

## Why I Am a Presentist

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Both geologists and historians study the past, but they have divergent views of the present. Geologists are unambiguously presentist. They believe that the observable present is a crucial resource in understanding the past, because in the observable present we can see and study the processes that have occurred in the unobservable past.<sup>1</sup> For geologists, it is largely uncontroversial that the past not only can but should be interpreted with reference to the present.

For historians, our relation to the present is more ambiguous, but generally we are anti-presentist. While the situation may be somewhat different in Europe, Anglophone historians tend to view the present with distrust. We believe that the past must be approached on its own terms, and excessive reference to the present tends to impede this approach. Presentism is also associated with triumphalism and Whig history, both generally taken to be problematic, if not anathema, by professional historians. To call a work “presentist” is, for many historians, to critique if not entirely to reject it.

To some extent this contrast maps the divergence between the natural sciences and the humanities, between causal and interpretive explanation. The natural sciences presuppose the existence of laws of nature, and therefore that we can infer relationships, past or present, or between past and present, based on those laws; among natural scientists the claim that there are such laws is essentially taken as axiomatic.<sup>2</sup>

For humanists and social scientists, this is far more complex and contested territory. While social scientists, philosophers, and some sociologically-oriented historians (mostly in Europe) have at times aspired to finding natural laws of human affairs, for the most part humanistic scholars today reject that aspiration; this is certainly the case in the United States. Human affairs are so complex as to defy generalization, many of my historical colleagues would argue. Some would go so far as to suggest that

<sup>1</sup> Traditionally geologists were mainly concerned with using the present to interpret the past, but with concerns about the human impact on the environment, increasingly they also look to the past to better understand human impacts in the present.

<sup>2</sup> Whether they should be taken as so is of course debatable. On this, see the classic work of Nancy Cartwright (1983 and 1999).

because human interactions are highly specific and context-dependent, any attempt at close comparison does a disservice to the situations under discussion.<sup>3</sup>

There is, however, more than one way to be a presentist. Many years ago, Stephen Jay Gould made this point about geology; a parallel argument may be made about history. I argue that there are several kinds of historical presentism, at least one of which is unavoidable, simply because we live in the present and are motivated by the conditions of our own lives. I call this form of presentism “motivational presentism” and argue that it is a good thing, because hiding our motivations hamstrings us intellectually and stylistically, isolates us from potential audiences, and undermines our ability to speak persuasively about the value of our work.

### Uniformitarianism in Geology

In one of his most famous articles, paleontologist Stephen Jay Gould criticized his colleagues’ understanding of what it means to be a presentist, or, as geologists call it, a uniformitarian (Gould 1965; see also Hookyaa 1963; Hubbert 1967; Shea 1982). Often glossed by the slogan “the present is the key to the past,” uniformitarianism was said to be geology’s guiding principle, as well as a major intellectual contribution of geologists to scientific thinking in general. But Gould distinguished between two forms of uniformitarianism – substantive and methodological – and argued that they were two different things.

*Substantive uniformitarianism* (he held) is the view that in geology, as in Aesop’s fables, slow and steady wins the race. While the scale of geological phenomena – the uplift of mountains, the displacement and folding of great masses of rocks, the remarkable disappearance of huge numbers and varieties of fossil species – might superficially seem to demand catastrophic events to explain, this is not actually so (or so geologists traditionally held). The vast changes observed in the stratigraphic and fossil records can be explained by the steady accumulation of modest impacts and small effects; recourse to large-scale, dramatic, sudden, and catastrophic events is not required. Following an Occam’s (or more properly Ockham’s) razor of sorts, many geologists, particularly in nineteenth-century Britain, concluded that if catastrophic events were not required, then they were not to be invoked. The argument for gradualist explanation was famously made by Charles Lyell in his *Principles of Geology* of 1830–33, and then still more famously applied by Charles Darwin to explain the origin of species by natural selection. This in turn influenced generations of geologists to do the same in explaining other phenomena.

<sup>3</sup> I write here primarily from personal experience having spent the past 15 years in a U.S. history department, and lectured in colloquia at many others. Few of my colleagues would discuss their anti-presentism explicitly in their books and papers, because the anti-presentist presumption is sufficiently taken for granted as to obviate articulation or defense. For one unusually explicit (and in some ways interestingly ambiguous) expression of anti-present concern, see Richard White (2011), discussed further below. On the contrast between (ostensibly) universal laws of nature and socially situated laws of men, see Tal Golan 2004.

While it had not always been the case before, after Darwin gradualism became most geologists' default assumption, particularly in the Anglophone world (Rudwick 2010).

The problem with substantive uniformitarianism, Gould argued, is that it is wrong. Logically, something might not be necessary yet still occur; unnecessary is not impossible or unknown. In essence, Gould was arguing that the past was under-determined by the present: perhaps one could explain the observed geological record by the steady accumulation of small changes, but that did not prove that it had developed that way. Moreover, the general principle of taking gradualism as a default position – a starting but not necessarily an ending point – transmogrified (particularly in North America in the early to mid-twentieth century) into a sort of fear and loathing of catastrophes and a disdain for colleagues who argued in their favor (Oreskes 1999; Brysse et al. 2012). Catastrophes, and their advocates, came to be viewed in some geological circles as bordering on unscientific.

This was illogical. The question should never have been: Are catastrophic explanations to be avoided on principle? The question should have been: Is there convincing evidence of sudden change, either in the present or in the past? Gould argued that the answer to the latter question was yes, so as a factual claim, substantive uniformitarianism is incorrect.

Since the 1960s, Gould's position has been well confirmed. Large quantities of data now support the conclusion that the history of our planet is not exclusively characterized by small, steady change, but by sudden and violent alteration as well. The Earth is periodically hit by large meteorites, and at least one of these played a significant role in the mass death of dinosaurs and other species at the end of the Cretaceous period (Alvarez 1986 and 1987; Koeberl 1996; Toon et al. 1997; Smit 2002; Culver 2003; Cockell et al. 2010). Massive volcanic eruptions have disrupted the climate, and at least one of these – the Toba eruption circa 70,000 years ago – has played a significant role in human evolution (Rampino and Self 1993). Magnitude 9 earthquakes can and, as we have recently witnessed, do trigger tsunamis that can re-shape coastlines and alter the course of history.<sup>4</sup>

In hindsight it seems that geologists were wrong to think of the question in either/or terms; geological history appears to be a matter of both/and. A sensible starting point – the observation that small changes can sum to large effects – became the peculiar claim that all geological phenomena were necessarily the result of the accumulation of small changes and that the invocation of dramatic events was inherently problematic.

But even at the time Gould was writing – before the discoveries of Iridium anomalies at the Cretaceous-Tertiary boundary, the analysis of Toba, and the tragic events surrounding Fukushima – Gould was slaying an already injured if not quite slain foe. When I attended university in the 1970s, none of my professors denied that there had been catastrophic earthquakes, volcanic eruptions, and large meteorite impacts,

<sup>4</sup> <http://www.xmarks.com/site/earthquake.usgs.gov/earthquakes/eqinthenews/2011/usc0001xgp/> (last accessed 26 July 2013).

some of which had left lasting geological legacies. Moreover, given the length of geological history, the chance that the present was representative had to be somewhat slim. The idea that the present was key to the past could only be true in some less exacting way. That way was closer to what Gould called *methodological uniformitarianism*.

Methodological uniformitarianism, Gould suggested, was the belief in the time and space invariance of natural laws. This, he claimed, belonged “to science as a whole and . . . [was] not unique to geology,” because without it, no experiment, no observation, no thought-process, would have external validity. In the United States in the mid-twentieth century, this was hardly controversial: virtually all physical scientists would have accepted as obvious the presumption that there are laws of nature and that scientists try to find them and interpret observed phenomena according to them. What *was* controversial was Gould’s claim that uniformitarianism amounted to nothing more than an explicit articulation of this widespread and broadly shared presumption, and therefore had nothing special to do with geology.

On the other hand, if geology lacked laws, then current conditions might indeed lack external validity, and a geological description of any time or place would be just that, lacking relevance to any other time or place except insofar as prevailing conditions constrained what came next. Geological history would be a form of history and not a branch of *science*. When I was in university and graduate school there were faculty, particularly in geophysics and geochemistry, who criticized traditional geology on just this point. As I’ve argued elsewhere, the growth of geophysics and geochemistry in the twentieth century was driven in part by the view that growth in these sub-fields would help to make geology “scientific,” where that term was understood in part as meaning more nomological (Oreskes 1999; see also Oreskes and Doel 2002).

Gould’s article triggered much productive discussion in geological circles – particularly about the ways in which past scientific cultures may condition current scientific practice – a discussion that was impactful for me as a budding historian. But Gould was wrong in one respect that is pertinent for thinking about methods and aims in history, for thinking about how and why we write history.

Methodological uniformitarianism, as understood by twentieth-century geologists, was not simply the belief in the invariant laws of nature. That is not a methodological principle, but an ontological claim, and geologists were not so thick as to confuse the two or so cosseted as to think that belief in natural laws was peculiar to their science. Methodological uniformitarianism was, rather, a form of practice and a guide to action. It was an idea about how to *do* geology. In this sense Gould was right that it was a methodological principle but wrong about what principle it was. The latter was that, by and large, the best way to do geology was not laboratory experimentation, because it was vexingly difficult to capture the scale and magnitude of geological forces in the laboratory (Newcomb 1990; Oreskes 2007). Nor was it to theorize broadly, because there were indeed more things in heaven and earth than dreamt of in our philosophies. It was to go outside and *look*. It was an injunction to go to places where one could observe geological processes in action and compare their effects with the remains of

the past. If past and present products were very alike, then perhaps past and present processes were alike, too. In short, uniformitarianism was a *comparative methodology*, designed to enable one to use the present to interpret the past. It was distinct from what one generally learned in math, physics, and chemistry, and even most biology classes, because above all, it was an injunction *to go outdoors*.<sup>5</sup> It was a directive about how to do geology and where to do it.

This aspect of geology, as Martin Rudwick has recently emphasized, linked geological history to human history, with their shared emphasis on finding and interpreting physical remains (Rudwick 2010). As nineteenth-century geologists increasingly believed in their ability to “read” the past through rocks and fossils, they also came, particularly under the influence of Lyell, Darwin, and others, to believe that they could read the present, too, through direct observation of it.

### Presentism in history

Historians have a problem that is in some ways the inverse of uniformitarianism in geology: the problem of presentism. We might call it anti-uniformitarianism. For just as geologists have been taught to trust the present as an explanatory resource, historians have been taught to suspect it. This is admittedly over-simplified. Historians of course recognize that past and present may bear resemblances, some of which may be of more than passing interest, and that some institutions and activities – the Catholic Church, for example, or prostitution – have proved highly enduring. But we tend to stress differences more than similarities – change over time more than persistence – seeing each historical period and event as unique, with its own particular origins and explanations. We are quick to note that enduring institutions endure in part because of their capacity to change. Most important, we tend to believe that over-reliance on comparisons with the present will lead us to fail to understand the past on its own terms. While perhaps overstating the case slightly, we might say that whereas reference to the present, for most geologists, is viewed as how to do geology right, reference to the present, for most historians (at least nowadays) is viewed as how to do history wrong.

While the epistemic positions of geologists and historians are thus inverted, I would suggest that the justification for both positions is the same: the worry that incorrect methods will lead to incorrect results. Both geologists and historians wish to understand the past, but they have come to opposing conclusions about the role the present can and should play in facilitating that understanding. Both groups carry anxieties about exceptional explanations, but they are opposing anxieties: for geologists, an anxiety associated with invoking exceptional explanations, for historians, an anxiety associated with not invoking them.

<sup>5</sup> On the role of outdoor field work in geology, see especially Rudwick 1985, Oldroyd 1990, and Secord 1990.

These concerns are not misplaced, since faulty methods can surely lead to faulty results. Yet anxiety is rarely a good basis for good decision-making. So, following Gould, I believe it is useful to distinguish between *types of presentism*. Here, I borrow his two categories while introducing a third, what I label *motivational presentism*.<sup>6</sup> While both substantive and methodological presentism *are* problematic for historians – and we are right to eschew them – I believe that motivational presentism is not only inescapable, it is actually desirable.

*Substantive presentism* may be defined as the belief that the present is the key to the past, in the literal sense that the present is substantively like the past. If we were to believe this, then we could invoke current events to explain the past – but few contemporary historians would do this. Indeed, one of the rewards of historical work is the sense of time travel – even momentary transcendence – one feels when emerged in the documentary record of a time and place distinctly different from our own. Our predecessors, we have learned through our own investigations, carved their worlds differently than we do, worried about different problems than we do, and solved those problems in ways that often do not appear to us even to be solutions. In history of science this is particularly the case: it is a truism of our field that what counted as a scientific explanation in earlier periods might well not count today. (Think of imbalances of humours in medicine, of the harmony of the spheres in astronomy, or of geosynclines in geology). By current standards, some earlier scientific explanations hardly seem to be explanations at all.

The brains and bodies of our predecessors may have been similar to ours (although even that is arguable, given what we know about the impacts of nutrition and environmental stimuli on the development of neural networks, not to mention lead poisoning and endocrine disruption), but their lives were often not similar at all. As Richard White has recently put it, notably in a book about the United States in the late nineteenth century, “It is a mistake to make the past a place where people just like us think about things as we think about them now and do things just as we do them now” (White 2011, xxxiii). Any of us who has spent time in an archive would surely agree. It is our job, as historians, to relinquish the present – its assumptions, concerns, anxieties and pleasures – to find the assumptions, concerns, anxieties and pleasures of the past.

The role of archives brings us to what we might then call *methodological presentism*. Following the geologists, a methodological presentist would argue that if we wish to understand past events, we should study similar recent or current ones. The causes of the French revolution in the eighteenth century, might, on this view, be understood by studying the Maoist Revolution of the twentieth, or the Arab spring of the early twenty-first. As historians, we flinch at this suggestion. Egypt in the twenty-first century is very different from France in the eighteenth. We might allow that some similar forces

<sup>6</sup> Acknowledgments to Arthur Fine, *The Shaky Game*, whose concept of Motivational Realism underlies my argument.

and factors may have been at play, and that a comparative study of revolutions can be of considerable interest, but we would scarcely conclude that we could *understand* the French Revolution by studying the Arab spring, and we would almost certainly reject the idea that in order to understand the French Revolution we *must* study the Egyptian one. At best the Arab spring would provide a counter-part with which to compare and contrast, and therefore perhaps better appreciate the unique qualities of the French example.

Like the geologists, however, we follow a methodological principle that involves going and looking: in our case going to archives and looking at historical materials. Where geologists go outside, we go inside: inside the archives and through them inside the past. Into its documents, letters, photographs, and diaries, its collections of rocks, fossils, and skulls, its lab notebooks, instruments, and other material culture, and, more recently, its emails, websites, and on-line data-bases. We go into the past to understand it. So our anti-presentism, like geologists' uniformitarianism, is a methodological principle designed to open our minds and help us learn.

### The problem of Whig history

For Anglophone historians, methodological anti-presentism is closely tied to the question of Whig history. As a graduate student I was introduced to Herbert Butterfield's famous work, *The Whig Interpretation of History*, as the clearest articulation of what *not* to do as a historian. Butterfield exhorted the historian to act not "as a judge . . . [who] can lift up the fallen and beat down the proud . . . avenge the injured or reward the innocent," but more as neutral narrator (Butterfield 1965, 1 and 5). He condemned Whig history on many counts, but a major one was simply that it was bad history because it valorized judgment at the expense of understanding. The Whig, seeing triumph in the present and error in the past, tends to "refuse historical understanding . . . dividing the world into the friends and enemies of progress" (Butterfield 1965, 5).

It is quite possible, however, to compare the past to the present without assuming that the present is better (or worse, for the decline approach is also a presentist one), without telling a progress (or regress) tale, and without playing the role of avenger. It is also possible to understand how and why things happened, yet in the end still pass judgment, as do many historians of slavery, the Third Reich, or the American tobacco industry. Yet for many of us, what has been passed on from our research advisors is not just that Whig history is bad history because it is bad history – which is, after all, a tautology – but *because* it is presentist, in the sense that Butterfield defined: "It is part and parcel of the Whig interpretation of history that it studies *the past with reference to the present*" (Butterfield 1965, 2; emphasis added).

While Butterfield may have condemned the strategy of studying the past with reference to the present because it impeded understanding, leading to distorted, skewed, or inaccurate history, for many of us it has come to be seen as bad thing *in and of itself*.



For Butterfield, Whig history is characterized above all by an attitude in which the present is assumed to be better than the past, and past actors and actions are judged by whether they supported or inhibited progress towards that new and improved present. Professional historians do not need instruction on why such a stance is problematic, and in any case few of us would assume that the present is better than the past. This is also a major reason why many of us find amateur and practitioner history problematic, particularly in history of science: it often is whiggish to an extreme, looking for the predecessors who “got it right” and helped to build the path to our current truths. And it is a reason why some modern day political Whigs – typically but inaccurately called “conservatives” in America – dislike academic history, particularly U.S. history and Western Civilization: they want a progress tale and are angry at us for refusing to provide it.<sup>7</sup>

At minimum, most professional historians likely think that the present may be better in some ways and for some people, but worse in other ways and for other people. In my experience most professional historians in the U.S. see history not as a linear story towards a better human estate, but a tale in which the very notions of progress and regress, were we to invoke them, would need to be defined in terms of progress and regress for whom? Virtually all professional historians reject inevitability: we know that there were times when other options seemed possible and desirable, and those who desired them were not necessarily knaves or fools. So presentism is conflated, if not equated, with Whiggism, triumphalism, moralism, teleology, anachronism, and the general belief that the present is superior to the past. Presentism is bad history. But need it be? Is it possible to be a good presentist?<sup>8</sup>

Even Butterfield recognized that the historian did not stand apart from the past that he (or she) wrote about.

If history is . . . something like the memory of mankind and represents the spirit of man brooding over man's past, we must imagine it as working not to accentuate antagonisms or to ratify old party-cries but to find the unities that underlie the differences and to see all lives as part of the one web of life. The historian trying to feel his way towards this may be striving to be like a god but perhaps he is less foolish than the one who poses as god the avenger. (Butterfield 1965, 2)

<sup>7</sup> See for example [http://www.nas.org/articles/why\\_mitch\\_daniels\\_was\\_right/](http://www.nas.org/articles/why_mitch_daniels_was_right/) (last accessed July 26, 2013) and <http://chronicle.com/blogs/innovations/epic-battles-2/33007> (last accessed June 18, 2013).

<sup>8</sup> A note of clarification may be in order. I am sometimes considered an “advocate” for climate science and the truth of its conclusions, because I have publicly stressed the fact of a scientific consensus on the existence of anthropogenic climate change. But consensus is neither truth nor proof, and I have also made it clear that I do not believe that we know (or ever could know) that scientists’ conclusions are positively true (Oreskes 2004). My argument, rather, is that scientific evidence should provide a critical basis for decision-making in the domain of answering questions pertaining to the natural world. That is to say, I believe what should be a tautology, but which under current political and cultural conditions is not: that scientists are the best arbiters of scientific claims.



“The unities that underlie the differences.” “To see all lives as part of the one web of life.” Perhaps the great Butterfield was more of a presentist than we have allowed! So Whig history is *not* equivalent to presentism. After all, is it not possible to acknowledge the concerns of the present and be motivated by them, without succumbing to the view that history is a tale of triumph leading to that present?

Of course it is, and in recent years historians have increasingly acknowledged this. Drawing in part on Marxist theory, feminist epistemologists in particular have argued that our standpoints – including not just sex and gender, but race and class as well – need not be obstacles to understanding, but can assist it; diverse social vantage points can provide usefully diverse intellectual perspectives (Keller 1984; Harding 1986; Longino 1990; Keller and Longino 1996; Haraway 1990; Solomon 2001; Wylie 2002). But whether we are Marxists, feminists, post-modernists, or those who try to avoid being “-ists”, our vantage point has a temporal dimension, and that is, inescapably, the present.

We approach the past from the present, and we choose our topics because of some thing – some interest, some aspiration, some concern, some worry – that exists here, now, in this place and at this time. It is hardly a surprise that history departments in Canada often include scholars of Canadian history, but not of Belgian history, and vice versa. In the United States we teach reams of courses about the American Civil War, but only a few about the British. My former home department, 30 miles from the U.S. southern border, includes historians of Mexico, but not of Canada, and we more or less ignore Australia, New Zealand, and the South Pacific island nations, although those countries, of course, consider their own histories to be of interest.

What matters to us about the past has everything to do with who we are, where we live, and what we think is important – to us, here and now, in the present. Our motivations are inescapably presentist. Thus, to qualify the deliberately provocative title of this paper, I am a motivational presentist, and I believe all historians are.

We might argue that we pursue history simply because it is interesting, but that is a value in the present: that history interests and entertains us. We might argue that we wish to understand the arguments about the U.S. Constitution and the first amendment to it that Thomas Jefferson, James Madison, and American founding fathers offered, because we think those arguments have been misinterpreted or misused in current American political debates about the proper relationship between church and state; that is a value in the present. We might think that studying the history of science enables us to better understand how scientists have been able to produce reliable knowledge about the natural world; that is a value in the present, too. Or we might simply wish to finish the book we are currently working on because we know we need it for tenure – to keep our jobs and enable us to continue to pursue our profession. History serves the purposes of the present, whether we admit it or not.

Skeptical readers may think that I am making much ado about nothing; no reflective historian denies that we live in the present and that our choices can’t help but be influenced by the world we live in. Moreover, this is scarcely an original argument; indeed, it seems to be one that historians revisit in each generation (see, as just one

example, Hindle 1984). Yet it seems particularly to vex historians of science, perhaps because science itself is so persistently presentist – continuously rejecting its own past – so persistently triumphalist – and so persistently *whiggish* – as each new scientific discovery is cast by its discoverers as both more novel and more beneficial than skeptical historians might concede.

Those skeptical readers may argue that if our goal is to transcend the present – and particularly to transcend the progressivist narrative that dominates within the scientific community – then we are right to be anti-presentist to the extent that we are able to be. They may also wonder if it is really necessary to fuss about motivations. I think that it is, because the confusion between motivation and methods has confused our understanding of the value of history and undermined our capacity to speak to that value.

Methodologically, it is right to begin with the default assumption that the past is different from the present; we should not assume that insights gleaned in the present have relevance to the past. We should be open to, and actively seek, the different *weltanschauung* that make the past such an interesting, informative, and illuminating place to visit. But we should not be ashamed to admit that we study the past because it is, in some way, shape, or form, useful to us in the present, because it is this use – this sense of *value* – that is crucial to answering the question of both how and why we write history.

*We write history because we believe it is of value to do so.* We believe it is of value to us – living here, today, at this moment and in this place. If we deny this (really rather obvious) fact for fear of being labeled “presentist,” we deprive ourselves of the most important argument we have for why we do what we do, why our universities and funding agencies should underwrite it, and why our students should be required to study it. It is not necessary to make the case for monetary value – there are many forms of value other than pecuniary – but it *is* necessary to have a sense of value if we are to ask others to support us. And it is necessary to be able to articulate that sense clearly, and not disingenuously.

History is cheap compared to many academic disciplines, but it is not free. Someone has to pay our salaries, support our grants, and fund our students. Someone has to finance the libraries and archives on which we depend, something that we can no longer take for granted at many North American universities. (A Vice Chancellor of research at a leading research university once asked me why historians needed to go to archives.) If we do not have a compelling argument for the value of history, then how can we expect those around us to support it? The denial of our connection to the present is not only disingenuous, it also denies us of our most important argument for social, institutional, community and familial support.

Many of us are afraid to speak to the present for fear that it will distort, corrupt, or otherwise undermine our intellectual integrity as historians. *We are afraid that our motivations will spill over into our methods.* This is a legitimate concern, but one that can be addressed to a certain extent by being aware of it. As Allan Brandt wrote when noting the close relationship between medical history and social concerns about the

quality and delivery of medical care, “to recognize that contemporary events influence the selection and framing of historical problems is not to suggest that such studies need be presentist” (Brandt 2004, 463).

Recognizing motivating elements in the present may actually help us to highlight how present concerns affect how we view the past, and perhaps write more nuanced, multi-dimensional, and self-aware history. It can also provide motivation for ensuring that documents are adequately preserved, something that many of us might otherwise want to leave to librarians and archivists, who are typically overworked and may or may not appreciate the value of these documents to the extent that we do.

Consider one example close to my own research. Stanton Glantz, a statistician-epidemiologist, was motivated by his commitment to tobacco control to ensure that a huge trove of documents on the history of the tobacco industry was adequately catalogued and made available to other scholars through the Legacy Tobacco Documents Library.<sup>9</sup> It turns out these documents are far from only about tobacco – they are a huge resource pertinent to the cultural, political, and business history of the twentieth-century United States; they also include many materials relevant to media studies and communication. And they have been crucial for my own work with Erik M. Conway on the history of anti-scientific disinformation campaigns beginning with tobacco in the 1950s and continuing into debates about anthropogenic climate change today. In this work, Conway and I have had to acknowledge our own motivation in concern for the impact of anthropogenic climate change on people and ecosystems around the globe, which in turn has forced us into deeper engagement with colleagues over the relativistic premises of much contemporary work in science studies (Oreskes and Conway 2012; Oreskes 2013).

There is a second reason why it is important that we acknowledge our presentist motivations. Denying our connection to the present, we place ourselves outside of current conversations and leave them to journalists, who generally know far less about our subjects than we do, and to social and natural scientists whose assumptions we rarely fully accept and sometimes heartily reject. How often do we cringe at histories of science written by scientists or journalists, without acknowledging that we have ceded the field to them?

In our refusal to engage the present, we have left a swath of territory open to those who are quite happy to occupy it, but rarely do so in ways of which we approve. I am not just speaking of popular books, although there is surely a large opportunity for professional historians to write successful ones and improve both our financial standing and demonstrate the intrinsic interest of what we do. I am also talking about addressing substantive social concerns: about the reliability of scientific knowledge, the role of expertise, or the best way to judge contested questions like the hazards (or not) of cellular telephones, genetically modified organisms, and high voltage electricity lines,

<sup>9</sup> Cf <http://legacy.library.ucsf.edu/> (last accessed July 26, 2013); see also Glantz et al. 1998.

or whether abortion increases the risk of breast cancer. Our fear of being labeled presentist stands in the way of our engaging in significant debates in the world we live in, debates to which we have something distinctive to add. Moreover, one does not have to be working in the present to contribute usefully to present conversations: histories of ancient, mediaeval, renaissance, and early modern science, not to mention of the Enlightenment, have much to say to the present about evidence, expertise, proof, persuasion, and the durability (or not) of scientific knowledge.

Just as geologists can recognize the difference between substantive and methodological uniformitarianism, so can we distinguish between our methods and our motives. We can be motivated by the present – engaging in the world around us and participating in contemporary conversations – and still be sensitive, acute, and nuanced historians. An appropriate and mindful presentism may even help us write better, more interesting, and certainly more lively history, as we let go of some of the academic anxieties that get in the way of the simple pleasure of telling a good story, made that much better by the fact that it is actually true.

While our anti-presentism has some legitimate intellectual basis, it also has serious social costs. Our reluctance to engage with contemporary questions and concerns, coupled with our stylistic tendencies toward the dour and unreadable, has radically reduced our potential audiences. In stubbornly and steadfastly refusing to give people – even educated people – even a modicum of what they want, we abandon to journalists the bookstore territory that should be ours, and we perpetuate in academic libraries the survival of the unread.<sup>10</sup>

I am not suggesting that professionals become amateurs or abandon the critical cast that defines scholarly work. Nor am I suggesting that we become advocates for particular positions, which is a related but different question.<sup>11</sup> And I am certainly not

<sup>10</sup> It is striking that in the rather comprehensive volume, *Positioning the History of Science*, not one author takes as his or her title topic the question of the audience for history of science (Gavroglu and Renn, eds. 2007). On the survival of the unread, see Boorstein 1989, and discussion at <http://www.nytimes.com/books/98/09/06/specials/boorstin-historian.html> (last accessed July 26, 2013).

<sup>11</sup> Allan Brandt (2004) has eloquently laid out some of the advantages and disadvantages of historians taking explicit advocacy conditions by examining a recent debate in which some did. My view, I believe tracks his, but perhaps merits further clarification. I believe that historians, like scientists, may find that their work leads them, by its very nature, into a concern for the impacts of certain human activities, as, for example, nuclear physicists in the wake of Hiroshima and Nagasaki became advocates for arms control, or Carl Sagan became a spokesman against the concept of a “winnable nuclear war” after his discoveries related to nuclear winter. In these cases, their specific scientific work gave these men particular expertise directly related to the issue at hand, expertise that lay audiences lacked. Thus I believe that it was entirely appropriate for these scientists to speak publicly as to how their research results revealed or underscored threats to public health, safety, and/or well-being.

In the current debate over anthropogenic climate change, climate scientists have been divided over the degree to which they should become advocates for action to slow or prevent such changes. Following the example of Bohr or Sagan, one can argue that the results of modern investigations of the climate scientists have created conditions under which at least some of them can and should speak up in public about the threat of “dangerous anthropogenic interference in the climate system” (the term embraced in the United Nations Framework Convention on Climate Change). The key consideration here is that the scientific data do not simply indicate

suggesting that quantity of book sales is an indicator of quality. What I am suggesting is that we have circumscribed the world to which we speak and with whom we engage to an extreme and unnecessary degree, and this is both demoralizing to us as individuals and threatening to our prosperity as an academic field. After all, who among us lives and works in a department or program that feels fully institutionally secure?

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What is the value of history? There are many answers to that question, but one of them is surely that the past speaks to the present. If we return to Richard White's recent comment, he reminds us that it is a methodological mistake to *make* the past into something it is not, but this does not mean we cannot learn from the past, as indeed, White implicitly argues that we can when he notes "how much railroad talk in the late nineteenth century was similar to Internet talk" in the twentieth (White 2011, xxxiii). If we ask ourselves honestly and truthfully, why we study the past, I believe that many, if not most, of us would say with Jacques Le Goff that "in reality, the interest of the past is that it illuminates the present" (Le Goff 1996, xx). And what's so bad about that?

## References

- Alvarez, W. 1986. "Toward a Theory of Impact Crises." *Eos, Transactions of the American Geophysical Union* 67(35):649–658.
- Boorstein, Daniel. 1989. *Hidden History*. New York: Vintage Press.
- Brandt, Allan. 2004. "From Analysis to Advocacy: Crossing Boundaries as a Historian of Health Policy." In *Locating Medical History: The Stories and Their Meanings*, edited by Frank Huisman and John Harley Warner, 460–484. Baltimore and London: Johns Hopkins University Press.
- Brysse, Keynyn, Naomi Oreskes, Jessica O'Reilly and Michael Oppenheimer. 2012. "Climate Change Prediction: Erring on the Side of Least Drama?" *Global Environmental Change* 23:327–337. <http://www.sciencedirect.com/science/article/pii/S0959378012001215> (last accessed August 15, 2013).
- Butterfield, Herbert. 1965. *The Whig Interpretation of History*. New York: W. W. Norton & Company.
- Cartwright, Nancy. 1983. *How the Laws of Physics Lie*. New York: Oxford University Press.
- Cartwright, Nancy. 1999. *The Dappled World: A Study of the Boundaries of Science*. Cambridge: Cambridge University Press.
- Cockell, Charles, Christian Koeberl, and Iain Gilmour, eds. 2010. *Biological Studies Associated with Impact Events*. New York and Heidelberg: Springer.

that the planetary climate is changing, it also indicates that it is changing in a manner that is likely to be highly damaging in specific ways and that the primary drivers are human activities that could, at least in principle, be consciously modified. The human driver carries with it an ethical dimension, in part because future losses will fall on people and species who did not reap the benefits of the activities that caused them.

On the other hand, when physical scientists become advocates for particular political, social or economic interventions, such as population control, a carbon tax, or the expansion of nuclear power, they may overstep their expertise in ways that are inappropriate and unhelpful. Most real-life problems transcend academic disciplines, so it is, in my view, the rare case where a traditional scholar can claim to be an expert on pertinent *solutions*, unless he or she has adjusted his or her research program to become an expert in that topic. For a historian, this would typically mean becoming more of a social scientist, which, come to think of it, is not necessarily a bad thing.

- Culver, Stephen J. 2003. "Benthic foraminifera across the Cretaceous-Tertiary (K-T) boundary: A Review." *Marine Micropaleontology* 47:177–226.
- Fine, Arthur. 1996. *The Shaky Game: Einstein, Realism and the Quantum Theory*. Chicago: University of Chicago Press.
- Gavroglu, Kostas, and Jürgen Renn, eds. 2010. *Positioning the History of Science*. New York: Springer-Verlag.
- Glantz, Stanton A., John Slade, Lisa A. Bero, and Peter Hanauer. 1998. *The Cigarette Papers*. Los Angeles: University of California Press.
- Golan, Tal. 2004. *Laws of Men and Laws of Nature: The History of Scientific Expert Testimony in England and America*. Cambridge MA: Harvard University Press.
- Gould, Stephen Jay. 1965. "Is uniformitarianism necessary?" *American Journal of Science* 263: 223–228, <http://www.ajsonline.org/content/263/3/223.abstract> (last accessed June 28, 2013).
- Le Goff, Jacques. 1996. *History and Memory*. New York: Columbia University Press.
- Haraway, Donna J. 1990. *Simians, Cyborgs and Women: The Reinvention of Nature*. New York: Routledge.
- Harding, Sandra. 1986. *The Science Question in Feminism*. Ithaca: Cornell University Press.
- Hindle, Brooke. 1984. "A Retrospective View of Science, Technology, and Material Culture in Early American History." *William and Mary Quarterly* 41(3):422–435. <http://xroads.virginia.edu/~DRBR/hindle.html> (last accessed June 18, 2013).
- Hookyaas, Reijer. 1963. *Natural Law and Divine Miracle: The Principle of Uniformity in Geology, Biology and Theology*. Leiden: E.J. Brill.
- Hubbert, M. King. 1967. "Critique of the principle of uniformity." In *Uniformity and Simplicity*, edited by Claude C. Albritton, *Geological Society of America, Special Paper* 89:3–33.
- Hut, Piet, et al. 1987. "Comet Showers as a Cause of Mass Extinction." *Nature* 329:118–126.
- Keller, Evelyn Fox. 1984. *A Feeling for the Organism: The Life and Work of Barbara McClintock*. New York: W. H. Freeman.
- Keller, Evelyn Fox, and Helen Longino, eds. 1996. *Feminism and Science*. New York: Oxford University Press.
- Koeberl, Christian. 1996. "Chicxulub—the KT boundary impact crater: A review of the evidence and an introduction to impact crater studies." *Abhandlungen der Geologischen Bundesanstalt* 53:23–50.
- Koeberl, Christian, and Wolf Uwe Reimold. 2012. *Meteorite Impact Structures: An Introduction to Impact Crater Studies*. New York and Heidelberg: Springer.
- Longino, Helen. 1990. *Science as Social Knowledge*. Princeton: Princeton University Press.
- Newcomb, Sally. 1990. "Contributions of British Experimentalists to the Discipline of Geology 1780–1820." *Proceedings of the American Philosophical Society* 134(2):161–225.
- Oldroyd, David. 1990. *The Highlands Controversy*. Chicago: University of Chicago Press.
- Oreskes, Naomi. 1999. *The Rejection of Continental Drift: Theory and Method in American Earth Science*. New York: Oxford University Press.
- Oreskes, Naomi. 2004. "The scientific consensus on climate change." *Science* 306:1686.
- Oreskes, Naomi. 2007. "From scaling to simulation: Changing meanings and ambitions of models in the Earth sciences." In *Science without Laws: Model Systems, Cases, and Exemplary Narratives*, edited by Angela, N. H. Creager, Elizabeth Lunbeck, and M. Norton Wise, 93–124. Durham NC: Duke University Press.
- Oreskes, Naomi. 2013. "On the 'reality' and reality of anthropogenic climate change." *Climatic Change* 119:559–560, <http://link.springer.com/article/10.1007/s10584-013-0779-3> (last accessed June 30, 2013).
- Oreskes, Naomi, and Erik M. Conway. 2012. "Perspectives on global warming: A Book Symposium with Steven Yearley, David Mercer, and Andy Pitman." *Metascience* 21:531–559, <http://link.springer.com/article/10.1007%2F11016-011-9639-9> (last accessed July 17, 2013).
- Oreskes, Naomi, and Ronald E. Doel. 2002. "Physics and chemistry of the earth." In *The Cambridge History of Science, Volume V: Modern Physical and Mathematical Sciences*, edited by Mary, Jo Nye, 538–552. Cambridge: Cambridge University Press.

- Rampino, Michael, and Stephen Self. 1993. "Bottleneck in human evolution and the Toba eruption (Letter)." *Science* 262:1955.
- Rudwick, Martin J. S. 2010. *Worlds Before Adam: The Reconstruction of Geohistory in the Age of Reform*. Chicago: University of Chicago Press.
- Secord, James. 1990. *Controversy in Victorian Geology*. Chicago: University of Chicago Press.
- Shea, James H. 1982. "Twelve fallacies of uniformitarianism." *Geology* 10:455–460, <http://geology.gsapubs.org/content/10/9/455.abstract> (last accessed June 8, 2013).
- Smit, J. 2002. "The Fate of Planktonic Foraminifers Crossing the KT Boundary (Or Not): A Review." In *Catastrophic Events and Mass Extinctions – Impacts and Beyond*, edited by Christian, Koeberl and Kenneth G. Macleod, 204–205. Boulder CO: Geological Society of America.
- Solomon, Miriam. 2001. *Social Empiricism*. Cambridge MA: MIT Press.
- Toon, Owen B., et al. 1997. "Environmental Perturbations Caused by the Impacts of Asteroids and Comets." *Reviews of Geophysics* 35(1):41–78.
- White, Richard. 2011. *Railroaded: The Transcontinentals and the Making of Modern America*. New York: W.W. Norton.
- Wylie, Alison. 2002. *Thinking from Things: Essays in the Philosophy of Archaeology*. Berkeley: University of California Press.