# **Images of Environmental Disaster: Information and Ontology**

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#### Abstract

This paper examines the ways in which visual images of environmental disaster function in the context of our Information Age ontology. Following the analysis and typology of images associated with the 2010 Deepwater Horizon oil spill in the Gulf of Mexico sketched out in a brief article by Peter Galison and Caroline A. Jones, I show, first, the essential incompleteness of those images that convey the picture of disaster to television and computer screens of a global public. As these authors emphasize, there are crucial aspects of the disaster necessarily left out of the picture: aspects which can not yet be rendered visible by existing imaging technologies. Granting the importance of these lacunae, the present study attempts a second step, beyond the not-yet-visualized aspects of disaster emphasized by Galison and Jones, in order to elucidate the *ontological context* in which an event such as environmental disaster becomes possible—or inevitable. This ontological context is constituted by the fundamental structure of reality as such, our "world" as manifest in the present Information Age.

If the fundamental ontological set-up is itself essentially in principle recalcitrant to visual imaging, the visual image itself claims a privileged place in our information-age reality. The Deepwater Horizon disaster, and the pragmatic necessity of looking beyond the surface images are situated here in a philosophical context that allows for more radical inquiry into the fundamental contours of the "world order" we presently inhabit (this term is to be understood in its ontological, not geo-political significance). This type of inquiry, sketched out in very preliminary terms, is contrasted with the *technocratic framework* in which the environmentalist problematic is currently situated. Concluding remarks point to the *pragmatic implications* of the attempt to shift this problematic onto ontological grounds: new stakes and new strategies emerge with the second step beyond the surface images of disaster. The new philosophical context sketched out here allows for a profound reorientation of assessment and response to environmental disaster as such, and to the fragility and essential instability of the world order in which such disasters occur.

### Introduction

The following study can be understood as an attempt to "resituate" the environmentalist problematic on a new—ontological—terrain. Its focus is rather narrow, taking the 2010 oil spill in the Gulf of Mexico as exemplary environmental disaster, and paying particular attention to the means by which such an event emerges *qua disaster* in the prevailing ontological context of our Information Age<sup>1</sup>. These means by which the event of disaster

<sup>&</sup>lt;sup>1</sup> No attempt will be made here to give a full-blown account of this *ontological context*. It should suffice for present purposes to make the rather obvious claim that the "Information Age" or the digital revolution, or

becomes manifest are, above all, techniques of visual imaging, or "technologies of the visible." (I borrow this term from the analysis of oil-spill disaster images worked out by Peter Galison and Caroline A. Jones in a brief piece that motivates the present study, and provides much of its subject matter.) If we recognize the increasing importance of the visual image as one of the salient features of the Age of Information, we must also consider the pragmatic implications of visual image processing as the cognitive means by which the significance of environmental disaster is to be registered. These implications are spelled out fairly clearly by Galison and Jones: the significance and the lessons to be learned from a major environmental disaster tend to be lost in the processing of "surface images" that may capture our attention and galvanize opinion, but fail to capture the deeper-lying causes and consequences of disaster, which remain conveniently out of sight, out of mind.

These considerations seem to warrant the sort of conceptual shift to be sketched out in the following pages: attempting to dislodge the environmentalist problematic from the technocratic framework which is its "natural" home, and point toward the need for an ontological inquiry into the prevailing "meaning of being" that structures our world and determines our present reality in terms of information. Moreover, since we are pointing toward certain defects or deficits of the "pragmatic implications" now operative in the Information Age technocratic framework (more on this below), it will be necessary to indicate, if only in very preliminary ways, the practical implications of the type of inquiry undertaken here. Such reflections, on the new strategic and/or conceptual approaches to the very real demands and urgent questions encompassed by the environmentalist problematic, will be consigned to the conclusion of this study. There it will be suggested that an inquiry attempting to situate the environmental disaster, ontologically, among the decisive events that characterize our Age of Information does indeed shift the terrain upon which our response will have to be fashioned. Inquiry into the fundamental layout of the world in which environmental disasters are recognized as decisive and inevitable features should also affect the ways in which the disaster "speaks to us." And if we could properly heed the significance of a major oil spill, for example, beyond the surface images of disaster and outside the technocratic environmentalist framework, we would catch sight of possibilities for new kinds of response: new ways of conceptualizing the problematic, new forms of action, and new realms of engagement.

### The technocratic framework

An environmental disaster is described, first of all, in terms of "what actually happened"—two hundred million gallons of oil released into the ocean, in our exemplary case study—and then two areas of impact must be assessed: the ecological damage and

however we may wish to designate the tremendous advances in communications and information technologies over the past half century, ushers in a fundamentally new understanding of reality. This new ontological context will be taken "as given" —without any attempt to give a full description or characterization of its newness.

the human costs. Causes and consequences of the disaster are investigated in two different "registers:" the human impact, which may of course include emotional response, a sense of tragedy, outrage or apocalyptic doom, but is ultimately reducible in principle to economic costs; and the effects of the disaster on non-human species (which may or may not be of economic importance), natural cycles, and ecosystem functions. The latter register is largely determined by ecosystem models and computer simulations, and accurate predictions and assessments of damage are possible only in the case of an ecosystem whose baseline functioning has been well studied (over the course of years or decades, depending on the complexity and type of ecosystem involved.) The human costs are also determined by mathematical models, predicting the economic and sociological effects of the collapse of fisheries, for example, or the loss of public and private revenues that follow from disruptions of seasonal tourist industries. Ultimately, a dollar figure is attached even to the destruction of wetlands, not because we can calculate the costs of all the ecosystem functions carried out by wetlands, but on the basis of estimated costs for cleanup operations and the recovery time required to return to equilibrium after a major system perturbation. (The current estimates of the total "cost" of the Deepwater Horizon disaster stand at \$100 billion.) This reduction to the sphere of measurable economic parameters registers the environmental disaster as quantifiable, calculable event, subject in principle to more or less rigorous analysis by means of complex systems of accounting. Reparations, punitive damages and reform of governmental-industrial relations can, in principle, be assessed, calculated, "reprogrammed" with varying degrees of precision.

The causes of environmental disaster too are understood within the prevailing technocratic paradigm as breakdowns, glitches, planning errors and technological failures. Investigations of the explosion of the Deepwater Horizon drilling rig in the Gulf of Mexico last summer directed our attention toward design or construction flaws in the "blowout preventer." Profit-driven cost cutting measures, substandard grade cement used in the drill pipe, management decisions ("human error") in ignoring or circumventing warning signals—these constitute the explanatory framework in which the causes of disaster are to be located and understood. But this focus on technical decisions and technological failures blocks from view any deeper inquiry into the political and economic demands, the motivations and inevitable risks of offshore drilling. If we focus on the failure of the blowout preventer we do not ask questions about our world's insatiable demand for fossil fuels. Within the technocratic framework the causes and consequences of environmental disaster are understood in relatively precise but superficial terms.

My dictionary defines the word *technocracy* as "government by engineers and natural scientists"—a concept which has been nowhere actually realized, not even in the Soviet Union, and not in our contemporary societies where scientific knowledge and technological adances continue to exert profound influence over our lives and our self-

understanding.<sup>2</sup> The definition goes on to elaborate a somewhat more pertinent "theory of government in which all economic resources, and hence the entire social system, would be controlled by engineers and scientists." (More pertinent as long as one broadens the category of engineers to include captains of industry and those "soft technologists" who direct flows of capital, negotiate terms of governmental regulation, and shape public perception of the world we inhabit.) But could we not define our technocratic framework more simply, as a worldview or a fundamental understanding of reality which is characterized by a certain mode of intelligibility, entailing the relatively precise but superficial analysis of causes and consequences outlined above? Can we designate our present world order as technocracy insofar as our basic sense of the meaning of being is determined by the present state of scientific knowledge and technological advance? It would follow, of course, that investigations of environmental disaster—and, inevitably, our responses—are determined at the surface level of calculable, quantifiable factors in such a way that more radical inquiry into the fundamental lay-out of our world order is, in principle, foreclosed. The technocratic enframing of the environmentalist problematic would then serve pragmatically as an obstacle to ontological inquiry.

If we understand by *technocracy* a certain mode of intelligibility, a certain conceptual and pragmatic framework set up by the culminating success of the modern natural sciences and technological applications we can recognize the essential superficiality of this mode of intelligibility only if we are able to catch sight of the "deeper" ontological inquiry which it occludes. Without such recognition that something is being left out of the picture constructed within the technocratic framework, this "invisibility" or necessary blind spot remains effectively out of sight, out of mind (to borrow again the phrase invoked by Galison and Jones.)

### **Ontology in the Age of Information**

To ask the fundamental "question of being" has been the task philosophy assigns to human consciousness since the time of the ancient Greeks. Ontology can be understood either as a "theory of being" or a doctrine concerning the ultimate nature of reality, so that we speak of Plato's "ontology" of eternal forms or Ideas, Aristotle's ontology based on the concept of Substance, or leaping ahead a bit, we may speak of the ontological implications (or questions) raised by Einstein's theory of relativity and by quantum mechanics. The approach to ontological inquiry worked out by Martin Heidegger eschews any attempt to posit a doctrine that would claim to be foundational. There is no

<sup>&</sup>lt;sup>2</sup> Michael J. Graetz makes the following suggestion in *The End of Energy*: "What we need now is for scientists and engineers rather than politicians to make the spending and subsidy decisions regarding the taxpayer dollars that are spent on energy technologies. We [would] benefit greatly when energy technology decisions are made through a process that more closely resembles the National Institutes of Health or the National Academy of Science." (Graetz 2011, 258.) However reasonable this may sound, we should note how *radical* this suggestion is, in proposing a fundamentally different means of governance – at least in this important area of concern. It is a fundamental part of our current understanding of the modern state that decisions regarding public expenditures are made by elected officials, and not by scientists and engineers.

"positive" theory of being put forth, no *ground* posited as foundation for all beings and all modes of being. Instead, ontology is understood and carried out as *radical inquiry* into the basic layout of the reality we inhabit.

In his later thinking, starting with the lecture courses on Nietzsche in the late 1930s, Heidegger introduced the perspective designated as *Seinsgeschichte* [history-ofbieng.] He came to understand that Western history can be "read" as a series of ontological epochs, each determined by a fundamental understanding of *the meaning of being*, and he recognized that the present epoch, ushered in by the upheavals and World Wars of the twentieth century, would mark both the culmination and completion of Western rational thought. He designated this terminal epoch of the West as the epoch of technology, and he recognized already in the 1950s that this planetary culmination of Western rationality would be profoundly determined by the new fundamental science of *cybernetics*.<sup>3</sup> Today we refer to the several waves of technological innovations and advances over the past half-century, especially in communications technologies, under the rubric of the Information Age.

This very schematic and preliminary account is given here in order to situate the approach to environmental disaster to be taken up in the following pages, very broadly, in a certain ontological context. If we wish to shift the framework in which environmental disaster is presently registered, this is motivated not only by the particular focus to be taken up here (following Galison and Jones), namely the analysis and typology of images of disaster associated with the Deepwater Horizon oil spill. On the contrary, it follows from the reflections sketched out above that an adequate approach to any decisive event or development in the world we presently inhabit would have to be situated ontologically—in the context of Information Age. If it is true that our present epoch is determined by a fundamentally new understanding of being itself in terms of information (and this has, I think, become more emphatically and more palpably clear over the course of the past decade or two), then the environmentalist problematic, along with all of the other decisive features of our times, from globalization to biotechnology, will have to be understood as a manifestation of our Information Age "reality," recognized as ontological epoch—indeed as critical watershed and crucial turning point in the history-of-being. Focus on the visual imagery of environmental disaster lends itself to this sort of approach, perhaps, more obviously than other decisive features or developments of our times (new forms or warfare, for example, new forms of political participation, new fundamental determinations of life, of cognition, and new means of identity-formation, etc.) Moreover, the very nature of the oil-spill disaster lends itself to analysis in terms of

<sup>&</sup>lt;sup>3</sup> See, for example, "The End of Philosophy and the Task of Thinking" (1966). "The sciences are now taking over as their own task what philosophy in the course of its history tried to present in certain places, and even there only inadequately, that is, the ontologies of the various regions of beings (nature, history, law, art.) 'Theory' now means positing of the categories, which are allowed only a cybernetic [i.e., "steering"] function, but denied any ontological meaning. The operational and model-character of representational-calculative thinking becomes dominant." (Heidegger 1977, 377)

visual images to a far greater extent than, say, the Japanese nuclear disaster. If so, the Gulf oil spill will serve here as "exemplary" disaster for motivating *the shift from technocratic framework to ontological inquiry*, which is the real subject matter of the present study.

In attempting to resituate not only this disaster (and the consideration of its associated visual images) but the entire environmentalist problematic in an ontological context we are trying to point to new strategic approaches, and new possibilities for response. Shifting away from the technocratic framework, as outlined very schematically above, does not merely entail "changing the conversation" or adding a new buzzword to the discussion. There is no promise of an "ontological fix" that would claim to trump the technological fix we implicitly seek—again expanding the concept of *the technological* here to include those "soft technologies" embedded in the political, legal and economic structures, the apparatus by means of which a modern state governs itself.

Our intentions here are less ambitious: to catch sight of an "overlooked" dimension (i.e., being itself!) in which the meaning, the stakes, and our ultimate response to environmental disaster emerge in new light. In relating this ontological dimension to the concept and the new reality of our Information Age, I do not mean to suggest that a fundamentally new terrain called information is to function as a source or foundation for practical or theoretical solutions to our present predicament. (That assumption is indeed a defining feature of what has been termed the technocratic framework.) Rather, the ontological significance of the Information Age, or the conception of this "digital revolution" which we are very much in the midst of as *ontological epoch*, is invoked here as the context in which the environmentalist problematic will ultimately have to be inscribed. What is at stake is not merely a set of questions concerning of legislative reprogramming of relations between government and industry, nor of relations between image and reality, or of the privileged place of visual imagery in our information-age reality. A major environmental disaster calls into question the fundamental layout of the world we inhabit, not in abstruse philosophical discourse but in very urgent and very pragmatic ways. The world as such is neither a simple material object (a planet) nor a philosophical construct; it is the meaningful, structured reality we inhabit. The fundamental structuring elements of our world—from democracy and global capitalism to science and technology, from the place relegated to religion and the arts to the basic relations between human beings and the ways in which we build buildings and grow crops—combine in a particular fundamental ontological arrangement which constitutes our reality. It is this ontological arrangement, this reality, that becomes the pragmatic focus when we shift beyond the technocratic framework in which environmentalist discourse is currently confined.

## **Images of Disaster**

Galison and Jones (2010) offer a unique perspective on the Deepwater Horizon disaster in focusing, first, on the iconic and unprecedented visual images of the oil spill, and then insisting on the pragmatic necessity of thinking *beyond the surface images*. Their article begins, rather tellingly, with the question, "Have we already forgotten?"—as if to imply that the striking visual images that had occupied our TV and computer screens for nearly three months may have already faded from memory ("out of sight, out of mind.") There follows a very brief account of the course of events that began with an explosion on the drilling rig, Deepwater Horizon, which killed eleven workers and eventually left some five million barrels of oil "dispersed" in undersea plumes in the Gulf of Mexico—"the largest petrochemical spill in history" (Galison and Jones 2010, 49). It is worth quoting at length the sentences in which their provocative thesis is spelled out in preliminary form:

"Images played a unique role in the crisis, accompanying it at every turn but also failing, by definition, to capture that which could not be made visible. What we *could* see were tragic images of oil-coated shorebirds, sublime satellite photographs of iridescent oil slicks on the ocean surface, and stream-of-catastrophe footage that brought the wellhead gusher onto computer screens around the world. Such sights galvanized response, but as those surface images (seafloor surface, ocean surface and shorefront) faded, both the public and the politicians were primed to declare the spill over." (Galison and Jones 2010, 49)

All three of the key points developed in the article are presented here. We will single them out and reformulate them individually. First, the important recognition that certain aspects or consequences of the oil spill could *not* be captured in visual images and were thus excluded from "the picture" which effectively conveyed the reality of the disaster to the viewing public. More radically, the authors show that those "surface images" that do capture the visible aspects of the disaster effectively block out the non-visualized aspects, which are thereby "occluded" or rendered invisible. (As we will see, at least one of these not-yet-visualized aspects has profound consequences for shaping public perception of the disaster.)

The second important point to be gleaned from the introductory passage cited above is the typology of disaster images. The authors identify three levels of *surface effects*—phenomena manifested at visible surfaces, and thus easily captured by existing visual technologies and included as crucial features in the picture of disaster. These three dimensions of the visible are: the body surfaces of animals, covered in oil; the ocean surface streaked with mile-long oil slicks, captured by satellite photography; and the

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<sup>&</sup>lt;sup>4</sup> The authors are, respectively, professor of the history of science at Harvard University and professor of art history at the Massachusetts Institute of Technology. Galison's research focuses on the role of visual representations in science (in elementary particle physics, for example); Jones's work deals with, among other things, relations between technology and contemporary art.

surface of the ocean floor, with its broken wellhead gushing one hundred thousand barrels of oil per day, captured by BP's own underwater webcam and beamed as "live feed" to television and computer screens around the world. This last "surface of visibility," one mile below the ocean's surface, is of course the novel iconic image for the Deepwater Horizon disaster. The "smoking gun" (still actually firing!) for a slow-motion crime in progress, an instance of visual proof unprecedented not only for an oil spill, but having no equivalent in any previous environmental disaster.

Finally, and most importantly for our present concerns, the third point articulated by Galison and Jones concerns what we have referred to as the *pragmatic consequences* of the disaster imagery—or perhaps better to say, of the disaster-as-image. Insofar as a major environmental disaster such as the Gulf oil spill is perceived and comprehended through visual images, the response to the disaster will also be determined largely according to a rhetoric of images. ("Response" here is meant to include governmental and industry policy changes as well as individual citizens' understanding of the need for "lifestyle" changes; the concept of "pragmatic implications," accordingly, would include both of these dimensions, collective and individual.) Observing that politicians and the public were equally ready to declare the spill "over" as their perception of the disaster-asimage was successfully resolved, Galison and Jones imply that the visual images effectively shape the response that we make, as a society and as individuals. That is to say, our response is largely an effect of the visual imagery that conveys the reality of the disaster, the media spectacle that doubles up the empirical event projected into the dimension of cyberspace. This dimension—event as information—constitutes the determining level of reality for our age of information.

Also implied by this last point is the claim (made explicit later in the article) that important aspects of the oil spill which are not easily visualized by existing technologies, and thus are left "out of the picture" of the disaster that shapes public opinion and political response, might significantly alter that opinion and response. If policy makers and the public were adequately informed about these not-yet-visualized aspects, we may assume, our response would be very different: we might not, for example, be so ready to declare the spill over as soon as the oil slicks are effectively removed from the visible surfaces of the ocean. This counterfactual scenario could be realized—if only "our awesome technologies of the image" (Galison and Jones 2010, 51) allowed us to visualize the underwater plumes of oil, dispersed from the visible surface and rendered invisible to satellite cameras. The authors seem to suggest that it is due to certain technological limits or lacunae that the *picture of disaster* formed and disseminated via visual images is *necessarily incomplete*—and thus subject to distortion or manipulation:

"That we have yet to develop or popularize certain kinds of technologies of vision (for deep ocean plumes, for durational models of wetland change, or for the microscopic uptake of petro-dispersants inside organisms) produces specific invisibilities that fit well with corporate policy. No picture, no action." (Galison and Jones 2010, 49)

The three "specific invisibilities" mentioned here correspond to the three surface images discussed above; in each case the very visibility of the surface occludes whatever lies below the surface, or out of range of the technologies that render the disaster visible (only, inevitably, partly visible.) The two key parts of this typology—again emphasizing those aspects with clear pragmatic implications for the ways we read and respond to the picture of environmental disaster—are the bodily surfaces of the animals (sea birds and turtles) and the surface oil slicks, successfully *dispersed* out of sight, and effectively removed from the television and computer screens on which the imagery of disaster is projected. We see the oil-covered birds rinsed by veterinarians and well-meaning volunteers, but there are no fiber-optic cameras showing us the damage to internal organs of the animals. These misleading (albeit heartwarming) images have the pragmatic effect of assuring viewers of the disaster that clean-up operations are underway, reparations are being made to nature's innocent victims of man's large-scale technological mishaps. Under the rubric of "Making It Right" on BP's website,

"these all-too-familiar spill icons combine the sad fate of individual creatures with media-ready rescue in a perfect combination: a technological failure, a compassionate human-scale response, a documented clean-up. Never mind that only a fraction of the oil-doused birds make it to the clean-up station, or that biologists assert that only a small percentage actually survive in the medium term." (Galison and Jones 2010, 49)

And finally, the specific invisibility unique to the Deepwater Horizon oil spill involves the controversial use of chemical dispersants, ostensibly to break up the milliongallon oil slicks in order to facilitate "natural" bio-chemical decomposition, but in fact, these authors assert, the intended effect of the dispersant was to remove the slicks from the visible ocean surface and thereby remove the disaster images from our television and computer screens. In claiming that these specific invisibilities "fit well with corporate policy" it almost sounds as if the authors are pointing to a conspiracy of sorts, concerning those technologically produced images that constitute the picture of the disaster presented to the world. Strictly speaking, then, it would not be adequate to say, "No picture, no action." A more complete formula would have to say, "No visualizing technologies, no picture, no action"—and this would posit a direct link between "technologies of the image" and pragmatic implications. As if to imply (though I do not wish to attribute this technocratic thinking to these authors): a more robust array of visual technologies would create a more complete picture of the disaster, and such a picture might lead to more

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<sup>&</sup>lt;sup>5</sup> I refrain from any such attribution, in particular following a personal correspondence with one of the authors, Caroline A. Jones, in which she responded to an earlier version of this paper. I would like to express my gratitude toward her for this exchange. [CB.]

appropriate or more effective response. Better technologies-of-the-image, more accurate picture, more appropriate action.

If we turn to the conclusion of this brief article, we see the authors articulate a very different message. After running through the calculations that show, rather alarmingly, the amounts of the dispersant deployed by BP in their clean-up operation, 6 the authors offer these concluding reflections.

"No longer visible, the treated oil floats in those submerged transparent plumes, unimaged and hence largely unimagined. It may be that in the final analysis, the real role of the dispersant was to remove the spill from the camera—and with it, BP from the glare of popular and political scrutiny. The circuit—of drill, spill, 'clean-up,' and drill again—relies on such images and occlusions, in which the production of invisibility forms an aesthetic chiaroscuro to all the tragic, sublime, and subaquatic flows. Our response must be to take what's out of sight and keep it well in mind." (Galison and Jones 2010, 51)

Now, clearly, what remains "out of sight"—beyond the reach of our technologies of visualization—is not merely a matter of the specific invisibilities mentioned here. There are many aspects of an environmental disaster such as this major oil spill that do not lend themselves, in principle, to visual imagery. These include, beyond the immediate causes of the disaster, the background context of our desperate need for the world's remaining and increasingly difficult-to-reach oil supplies. Also excluded from visibility are the long-term ecological consequences of the disaster, which will take years, if not decades, to determine. What remains "out of sight" insofar as our comprehension of environmental disaster is determined solely by visual images, is in fact the ultimate meaning of the disaster—its significance, its "message" about the world we live in. The ontological significance of the disaster cannot be captured or conveyed as visual image.

If the environmental disaster tells us something about our present world, something about its fundamental fragility or essential instability (purposely avoiding the technocratic concept of sustainability), this message is not articulated by means of visual rhetoric. Even a more complete picture of the disaster, enhanced by new technologies of the image capable of extending the visible surfaces, could serve only to function more effectively as self-correcting mechanism of the technocratic totality. Galison and Jones direct our attention *beyond* the surface effects and toward the specific invisibilities occluded by the powerful images that constitute a "second reality" of the disaster in our

<sup>&</sup>lt;sup>6</sup> "The real damage is deeper, out of the camera's eye. And in the Gulf spill, to the annoyance of BP, NOAA, and the Coastguard, chemical oceanographers have taken deepwater samples, mapped their distribution, analyzed their contents, and presented compelling evidence that vast undersea plumes of oil have formed . . . Most scientists believe that these submerged columns were produced by quantities of dispersant (Nalco's 'Corexit') injected at the wellhead. (BP reported applying one million gallons on the surface and another 721,000 gallons in subsea locations, but independent analysis of Corexit depletion estimates that another an additional 965,000 gallons were deployed in unreported operations.)" (Galison and Jones 2010, 51)

Age of Information. In order to reach the level of ontological inquiry—questioning the fundamental understanding of reality that determines our world as one in which environmental disaster is recognized as essential possibility (or inevitability)—it will be necessary to interrogate this "second reality" in which the empirical disaster gets doubled up as media event. We will have to make a second step, beyond the specific invisibilities identified by Galison and Jones (those aspects that lie outside the present range of our technological capacities for rendering visible), to recognize the generic invisibilities (which cannot, in principle, be captured as visual imagery) that structure our understanding of being and our relations to nature. This is the step we have designated as ontological inquiry, and have sketched out here in very preliminary ways: intending first of all to "motivate" such an inquiry by pointing—in advance, as it were—to its practical implications. Not to say that a new approach to the problematic will allow us to solve all our problems, but to open up a realm, an "order of being" in which solutions will ultimately have to be sought, in which the environmentalist problematic will ultimately have to be inscribed.

## **Pragmatic Implications**

The reflections offered by Galison and Jones are noteworthy for two reasons: first, as we have emphasized above, for their recognition that the surface imagery of disaster necessarily leaves out everything that eludes our technologies of visibility (from undersea oil plumes to long-term ecological consequences.) Secondly, and already implied by this, they direct our attention not only toward those "specific invisibilities" that lie below the surface images, but toward the very fact that the image of disaster as technological construct. This is, once again, not to claim that the image is false or intentionally misleading (though it may indeed be, in the ways suggested by these authors); to say that

<sup>&</sup>lt;sup>7</sup> The authors whose reflections we have been following here refer to Michel Foucault in order to articulate one aspect, at least, of the complex relations between the visible "surface effects" and the underlying and invisible "reality." Referring to the name of the oil rig that exploded, initiating the spill, they write: "But that prophetic name [Deepwater Horizon] demands that we keep scanning the darkening horizon of deep water, and calling for the nonimages that are *implied by the visibility* only because their *invisibility* is part of a system in which the seen is supported by the unseen. Just as Foucault would have parsed 'Don't ask, don't tell' as a classic instantiation of how what can be said is intimately related to what cannot be said (both controlled and dispersed by internalized modes of power), so the systems of what can be made visible are intimately tied to what cannot." (Galison and Jones, 51) Here they come close to recognizing that certain aspects or dimensions of the problematic – the ontological order, for instance – cannot in principle be visualized. And we might easily read into their reference to Foucault a recognition of the ontological significance of this invisibility, these nonimages that somehow determine, ir are intimately linked to, what can be visualized. At the beginning of his lecture course at the Collège de France in 1983, Foucault calls more explicitly for a general inquiry into the ontological arrangement that structures our reality. Referring to a philosophical direction he discerns in Kant's essay on the Enlightenment, Foucault writes: "This other critical tradition does not pose the question of the conditions of possibility of a true knowledge; it asks the question: What is present reality? What is the present field of our experiences? Here it is not a question of the analytic of truth but involves what could be called an ontology of the present, of present reality, an ontology of ourselves." (Foucault 2010, 20) The present communication has pointed to another motivation for such an inquiry into the reality we inhabit, the event of environmental disaster.

the image is a technological construct, produced by the various types of cameras and satellites and imaging technologies involved, and by the political and corporate and sociological forces that have developed and deployed these technologies, is to recognize that the image of environmental disaster functions as part of a totality of technological devices and relations. Again, these range from the novel "live web-cam feeds" from the ocean floor to the orbiting satellites and, perhaps most important of all, the internet which makes it all available to a concerned, enthralled or benumbed public. The technological image functions as part of a technological totality.

In shifting attention toward the formation, construction or production of the image of disaster, Galison and Jones pointed toward the inevitable lacunae or blind spots, and suggested that a more complete picture would or could have very different pragmatic effects—that is to say, a more complete, more accurate picture could elicit very different responses from the public. This can hardly be gainsaid, and yet our close reading of their article has emphasized the necessity of a second step—beyond the surface images, and then beyond the specific invisibilities left out of the picture—in order to open up a "deeper" pragmatic ground outside of or anterior to the technocratic framework. Indeed, the "chiaroscuro" logic of their analysis, recognizing that the very visibility of the surface images effectively occludes all other aspects of disaster, can be applied as a second level. The "positivity" of the technocratic framework—whose objects are measurable, calculable, open to scientific scrutiny and technological intervention—functions to occlude the type of analysis sketched out in this study. The effective working space constituted within the operative framework of environmentalism blocks from view the "deeper" pragmatic ground addressed by ontological inquiry.

This deeper pragmatic ground is accessible only by means of an ontological inquiry. That is to say, by means of a more radical questioning of the structure of our reality, the fundamental configuration of *the world* we inhabit, a new conceptual approach to the environmentalist problematic becomes possible. Rather than hoping for a more or less complete image of disaster to emerge, as a technological construct functioning in a technological totality—functioning, indeed, as a means of "critique" or self-correction of the system of relations that gives rise to environmental disaster as such—this ontological inquiry would direct attention, and *response*, toward this underlying "reality," this system of relations, this fundamental configuration of the world we inhabit.

Now, needless to say, no miracle cure emerges when we begin to rethink the environmentalist problematic in these terms. To be sure, the *Seinsgeschichte* [history-of-being] perspective outlined at the beginning of this study does situate our present Information Age as the culmination and critical turning point of the history of ontological epochs (ancient Greek, medieval Christian, modern scientific, etc.) that have constituted "reality" in different ways across the grand historical sweep of the West. In doing so, this perspective situates our present epoch as a *transitional period* of unprecedented

ontological-historical importance. Now, to recognize the transitional character of our present ontological order is to recognize the essential fragility of our present world set-up. A major environmental disaster, whether an oil spill or nuclear meltdown, can serve as an "ontic clue" (to borrow a term from Heidegger once again) that points to the essential fragility, the ontological instability, of the reality we inhabit. It is here, I think, that the most important pragmatic implications of this kind of thinking emerge.

In the technocratic framework which is the natural home of the environmentalist problematic (that framework constituting a sort of generalized elaboration of the modern scientific worldview so as to include all social relations and in particular the "soft technologies" involved in governmental and legislative regulation of economic activities), the image of environmental disaster is meant to function as a mechanism of self-correction, by which "the system" responds to and adjusts to its own systemic threats and malfunctions. Even at this level, it is hard to claim, today, that the image is functioning properly—that it is "doing its job" in eliciting appropriate responses from the public or from governmental, legislative or corporate decision makers. Thus the critique of the "surface imagery" of disaster offered by Galison and Jones is entirely appropriate. But we can also follow the trajectory of their thinking a bit further, perhaps in a more radical direction: to keep in mind not only what is left out of the picture, but what is necessarily occluded by the very nature of the environmental disaster image qua technological construct. Namely, that is, the fundamental ontological configuration of "our reality." In doing so, the pragmatic implications—the very meaning of response and the strategies of environmental activism—shift radically. Instead of hoping for a systemic self-correction, a reprogramming of governmental regulation of certain corporate practices, offshore drilling for example, or the oil-extraction industry's own internal adjustment spurred by costly mishaps, ontological inquiry points toward a different realm altogether—essentially "invisible" since it lies beyond the technocratic framework.

If the etiology and the tracing of root causes of environmental disaster go back to the ontological dimension in which our basic conception of reality is forged, then our response, too, must be worked out in this realm. Not by imposing some new ontological arrangement, under the rubric of sustainability, for example, upon being itself. This is precisely what Western thought, and especially its modern scientific and technocratic culmination, has always attempted to do! In rethinking the environmentalist problematic from an ontological perspective we can recognize the possibility of a fundamental adjustment of the basic relation between consciousness and reality (or between thought and being, to put it in traditional philosophical terms.) To recognize that such an adjustment, perhaps as subtle as it is radical, is not only necessary but also possible (!)—is to catch sight of a new realm of action. What we must hope for and work toward is not a system-wide self-correction of the functioning technocracy, but a new relation to reality as such, a new way of being. If we cannot "ontologically fix" our world-system which is increasingly prone to breakdown, we can, in principle, respond to the new *order of being* 

as it emerges: not by imposing our technological will upon it, but by accepting the responsibility it will assign to us.

Whatever "technical arrangements" will be necessary, (and they are of course many) regarding our actual existence in the world as human beings, will have to be informed by this underlying ontological responsibility. A new configuration that defines our place in the world as responsible beings—as beings that respond to the manifestations of being—will surely have to engage all those practical realms that shape our experience of what we call reality. Our political and economic arrangements, our basic social relations, our ways of growing food and building buildings—and our reliance on external energy sources—will all have to be re-thought and pragmatically re-worked in ways determined not by the reigning ontological technocracy, but by response to the new and multiple configurations of being as they emerge. Hardly utopian, this thinking points to the sobering tasks that will be assigned, or are already assigned to us insofar as we perceive the environmental disaster as clue—or perhaps as command—that opens up a new relation to being, a new realm of responsibility, and new forms of action.

## References

Foucault, Michel. 2010. *The Government of Self and Others: Lectures at the Collège de France 1982—83*. Translated by Graham Burchill. New York: Palgrave Macmillan. [Originally published in 2008.]

Graetz, Michael J. 2011. *The End of Energy: The Unmaking of America's Environment, Security, and Independence*. Cambridge, Massachusetts: The MIT Press.

Galison, Peter, and Caroline A. Jones. 2010. "Unknown Quantities." *ARTFORUM* XLIX(3): 49-51.

Heidegger, Martin. 1977. "The End of Philosophy and the Task of Thinking." *Basic Writings*, edited by David Farrell Krell. New York: Harper & Row [Originally published in 1966.]

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