Southern Illinois University Press, 2001) I have engaged many of the themes of this paper in a more extended format.
- 6 Serge Cacaly, "Paul Otlet (1868–1944)," in *Dictionnaire encyclopédique de l'information et de la documentation* (Paris: Éditions Nathan, 1997), 446–47.
- 7 Paul Otlet, *Traité de documentation: Le livre sur le livre. Théorie et pratique* (Brussels: Éditions Mوندanenum, 1934), and *Monde: Essai d'universalisme: Connaissance du monde, sentiment du monde, action organisée et plan du monde* (Brussels: Éditions Mوندanenum, 1935).
- 8 Briet, *Qu'est-ce que la documentation?* 2.
- 9 See, for example, Armand Mattelart, *The Invention of Communication* (Minneapolis: University of Minnesota Press, 1996). On Otlet and international associations, see Isabelle Rienset-Lemarié, "P. Otlet's Mundaneum and the International Perspective in the History of Documentation and Information Science," in Buckland and Hahn, eds., *Historical Studies in Information Science*, 34–42.
- 10 Cacaly, "Paul Otlet," 446–47. W. Boyd Raymond, "The Origins of Information Science and the International Institute of Bibliography/International Federation for Information and Documentation (IFID)," in Buckland and Hahn, eds., *Historical Studies in Information Science*, 22–33. See also W. Boyd Raymond's biography of Otlet, *The Universe of Information: The Work of Paul Otlet for Documentation and International Organization* (Moscow: VINITI, 1975).
- 11 W. Boyd Raymond, "Visions of Xanadu: Paul Otlet (1868–1944) and Hypertext," *Journal of the American Society for Information Science* 45, no. 4 (1994): 235–50.
- 12 See W. Boyd Raymond, "H. G. Wells's Idea of a World Brain: A Critical Reassessment," *Journal of the American Society for Information Science* 50, no. 7 (1999): 557–73.
- 13 W. Boyd Raymond, "The International Exposition and the World Documentation Congress, Paris, 1937," *Library Quarterly* 53 (1983): 254–68.
- 14 See Raymond, "H. G. Wells's Idea of a World Brain."
- 15 See Michael K. Buckland, "What Is a 'Document'?" in Buckland and Hahn, eds., *Historical Studies in Information Science*, 215–20.
- 16 Otlet, *Monde*, 390.
- 17 Martin Heidegger's thought is, of course, complex, not only intertextually but in terms of social and philosophical origins. It is not my purpose in this section to delve into it deeply, especially in terms of its philosophical context, but rather to point out certain explicit social engagements that it makes with Otlet's type of positivism and with the development of information culture in the twentieth century.
- 18 Martin Heidegger, "The Age of the World Picture," in *The Question Concerning Technology and Other Essays* (New York: Harper and Row, 1977), 134–35.
- 19 It is interesting to note that Heidegger partly marks the transition from what he sees as scholarship to research work with the advent of public document collections, particularly in the form of publishers' series and sets: "The research man no longer needs a library at home. Moreover, he is constantly on the move. He negotiates at meetings and collects information at congresses. He contracts for commissions with publishers. The latter now determine along with him which books must be written" (Heidegger, "The Age of the World Picture," 125). See also Heidegger's comments in appendix 3 to "The Age of the World Picture" where he continues this train of thought, accusing the publishing industry of creating a commercially defined public space of knowledge through selective publishing strategies and the establishment of canons.
- 20 Heidegger, "The Question Concerning Technology," in *The Question Regarding Technology and Other Essays*, 9.
- 21 Martin Heidegger, "The Way to Language," in *On the Way to Language* (New York: Harper and Row, 1977), 111–36.
- 22 Martin Heidegger, "The End of Philosophy and the Task of Thinking," in *Martin Heidegger: Basic Writings* (New York: Harper and Row, 1977), 376.
- 23 Buckland, "The Centenary of 'Madame Documentation,'" 235–37.
- 24 Briet, *Qu'est-ce que la documentation?* 9.
- 25 Suzanne Briet, "Bibliothécaires et Documentalistes," *Revue de la documentation* 21 (1954): 43.
- 26 On the ethics and politics of Briet's rhetoric of "science," see my "Tropes, History, and Ethics in Professional Discourse and Information Science," *Journal of the American Society for Information Science* 51, no. 5 (2000): 469–75.
- 27 Briet, *Qu'est-ce que la documentation?* 29.
- 28 *Ibid.*, 43.
- 29 For an exemplary analysis of capitalism understood as a process of semiotic encoding, see Félix Guattari and Eric Alliez, "Capitalist Systems, Structures, and Processes," in *The Guattari Reader* (Cambridge, Mass.: Blackwell Publishers, 1996), 233–47.
- 30 See, particularly, Walter Benjamin, "On Some Motifs in Baudelaire," in *Illuminations*, ed. Hannah Arendt, trans. Harry Zohn (New York: Schocken Books, 1968), 155–200.

- 31 Hans-Georg Gadamer, *Truth and Method* (New York: Crossroads, 1985), 55.
- 32 Ibid., 55–63.
- 33 Ibid. Gadamer's explanation helps elucidate Heidegger's disparaging remarks regarding Dilthey's tendencies to reduce knowledge to "life-experiences" (*Erlebnisse*), in the latter's "The Age of the World Picture" (see, for example, pp. 134 and 142), and it also illuminates Heidegger's critique of life philosophy in *Being and Time*.
- 34 See, especially, Theodor Adorno's letter to Benjamin of 2–4 August 1935 in *Theodor Adorno and Walter Benjamin, The Complete Correspondence: 1928–1940* (Cambridge, Mass.: Harvard University Press, 1999), 104–16.
- 35 Benjamin, "On Some Motifs in Baudelaire."
- 36 See, for example, Benjamin's analysis of the function of newspapers in modernity in "On Some Motifs in Baudelaire," 158–59.
- 37 See Benjamin's discussion of time in section 9 of "On Some Motifs in Baudelaire."
- 38 Ibid., 175.
- 39 Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction," in *Illuminations*, 242.

II

VISUAL CULTURE, SUBJECTIVITY, AND THE EDUCATION OF THE SENSES



LAUREN RABINOVITZ AND
ABRAHAM GEIL, EDITORS

MEMORY BYTES

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CONTENTS

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Fisher:

LAUREN RABINOVITZ AND ABRAHAM GEIL Introduction 1

PART I

Intellectual Histories of the Information Age

LAURA RIGAL Imperial Attractions: Benjamin Franklin's *New Experiments* of 1751 23

DAVID DEPEW From Heat Engines to Digital Printouts: Machine Models of the Body from the Victorian Era to the Human Genome Project 47

RONALD E. DAY The Erasure and Construction of History for the Information Age: Positivism and Its Critics 76

PART II

Visual Culture, Subjectivity, and the Education of the Senses

LAUREN RABINOVITZ More than the Movies: A History of Somatic Visual Culture through *Hale's Tours*, IMAX, and Motion Simulation Rides 99