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Sullivan, Shannon and Nancy Tuana, eds. Race and Epistemologies of Ignorance. Albany: State University of New York Press, 2007. 284 pp.

***Review Essay***  
**Susan Dieleman**

*Race and Epistemologies of Ignorance* (2007), edited by Shannon Sullivan and Nancy Tuana, and *Agnotology: The Making and Unmaking of Ignorance* (2008), edited by Robert N. Proctor and Londa Schiebinger, developed out of workshops at Pennsylvania State University, the former in 2004<sup>1</sup> and the latter in 2003.<sup>2</sup> Both anthologies grapple with ignorance as an important but hitherto overlooked and underdeveloped facet of epistemology. In *Race and Epistemologies of Ignorance*, the authors, working from multiple theoretical perspectives and commitments, examine “the complex phenomena of ignorance, which has as its aim identifying different forms of ignorance, examining how they are produced and sustained, and what role they play in knowledge practices” (Sullivan and Tuana 2007, 1), while the stated purpose of *Agnotology* is “to promote the study of ignorance, by developing tools for understanding how and why various forms of knowing have ‘not come to be,’ or disappeared, or have been delayed or long neglected, for better or for worse, at various points in history” (Proctor and Schiebinger 2008, vii). Although these volumes represent only the beginnings of sustained inquiry into the phenomenon of ignorance and how it relates to knowledge and its study, some common themes begin to emerge. Most notably, ignorance itself comes to be understood not just as the dark side of traditional epistemology, but as an integral aspect of knowledge and its study. The study of ignorance serves to reveal the multiple dimensions of power at work in practices of knowing, and can help to clarify the overlap between social and political institutions and structures with such practices.

While each of the two books considered here is excellent on its own, together they balance each other out and compensate for the other’s weaknesses to provide a superb entrée into and first attempt at theorizing those aspects of epistemology traditionally relegated to the shadows. More specifically, although both texts claim to focus on both theoretical interventions in and practical examples of ignorance, they do not both wholly succeed. In fact, each succeeds in the task opposite to the other. Whereas *Race and Epistemologies of Ignorance* focuses predominantly on providing careful, nuanced theories of ignorance and its production and maintenance, but is light on practical examples of ignorance that are likely to resonate with non-philosophers, *Agnotology* presents interesting and useful case studies that serve to flesh out those theories, even

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<sup>1</sup> See the workshop website at <http://www.psu.edu/dept/rocketethics/events/eei/index.htm>.

<sup>2</sup> See the workshop website at <http://www.bshs.org.uk/agnatology-the-cultural-production-of-ignorance/>.

though it is itself light on theory. Thus, these two books are wonderfully complementary and it can be up to the reader to decide which to read first, depending on their preferred approach. Those who prefer examples to introduce theory would do well to read *Agnotology* first, while those who prefer theory to be fleshed out with examples, should begin with *Race and Epistemologies of Ignorance*.

The distinction I suggest above likely is not surprising, in large part because the editors and authors contributing to each book come out of different (although certainly related and often overlapping) academic circles. *Race and Epistemologies of Ignorance* is edited by two professors of philosophy, and its contributors are overwhelmingly located in philosophy departments, whereas *Agnotology* is edited by professors of the history of science, and its contributors come from a somewhat more diverse collection of backgrounds, although they all share in common an interest in the history of science, from various backgrounds including philosophy, psychology, and journalism. These varied backgrounds are evident in the approach to and examples chosen to elucidate the phenomenon of ignorance in which they all share an interest. Here, I will examine the essays in each book, beginning with *Race and Epistemologies of Ignorance*, for the simple reason that it was published prior to *Agnotology*. The aim of this overview is to provide a clear picture of how each book complements the other to result in a pairing that provides an excellent first foray into this new topic, and would provide an excellent basis for a senior undergraduate or graduate course on topics in epistemology.

The essays in the first book, *Race and Epistemologies of Ignorance*, are intended to “critically examine practices of not knowing that are linked to and often support racism” (3). In other words, in this book, race specifically is understood to offer a window into thinking about ignorance, or to contextualize the examination of practices of not knowing. Or, cast in another light, race issues are explored in this text because they represent a – or possibly even the – fundamental form of ignorance. The six essays comprising the first section, “Theorizing Ignorance,” aim to develop theories that can explain why and how racialized ignorance is produced and sustained.

The section begins with the essay “White Ignorance” by Charles W. Mills, which is based on themes presented in his 1997 text, *The Racial Contract*. In this chapter, Mills theorizes the phenomenon of white ignorance in an attempt to “pin down ... the idea of an ignorance, a non-knowing, that is not contingent, but in which race – white racism and/or white racial domination and their ramifications – plays a crucial causal role” (20). He explores the ways white ignorance is manifest in and sustained by five dimensions of cognition: perception, conception, memory, testimony, and motivational group interest. Of these five dimensions, Mills’s treatment of memory and testimony are particularly noteworthy, in part because of their overlap with and assistance in elucidating other approaches and chapters in the text. Mills’s contribution promises to become a foundational text in further discussions and examinations of ignorance. Indeed, *The Racial Contract* is often credited as one of the first texts to identify ignorance as a topic worthy of investigation. As editors Sullivan and Tuana note, Mills’s original text is “an exception to the neglect of racialized ignorance” (2). The notable passage in the original text, quoted in the introduction to *Race and Epistemologies of Ignorance* as well as in many other places looking to tackle the issue of ignorance, reads as follows:

on matters related to race, the Racial Contract prescribes for its signatories an inverted epistemology, an *epistemology of ignorance*, a particular pattern of localized and global cognitive dysfunctions (which are psychologically and socially functional), producing the ironic outcome that whites in general be unable to understand the world they themselves have made” (emphasis added; quoted in *Race and Epistemologies of Ignorance*, 2).

The introduction of the phenomenon of ignorance in *The Racial Contract* as a topic worthy of investigation, and its further development in the chapter included in this collection, likely explains the appearance of an almost identical version at the beginning of the “Theorizing Ignorance” section in *Agnotology* as well. Those interested in either studying or teaching about the phenomenon of ignorance will find that Mills’s “White Ignorance” proves an excellent place to begin.

“Epistemologies of Ignorance: Three Types,” is Linda Martín Alcoff’s contribution to *Race and Epistemologies of Ignorance*, which usefully builds upon work already done in the area of feminist epistemology to elaborate a typology of ignorances. She suggests there are, broadly speaking, three types of epistemologies of ignorance. The first is derived from the situatedness of knowers, the second type builds upon the insights of standpoint epistemology, and the third type of epistemology of ignorance is a systemic type, according to which knowing(s) and unknowing(s) serve to differentiate the powerful from the powerless in relation to a specific area of knowledge. Although this third type overlaps with the previous two types of epistemologies of ignorance, in this case it is maintained (either actively or passively, or both in concert) by the structures and institutions of society for a specific reason, which will in turn vary according to the purposes determined by a society and the dominant and subordinate groups that inhabit it. Alcoff also makes the further, normative claim that traditional epistemology is not suited to unearthing and judging ignorance because it is insufficiently reflexive. That is, traditional epistemology does not pay sufficient attention to the “structural economic organization of society, its reigning paradigms, and the coherence between these paradigms and scientific methodology” (54). Only a more reflexive epistemology than is currently available, one that incorporates the insights of critical theory and allows us to identify “the social-structural context for the production of historical modes of perception that result in ignorance” (54), will provide the basis from which to judge ignorance. This philosophically robust claim of Alcoff’s, though likely to border on opaque for those unfamiliar with the work of Horkheimer or other critical theorists, sets up a thought-provoking position from which to continue reading this volume, particularly when considered alongside the other theoretical perspectives forwarded in the text. The tension that results, which is made particularly clear by reading both this and the following chapter together, is both the benefit and the challenge of the pluralist approach the editors pursue.

“Ever Not Quite: Unfinished Theories, Unfinished Societies, and Pragmatism,” by Harvey Cormier, comprises the third chapter of this anthology. In his essay, Cormier

cautions against an uncritical pursuit of theories of ignorance because, as he puts it, “No systematic study will reveal the structures of our foolishness” (73). Cormier suggests that this insight is made available by adopting a pragmatist perspective, which reveals that an uncaring or uncritical epistemology of ignorance is likely to invoke a problematic distinction between appearance and reality with its presumption that, with a better theoretical apparatus, it might be possible to see past appearances to reality and thereby correct practices of ignorance. In other words, realizing that truths are built rather than grasped requires us to discard the appearance-reality distinction for a distinction between less and more useful, which is tempered by a pragmatist fallibilism that limits what will be revealed by any theory of ignorance. Cormier echoes a point made by Alcoff, namely, that some forms of ignorance arise as a result of our situations and our situatedness. Yet he makes the more radical claim that this may very well negate the value of the project of theorizing ignorance, a claim worthy of further investigation. Although Cormier’s contribution to *Race and Epistemologies of Ignorance* focuses on debates within pragmatism at the expense of explaining his central point or continuing on to explore what other risks and assumptions might be revealed when examining the idea of epistemologies of ignorance from a pragmatist perspective, the warning he sounds is valuable nonetheless.

Alison Bailey’s “Strategic Ignorance” forms chapter four of *Race and Epistemologies of Ignorance*. In this contribution, Bailey offers an account of ignorance it would be hazardous to overlook: she suggests that ignorance can be wielded strategically by oppressed groups. This strategic or subversive use of ignorance is not captured in Charles Mills’s account of (white) ignorance because the latter is limited by its reliance “the logic of purity,” a term Bailey borrows from María Lugones. Social contract theory, on which Mills’s account of the Racial Contract depends, relies on this logic of purity because it is “intolerant of spatial ambiguity: it split-separates polities into white civilized space and wild savage lands occupied by nonwhites” (85). That is, the ignorance identified by Mills’s Racial Contract is characterized as an inverted epistemology that can be corrected by simply reinverting the epistemology. Bailey suggests that this is a problematic metaphor because it erases the possibility for strategic ignorance and resistant epistemologies, which is why she recommends turning to Lugones’s metaphor of “curdled logic” instead, which offers us “a more relational understanding of ignorance” (84) that requires us to think of ourselves as “curdled beings” (91). Bailey’s chapter uses Lugones’s work to offer an important reminder that ignorance itself is a complex phenomenon, transcending our traditional understanding of its nature and role, and that its study must be attuned to such complexities. This approach is carried on and enriched by the following chapter as well.

“Denying Relationality: Epistemology and Ethics and Ignorance,” by Sarah Lucia Hoagland, forms chapter five of *Race and Epistemologies of Ignorance*. The argument forwarded by Hoagland closely resembles that presented by Bailey, building upon the work of María Lugones to theorize ignorance. For Hoagland, it is the denial of relationality that contributes to problematic forms of ignorance. Relationalities, Hoagland argues, “are rendered invisible through an epistemology that presupposes autonomy and denies relationality between knower and known” (99). As a result, it is not

whiteness that is invisible because it is the norm, but rather white relationality and interdependence with peoples of color that white people are ignorant of. Hoagland argues that the ignorance that emerges from the denial of relationality can be challenged via “complex communication” and “playful world travel,” concepts borrowed from Lugones, because these take place outside of and challenge the dominant logic, which only ever reinforces its own status. She writes, “When there is engagement on terms not countenanced by the dominant logic, then relationality changes and so does who we are becoming” (110). Although Hoagland’s position is not as clearly communicated as the similar argument forwarded in the previous chapter, the two chapters together provide a careful caution against or corrective to theories of (white) ignorance that are likely to prove overly simplistic.

Chapter six is “Managing Ignorance” by Elizabeth V. Spelman. In this paper, Spelman suggests the contradictory beliefs and incompatible commitments involved in ignorance require careful management. Though she uses an odd combination of analytic methods and literary examples to make her point, Spelman provides a unique perspective on the phenomenon of willful ignorance by exploring how individuals are forced to manage their own ignorance when faced with unhappy truths they do not care to admit. She explores this point through the lens of James Baldwin’s *The Fire Next Time*, in which he indicts the ignorance of White America. Spelman uses Baldwin’s text to show that, when there are costs and benefits associated with ignorance, strategies to manage that ignorance will need to be deployed. Complicated propositional attitudes, like “W is quite happy about not believing g is true but unhappy about not believing g is false” (121), are common occurrences within the area of ignorance that require extensive management. Understanding the management and commitment required to maintain ignorance that takes complicated forms such as “Her ignoring g allows her to stand by g’s being false, to be committed to g’s being false, without believing that g is false” (122) might be, the author suggests, one method for finding a way out of ignorance.

After these chapters comes Part II of the text: “Situating Ignorance.” Where the first section of *Race and Epistemologies of Ignorance* sought to theorize ignorance, the seven chapters in this section, in the words of the editors, explore “some of the geographical, historical, and disciplinary sites in which racial ignorance has operated and often continues to operate” (6). The essays in this section are filled with examples and insights that serve to enrich the theoretical approaches offered in the first part of this text. However, for those interested to find more accessible examples for teaching purposes, or to inform everyday conversations, the essays in *Agnotology* will serve this purpose more effectively than the papers in this second section of *Race and Epistemologies of Ignorance*, as they are still far more theoretical and abstract than the papers in the other text.

The first chapter in this second section is “Race Problems, Unknown Publics, Paralysis, and Faith” by Paul C. Taylor. In his contribution, Taylor considers the institutional, discursive, existential and volitional conditions that allow social ignorance to “take root and grow” (143). Taylor opens by considering examples of social ignorance that result from racial stereotypes; “racial myths,” he argues, “make it easier for us to ignore the complex realities that our fellows inhabit and represent” (137). That is, “race

thinking” can function as a type of agnogenesis (to borrow a term from *Agnotology*). However, Taylor contends that some forms of race thinking – in particular, the critical racialism of radical constructionism, according to which “each race comprises people who stand in similar relations to the stratifying mechanisms of white supremacy” (138) – can also help to “banish” social ignorance. There are multiple benefits of radical constructionism, Taylor argues, which link up with work on ignorance in ways that simple “practical racialism” (“the idea that race talk is a useful tool for identifying the victims of racism” (140)) cannot. Taylor fleshes out his argument by examining the political situation in Haiti at the beginning of the twenty-first century, a topic complicated by his personal connections to the country and its people. As a result of these connections, Taylor’s chapter concludes more as a ponderous affair than a sustained argument, where he seems to be grappling with the realities of one’s own ignorance when one is made aware of it by the circumstances in which one finds oneself.

Chapter eight is “White Ignorance and Colonial Oppression: Or, Why I know So Little about Puerto Rico” by Shannon Sullivan. Sullivan provides a particularly rich and accessible example of ignorance in the form of an historical overview that details the construction of “Porto Rico” – the “object of colonialist ignorance/knowledge” (158). This example reveals the workings of what Sullivan calls “ignorance/knowledge,” a term she uses because it “denies, or at least places under suspicion, the purported self-master and self-transparency of knowledge, as if nothing properly escaped its grasp” (154). Sullivan recounts the many ways ignorance is constructed and sustained by various institutions as part of the colonial project. Making note specifically of the role of education in perpetuating ignorance/knowledge, Sullivan explores how Puerto Ricans – because of the education they receive from their colonizers – become Americanized, masculinized versions of themselves, even to themselves. That is, not only are those who inhabit the United States ignorant of Puerto Rico; through colonization, so too are Puerto Ricans. However, Sullivan also points out that “Puerto Ricans have been effective in using ignorance/knowledge of them as Porto Ricans against itself for their own benefit” (163). That is, ignorance/knowledge can be a tool of resistance, and not just of (colonialist) oppression. Sullivan argues that the practice of *jaiba* politics in Puerto Rico, which “seeks to achieve its goals through ambiguity and subversion” (165), presents a picture of how ignorance/knowledge can be used in opposition to dominance. Sullivan’s is an excellent paper that provides a careful account of how knowledge/ignorance operates in complex social-political-historical cases, therefore providing a useful example that retains a commitment to careful theoretical work.

“John Dewey, W.E.B. Du Bois, and Alain Locke: A Case Study in White Ignorance and Intellectual Segregation” by Frank Margonis comprises the ninth chapter of *Race and Epistemologies of Ignorance*. Though more useful for those who locate themselves in the pragmatist tradition than in others, this chapter provides an illuminating case study that demonstrates the value of genealogy and of using multiple lenses to evaluate the works of major figures in our philosophical heritages to illuminate the ignorances that shaped their work and that, by extension, shape our own work as well. The specific case to which Margonis turns his attention involves how Dewey was affected by and contributed to ignorance about the role of race in American history.

Margonis suggests that, despite Dewey’s explicit opposition to and work against racism, his silences around pivotal aspects of American history, such as Roosevelt’s imperialism, federal antilynching legislation, and race riots, are “structured silences, characteristic silences: the epistemology of ignorance that Mills rightly condemns” (174). Thus, Dewey’s vision of American democracy is a distinctly white vision of democracy, and the author challenges contemporary philosophers to be attentive to the likelihood of incorporating such assumptions into one’s own views when deploying the situation-specific tools of a philosopher like Dewey.

Chapter ten is Lucius T. Outlaw Jr.’s “Social Ordering and the Systematic Production of Ignorance.” Outlaw’s aim in this chapter is to show how ignorance is legitimated through social and political institutions and organizations. He focuses on how education – and academic philosophy in particular – contributes to and stabilizes ignorance of “White Racial Supremacy” in America. Such legitimation occurs, for example, through the maintenance of a particular philosophical canon – he points to Tocqueville’s *Democracy in America* as an example of a text included in the canon despite its racist presumptions. Outlaw expresses amazement at the extent to which the rigors of thought definitive of philosophical inquiry “have *not* been applied ... to the substantial conditioning influences of raciality on the makeup of the ‘communities of discourse’ constituting the discipline” (203). Moreover, despite the emergence of potentially transformative critiques within philosophy, such critiques have been simply relegated to the margins. He argues, therefore, that “we need, among other things, a very substantial re-education and redirection of knowledge workers and knowledge work in academic philosophy” (210). Outlaw’s is an excellent contribution to this anthology, in particular as a complement to Margonis’s chapter, in revealing the deep and problematic racist assumptions of our canon, our departments, our educational institutions, and, as a result, our selves. Yet for all its eye-opening fervor, an example of how education could be helpful, in more specific terms, would have benefited this chapter, and provided a basis upon which to build further inquiry and critique.

Lorraine Code’s “The Power of Ignorance” is chapter eleven of *Race and Epistemologies of Ignorance*. In this densely-packed contribution, Code reflects on the operations of ignorance through examples from literature. Using George Eliot’s *Daniel Deronda* and James Mill’s *The History of British India* as examples of the multiple ways ignorance shapes practices of and generates puzzles about knowing, Code reveals that “the idea of ignorance brings real human knowers and their capacities and responsibilities squarely into the picture” (227). In short, the study of ignorance contributes to and helps strengthen feminist epistemologists’ projects aimed at showing the importance of the subject and of communities in building knowledge and knowledge practices. Thus, while the study of ignorance “is best conceived as a genealogical inquiry into the power relations and structures of power that sustain, condone, or condemn ignorance,” (227-228) it goes beyond this explanatory function to produce a model of inquiry “with a stronger descriptive-empirical and social-historical component than epistemology in an authorized sense would countenance” (228). In other words, epistemologies of ignorance, Code argues, should be empirical and genealogical, but this itself has implications for our understandings of how epistemology should be conducted. This is,

in fact, the strength of studying ignorance, a point that Code’s piece is invaluable for making.

“On Needing Not to Know and Forgetting What One Never Knew: The Epistemology of Ignorance in Fanon’s Critique of Sartre,” a shorter contribution by Robert Bernasconi, forms chapter twelve of the anthology. Bernasconi identifies in Sartre’s “Black Orpheus” (originally the preface to an anthology of African and West Indian poets that appeared in 1948) an ignorance that derives from his attempt to locate the negritude movement as a moment in the dialectical movement from white supremacy to a raceless society. By engaging with Fanon’s critique of Sartre’s “Black Orpheus,” Bernasconi suggests Sartre “made the mistake of locating the black agents he was addressing within a narrative” (232) when he was not suitably situated to do so. Fanon’s critique of Sartre is an example that reveals there is a beneficial sort of ignorance necessary to experience: *phronesis*. In placing negritude within a dialectical movement – in intellectualizing black experience – Sartre replaces this good form of ignorance, *phronesis*, with another, bad form of ignorance – his own ignorance that results from his lack of experience. It was Sartre’s social identity as a white man and philosopher that was significant in this case; a fact Bernasconi argues we must be more attuned to in assessing knowledge claims. Bernasconi therefore offers a challenge. He argues,

the urgent task of establishing the extent and depth of the white man’s ignorance of how the targets of racism suffer – just as the targets of sexism do – is still largely ignored by white philosophers in their attempts to contribute to race theory. Fanon’s critique of Sartre ... shows how even some of the best-intentioned whites failed. The stories of their failures serve as an appropriate warning (238).

Bernasconi’s contribution to this volume provides a powerful reminder, similar to some of the chapters that precede it, that we philosophers must be cognizant of the ignorances in our own work that often result from our social identities and situatedness. This call is echoed in the following chapter as well.

Chapter thirteen, and the final chapter of the volume, is “On the Absence of Biology in Philosophical Considerations of Race” by Stephanie Malia Fullerton. Fullerton argues in this stimulating piece that the philosophical denial of a biological basis of race, which can be traced, the author suggests, to the work of Kwame Anthony Appiah, serves the purpose it is intended to serve, namely, to undermine the “ontological legitimacy of race as a basis for human classification” (243). However, the advancement of a social constructivist view of race leads to a worrisome and harmful form of ignorance within philosophic race theory insofar as this area of inquiry ends up overlooking “specific features of the empirical record, not to mention pervasive practices, ... in favor of broad disclaimers relevant to only a narrowly applicable model of human biological difference” (242-243). In other words, while philosophers have tended to dismiss race as a topic worthy of biological investigation, work within the biological sciences has proceeded to investigate race in terms of population variation, an investigation outside of which philosophers of race have placed themselves. This

philosophical position of self-imposed ignorance is likely to prove harmful, Fullerton contends, because “the insistence that race has no biological basis therefore places biological ‘facts’ about race outside the realm of critique and denies the philosophical analysis of the biological and social coconstitution of racial identity” (251). Fullerton’s piece, like many of the papers in this section, provides a striking reminder that we philosophers are not immune from troublesome forms of ignorance – some of them of our own making. It also provides an opportunity to ask some important questions, most of which go unasked and unanswered in this volume, including the question of whether and when some forms of ignorance might be warranted or necessary. Such questions surely could form the basis of much further work in this exciting and evocative new area of inquiry.

What is most striking about *Race and Epistemologies of Ignorance* is its unity. It has the feeling (unsurprisingly) of having been preceded by discussion and deliberation among the authors, a feeling too often lacking in thematic anthologies. As such, it makes the text an exceptional foundation for a course, where each piece can be considered in light of the other material already considered. Moreover, as already mentioned, *Race and Epistemologies of Ignorance* would make an excellent pairing with *Agnotology*, to which I now turn my attention. *Agnotology* is divided into three sections, a reverse ordering to *Race and Epistemologies of Ignorance*, beginning with concrete examples and moving on to theorizing ignorance. After an introductory chapter from one of the editors, Robert N. Proctor, comes Part I, entitled “Secrecy, Selection, and Suppression,” Part II, entitled “Lost Knowledge, Lost Worlds,” and Part III, “Theorizing Ignorance.” As with the previous text, *Agnotology* emerged out of workshops on ignorance, specifically at Pennsylvania State and Stanford Universities in 2003 and 2005.

Proctor’s introduction, entitled “Agnotology: A Missing Term to Describe the Cultural Production of Ignorance (and Its Study),” outlines the aim of the project as thinking “about the conscious, unconscious, and structural production of ignorance, its diverse causes and conformations, whether brought about by neglect, forgetfulness, myopia, extinction, secrecy, or suppression” (3). He starts off the conversation by proposing three specific types of ignorance: “ignorance as *native state* (or resource), ignorance as *lost realm* (or selective choice), and ignorance as deliberately engineered and *strategic ploy* (or active construct)” (3). The first names the traditional understanding of ignorance, as a blank or void (often naturally occurring), meant to be overcome – the type of ignorance that fuels the scientific enterprise. The second refers to the ignorance that arises from attention, neglect, and selectivity. The third type of ignorance is “something that is made, maintained, and manipulated by means of certain arts and sciences” (8). He goes on to outline some paradigm cases of non-traditional understandings of ignorance, which are covered in greater detail in the volume, including the manufactured ignorance of the tobacco industry and military classification, as well as the possibility of “not knowing” as a form of resistance. The introduction finishes with an explanation of how the term “agnotology” was decided upon, as “the historicity and artifactuality of non-knowing and the non-known – and the potential fruitfulness of studying such things” (27).

Part I, “Secrecy, Selection, and Suppression” opens with “Removing Knowledge: The Logic of Modern Censorship” by Peter Galison. In this chapter, Galison explores the “classified universe” (37) – the vast and proliferating collection of classified documents that has emerged after World War II – suggesting there is likely more classified knowledge than there is unclassified (in the United States). The “Establishment of Secrecy” (49), Galison suggests, faces a number of dilemmas – from the fact that it is possible for one and the same person to create knowledge that is classified and at the same time not have the appropriate clearance to read that information, to the difficulties of determining how much to classify without impeding industry and technology. These dilemmas highlight some of the very real problems involved with manufactured ignorance, including the immense financial cost of maintaining the “antiepistemology” of classification, the threat to democracy it enables, the impediment to industry and technology, the barriers imposed on universities, and the challenge to intelligence-gathering for security purposes. Galison presents statistics that are staggering their scope, forcing us to rethink assumptions about public and private, about knowledge and its transmission, and about democracy. While this is the strength of this chapter, the fact that the author himself does not address any of these issues is a weakness.

The second essay in this section is “Challenging Knowledge: How Climate Science Became a Victim of the Cold War” by Naomi Oreskes and Erik M. Conway. Like the first chapter, this chapter is heavy on historical fact and light on analysis, but is valuable for encouraging the reader to ask important questions, and seek answers to those questions (possibly in a text like *Race and Epistemologies of Ignorance*). Oreskes and Conway explore how the George C. Marshall Institute, since the early 1990s, “has insisted that the evidence of global climate change is uncertain, incomplete, insufficient, or otherwise inadequate” (60). In short, the Marshall Institute, the authors contend, developed the tactic of “balanced reporting” – where minority views are expected to have equal coverage in the media – in their support of the Strategic Defense Initiative (SDI) during the 1980s, and has carried that tactic over to the issue of global warming. More specifically, the tactic is to “convince the public, through mass media campaigns, to accept an interpretation well outside the mainstream of professional science” (69). The same tactics were used, by the same people, “in denying that cancer causes smoking [sic], that pollution causes acid rain, that CFCs destroy ozone, and that greenhouse gas emissions are causing global warming” (76). What ties all these “causes” together is a political ideology, the authors argue – the Marshall Institute maintains and enforces ignorance using this tactic to sustain their political ideology, market fundamentalism. In essence, uncertainty has become a political tactic, a way to influence policy decisions.

David Michaels’s “Manufactured Uncertainty: Contested Science and the Protection of the Public’s Health and Environment” is the third chapter in Part I. In this thought-provoking chapter, replete with interesting examples and insights, Michaels explores the role certainty plays in contemporary medicine and public health debates. Based on the assumption that “debating the science is much easier and more effective than debating the policy” (92), big business, Michaels argues, has become adept at manufacturing ignorance about science in order to attain their policy goals. Michaels brings together the examples of tobacco, global warming, and toxic chemicals such as

beryllium (used in the production of nuclear weapons systems), to support his claim that a “new regulatory paradigm is required” (102). Michaels sets out the first steps for such a paradigm, including requirements that federal regulatory agencies develop requirements for research integrity, which means they should be given the authority to inquire into who pays for studies “and whether these studies would have seen the light of day if the sponsor didn’t approve the results” (102-103). Michaels concludes that “those charged with protecting the public health [must] realize that the desire for absolute scientific certainty is both counterproductive and futile” (104). That is, we need a new regulatory paradigm that focuses more on values in policy than just science, which is fallible and easily manipulated.

“Coming to Understand: Orgasm and the Epistemology of Ignorance,” by Nancy Tuana, comprises the final chapter in this section. Tuana uses case studies of knowledge and ignorance about female genitalia and orgasm to demonstrate that understanding ignorance “has the potential to reveal the role of power in the construction of what is known” (110). Tuana does an excellent job of tracing the complex genealogy of female sexuality to reveal the pushes and pulls involved in the construction of power/knowledge-ignorance – in her words, “to understand what ‘we’ do and do not know about women’s orgasms, and why” (112). This includes the women’s health movement, which has met with varied success in part because, “if you discover new knowledge about something others do not take seriously, do not expect your knowledge projects to have much effect” (131). Though Tuana does not claim to have presented a comprehensive theory or epistemology of ignorance, it is unfortunate that she does not explore in greater detail the central theoretical claims she outlines at the end of the chapter. In particular, the following claim would have been well-served by further investigation: “We should not assume that the epistemic tools we have developed for the study of knowledge or the theories we have developed concerning knowledge practices will transfer to the study of ignorance” (140). Although this chapter does not purport to be a theoretical intervention, the theoretical claims included would have benefited from more than a brief statement at the end of the chapter. Whether these claims might be satisfactorily answered in *Race and Epistemologies of Ignorance* I leave up to the reader to discern.

Part II, “Lost Knowledge, Lost Worlds,” begins with co-editor Londa Schiebinger’s contribution, “West Indian Abortifacients and the Making of Ignorance.” In this chapter, Schiebinger explores “how gender relations in Europe and its West Indian colonies guided European naturalists as they selected particular plants and technologies for transport back to Europe” (149). She focuses specifically on the peacock flower, examining how knowledge of its use as an abortifacient was not brought back to Europe by botanist explorers, instead slipping through “agnotological fissures” (154). She suggests three reasons for this ignorance: the fact that colonial enterprises were largely male, that controlling fertility worked against imperial interests, and that there were challenging disciplinary and professional divides (156-157). Schiebinger concludes with the following query: “One wonders what easy, safe, and effective methods of birth control and abortion have been lost to women because innocent plants have become entangled in the web of history and wide-ranging cultural politics” (159). At the end of the chapter, the author tells of trips to the Caribbean to learn more about contemporary

use of abortifacients. This is an interesting section, and it is unfortunate that it is so short, as the chapter would have benefited from increased attention to the possibility of ignorance as a form of resistance, as it appears elsewhere in this volume, and in *Race and Epistemologies of Ignorance*.

Adrienne Mayor’s “Suppression of Indigenous Fossil Knowledge: From Claverack, New York, 1705 to Agate Springs, Nebraska, 2005” forms the central chapter of this section. Mayor explores the complex interactions between ignorance and the discovery and recording of fossils. She notes how striking it is “that the contributions of Native Americans in the first scientific investigations of fossils are missing in modern histories of paleontology” (164). In other words, despite evidence that there existed communication between Native Americans and Euro-Americans about fossil discoveries, contemporary histories of paleontology do not reflect this communication. This is a result, Mayor argues, of purposeful omission, which she explores using five case studies. Such omission can arise from either the Euro-American perspective as willful ignorance arising out of an oppressive framework, or the Native American perspective as an act of resistance. Unfortunately, of all the chapters in the first two sections, this chapter suffers from the least amount of analysis, which would have been really helpful and worthwhile.

The final chapter of this section is Alison Wylie’s “Mapping Ignorance in Archaeology: The advantages of Historical Hindsight.” Wylie looks at the various factors shaping knowledge and ignorance, specifically by looking at the history of the development of archaeology as a field, and tracing the movement of knowledge and ignorance through four moments. The factors influencing these moments include empirical and ontological factors (the limitations imposed upon the knower by the nature of the data), theoretical considerations (with an emphasis “on theory building as a necessary framework for articulating interesting, productive questions, fueled by an impatience with ‘unimaginative observation’ for its own sake” (190) which emerged in the 1960s and 70s), and the sociopolitics of archaeology (emerging during the 1980s, which emphasized how the theoretical moves during the 60s and 70s involved “the projection of contemporary preoccupations and expectations onto past lifeways and cultural formations that may bear little relation to anything familiar from the ethnohistoric present” (191)). She proceeds to explore ways to intervene in the construction of ignorance, developed out of Trouillot, and outlined in relation to earthen mound sites. She concludes, “focusing on how it is produced and maintained holds the potential for systematic, empirically and theoretically informed well-informed calibration of what we know” (199-200). Wylie’s contribution is more theoretical than the other chapters in the first two sections of the volume, although at times, it is too much so. Yet the framework she provides is quite useful in helping us to understand more fully why it is that ignorance might be an important and valuable area of study.

Parts I and II of the volume come together well to present a compelling case for the study of ignorance. However, relying as it does more heavily on example than theory, it is so far left up to the reader to piece together what might emerge as the most salient points of a theory of ignorance, or the most important facets of our knowledge practices requiring a new field of study, agnotology. The third section of the volume,

“Theorizing Ignorance,” is intended to offer an account of what such theories might look like, and what might constitute a field of agnotology.

“Social Theories of Ignorance,” by Michael J. Smithson, opens Part III of the volume. Smithson’s chapter offers various candidates for “orienting strategies” and “core concerns” (224) that can shape inquiry in agnotology, in the hopes that “a working consensus about the basic nature of the field of inquiry” (224) will enable an interdisciplinary collaboration into this emerging area of inquiry. As such, this chapter is dedicated to finding a basis for this consensus, and developing such orienting strategies and core concerns. He opens by providing a literature review in an effort to nail down a set of terminology or nomenclature that might be considered useful, as well as the benefits or drawbacks of defining and presenting a taxonomy for ignorance, in a new field of agnotology. He also seeks to present and defend a “social theory of ignorance,” which he argues “should focus on ignorance with sociocultural origins” (214). Although this chapter recommends the development of an interdisciplinary collaboration in the field of agnotology, it is not itself an interdisciplinary effort, drawing mainly on work in the social sciences, and rarely venturing into other fields. And though the chapter has passing mentions of the importance and relevance of philosophical questions, they are not explored in any great detail. What this paper mostly clearly reveals is the lack of interdisciplinarity that exists between the humanities and social sciences. The different meanings for the same terms, as used across these disciplines is at times surprising, and reveals one of the few areas where a weakness might reside in pairing this text with *Race and Epistemologies of Ignorance*.

Charles W. Mills’s “White Ignorance,” an almost identical essay to the one found in *Race and Epistemologies of Ignorance*, is the next chapter in the “Theorizing Ignorance” section of this volume. I won’t revisit it here except to say that, as a part of this specific collection of papers, it offers what might be the best balance of theory and example to provide a perspective that both offers original insight, and encourages further insights on the part of the reader.

David Magnus’s “Risk Management versus the Precautionary Principle: Agnotology as a Strategy in the Debate over Genetically Engineered Organisms” is the third chapter of this section, and one of the better papers in the book. In this chapter, Magnus shows how regulatory regimes are impacted by ignorance. He uses examples of policy decisions to show how risk assessment and the precautionary principle have led to various deployments of ignorance, in service, sometimes, of opposing views. In other words, he explores how ignorance is encoded into policy, and used strategically for various political goals. In short, Magnus shows how uncertainty can be used in support of new technologies, and also by those who seek to limit new technologies; its manufacture is malleable. He also points toward “religious agnotology,” “in which we are urged to recognize our ignorance as a fundamental limitation on human experience, and we are urged not to intervene in matters where only God has knowledge” (260). In other words, not just science, but religion as well, has a voice in agnotology. Such a view would recognize that “the precautionary principle can be seen as a moral and religious expression of appropriate humility in the face of human ignorance” (261). Magnus also introduces the concept of “values agnotology,” where ignorance is constructed “in the

realm of values – by denying the existence or relevance of anything seen as ‘nonscientific’ – into the regulatory risk assessment process” (263). Magnus’s piece aptly demonstrates the complexities of ignorance, the (political) purposes it can serve, and how it does, can, and should impact policy decisions in the regulatory realm. Although this chapter still falls short of the bar for “theoretical” set out by *Race and Epistemologies of Ignorance*, it remains an insightful piece that ought not be overlooked.

The volume finishes with “Smoking Out Objectivity: Journalistic Gears in the Agnotology Machine” by Jon Christensen, another excellent paper that upsets expectations and shows how prized epistemic values such as objectivity can be (mis)used toward political ends. The author uses the example of “the tobacco industry’s development of agnogenesis through public relations and journalism” to show how these values are easily manipulated. He points out the ironies of how protections developed for journalism led to their being pawns in political wars. It is worth quoting Christensen at length to get an idea of the position he forwards:

It is one of the ironies of this history that objectivity, a professional code meant, in part, to free journalists from the manipulations of the new field of public relations in the early twentieth century, would in the end prove one of the most useful tools for the professional manipulators of news. Another irony is that a code of balance, meant to create a space for newspapers outside of the confines of the partisan politics of parties, which developed at the same time as an emerging trust in the empiricism of science, would leave journalists ill equipped when scientific evidence itself was politicized” (270).

Christensen suggests that new journalistic values, strategies and forms, such as the narrative form, and investigative journalism, can be used as correctives for, or counteract problematic uses of, “fairness,” “balance,” and “objectivity,” which tend to be accomplices to agnogenesis. Further explanation of the alternative offered by the author would have been helpful, but overall, this paper provides an apt note on which to finish the volume.

In sum, *Agnotology* is an excellent volume, more sociological in orientation than *Race and Epistemologies of Ignorance*, and therefore in some ways, more accessible. It is, however, less obviously unified than the other. This isn’t to say that the chapters are disconnected, only that the connections between them do not seem as consciously undertaken. Indeed, the repetition of specific examples, without mention or acknowledgement of that repetition, is striking. How much this might take away from the text is an open question, although I would not be surprised if a more deliberate undertaking in the creation, compilation and delivery of the chapters would have enhanced the final product. As mentioned at the outset, these two books together would form an excellent basis for a class on ignorance and its study at the senior undergraduate or graduate level, including classes with students from disciplines other than philosophy, as *Agnotology* in particular is a very accessible text. The order in which the texts, and the individual papers within them, are presented, would be up to the individual presenting the

Dieleman, S. [2012]. Review Essay of ‘Agnotology: The Making and Unmaking of Ignorance.’  
Robert Proctor and Londa Schiebinger (editors) and ‘Race and Epistemologies of Ignorance.’  
Shannon Sullivan and Nancy Tuana (editors).  
The Social Epistemology Review and Reply Collective  
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material, although the choice will likely come down to a preference for either theory before practice, or practice before theory. My preference and recommendation would be for the latter, since the rich examples in *Agnotology* are likely to get students interested in the questions and issues that inform the theoretical investigations in *Race and Epistemologies of Ignorance*.

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