

Mapping the Atomic Unconscious: Postcolonial Capital in Nuclear Glow

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During his visit to Hiroshima on May 27, 2016, the first ever to be made by a sitting U.S. president, Barack Obama claimed that "the memory of the morning of August 6, 1945, must never fade."¹ Not only did he seek to preserve the memory of the dropping of the first atomic bomb beyond the last voices of the *hibakusha*, he framed this call for preservation in moral terms: "The scientific revolution that led to the splitting of an atom requires a moral revolution as well." If his explicit claim is that the role of science in human atrocity can be mitigated by a renewed moral framework, the implicit message is that the practice of commemoration provides a symbolic ground for this renewed morality. Accordingly, the president's discourse of moral revolution not only affirms the largely apolitical, ahistorical nature of global memory culture, which tends to translate historical forms of exploitation into universal narratives of suffering, but it also obscures the slow violence of nuclear energy regimes by reducing nuclearity to the moment of explosion. In seeking to preserve the memory of atrocity, the moral revolutionary, however unwittingly, preserves the colonial logic of nuclear energy regimes by transforming the material exploitations of energy production into the universal grammar of commemoration.

Against the idealism of the moral revolutionary, I want to recuperate the material dimensions of cultural memory and suggest that it might serve a different purpose in the context of postcolonial capital: to elucidate the materiality of an energy unconscious embedded in memory media.² Postcolonial capitalism here signifies the ways in which immaterial forms of accumulation and material forms of labour intersect in the colonial landscapes of global memory culture. My utilization of the term is meant to reflect the complex ways in which enclosures of knowledge and labor reinforce one another while contributing to new forms of accumulation through the aestheticization of colonial capital's material remains.³ In my elaboration of the atomic unconscious of postcolonial capital, I adapt Michael Niblett's question regarding the mapping of energy regimes in relation to cultural media. Suggesting that patterns

of capital accumulation might be embedded in cultural forms, Niblett asks: “What happens if we map the flow of energy regime transitions in relation to cultural manifestations?”⁴ In other words, what can specific cultural media (Niblett uses the example of Gothic narratives) tell us about the flow of energy during the transition between regimes (for example, from coal to oil)? Following Niblett’s lead regarding this link between material inputs and symbolic forms, I ask: What happens if we map the emergence of global memory cultures alongside the transition to nuclear energy? And, consequently, how does memory media register not only cultural anxieties about repeating the past but also the “energy invisibilities” that accompany the emergence of nuclearity as a “green alternative” to fossil fuels?⁵

I begin by tracing the entwined histories of memory studies and energy humanities and identify the vital role discourses of rupture have played in both the preservation of memory and conceptions of nuclearity. I follow this brief historicization by tracking the ways in which the energy unconscious works across different cultural mediums tasked with doing memory work, beginning with the example of the modern museum. Drawing on the concept of resource aesthetics, I argue that the atomic unconscious, closely associated with the history of photography, registers a new regime of dispossession in the uneven landscapes of postcolonial capitalism in which commemoration becomes not only an aesthetic practice but also a cultural resource. Finally, I assert that the materialities at work in nuclear photography — including its status as a physical object that circulates within and through various cultural institutions; its manifestation as the effect of light on a chemically specific surface; and its subjection to environmental impacts that result in fading, tearing, annotating, archiving, destruction — register contradictions between the brute materiality of nuclear inputs and cultural representations of nuclearity in the form of an atomic unconscious whose relationship to memory differs significantly from the carbon unconscious. I conclude by claiming that memory can serve as a critical methodology for the energy humanities.

Discourses of Rupture

As emergent disciplines of the atomic age, memory studies and energy humanities share a common genealogy: both arise from a series of ruptures — technological, historical, moral — accompanying the postwar condition. While the origin of global memory culture is varied, and contested, American historian Jay Winter argues that it proliferated after World War II due to shifting social and economic conditions that increased both leisure time and disposable income.⁶ Despite this socioeconomic basis, memory studies often uses the atrocities of the Holocaust as a touchstone, a tendency that has been harshly criticized by Kerwin Lee Klein, who sees the memorial turn in historical discourse as a form of cultural re-enchantment deriving from the intersection of the therapeutic and the avant-garde.⁷ As a result of this re-enchantment, memory is falsely lauded as a site of emancipation. Memory scholar Andreas Huyssen

proffers a similar critique. In addition to the criticism of Holocaust as touchstone, he claims that the conception of “history as trauma” that permeates memory studies does very little to elucidate the political and material dimensions of cultural memory.⁸ The effect is to reduce memory to yet another version of identity politics.⁹ Indeed, affirming memory as the organizing principle of twentieth-century historical study *par excellence*, Winter asserts that “the hyphen of identity is strengthened by commemoration.”¹⁰ However, the main difference between memory and other expressions of identity is that memory movements pose a temporal disruption rather than a simple re-signification. This concept of temporal rupture is central to literary theories of trauma and memory, which locate emancipatory potential in repressed counter-narratives that speak back to and against dominant historical narratives.¹¹ Here, traumatic memory signifies a disruption of the proper ordering of experience. Representations of historical trauma stand in for an original encounter, analogically signifying the return of the repressed, where repressed memory disrupts official historical narrative.¹² Postcolonial scholars, however, have criticized this version of trauma theory for its colonial constitution: “following feminist psychologist Laura Brown, they argue that the ‘event’ or ‘accident’-based model of trauma associated with [Cathy] Caruth assumes the circumstances of white, Western privilege and distracts from ‘insidious’ forms of trauma that involve everyday, repeated forms of traumatizing violence, such as sexism, racism and colonialism.”¹³ Put differently, Western trauma theory fails to address the slow violence of colonial logics, which include forms of sexual and racial exploitation.¹⁴

In nuclear discourse, the emancipatory potential of rupture is tied to postwar instantiations of the twin movements of human rights and decolonization. This relationship is best represented in the work of Gabrielle Hecht, who states: “In the beginning, there was The Bomb. It ended The War. Splitting the atom ruptured human history.”¹⁵ Connecting scientific discovery and morality (albeit very differently than Obama), she explains that the historical rupture taking place around the time of detonation was not only scientific but moral as well; alongside the power of nuclear technology, the Universal Declaration of Human Rights, in line with movements of decolonization, promised to emancipate those populations exploited under colonial rule.¹⁶ Mediated by discourses of historical rupture, however, decolonization did not lead to emancipation; rather, colonial power was simply reoriented along the lines of the nuclear (colonizer) and the non-nuclear (colonized).¹⁷ In a separate article, Hecht departs from the usual polarizing categories of nuclear scholarship to examine the ways in which the intertwining “rupture-talks” of nuclearity and decolonization play out in the lives of uranium miners in colonial Africa.¹⁸ By making the miners and not technoscientific innovation the focus, she exposes the “power effects” of nuclear ontologies. By mapping the reorientation of French colonial power onto the revolutionary imaginary of nuclear technology, she argues that discourses of rupture had material effects: “Nuclear and postcolonial rupture-talk combined in shaping

sociotechnical practices, but what mattered most to [the uranium miners] was how these practices conjugated colonial power relations into real and imagined futures.”¹⁹ What becomes evident in Hecht’s work on nuclear ontologies is the ways in which the discourses of moral and historical rupture that underwrite contemporary forms of commemoration eclipse the slow violence structuring the everyday labor of the uranium miner.

Elsewhere I have argued that memory is implicated in the forms of exploitation that accompany the new global enclosures; and that the dispossession of knowledge reinforces material dispossessions. Sites of memory, in other words, are also sites of enclosure, operating according to a logic that conceals cycles of accumulation and dispossession through the preservation of the material remains of previous stages of accumulation. In this way, enclosures of knowledge fortify the outward thrust of capitalist expansion. This relationship is exemplified in popular interpretations of the Harper government’s actions toward knowledge-producing institutions, such as the closure of seven of nine Fisheries and Oceans Libraries whose destruction has been referred to in popular media as both “libracide” and a “knowledge massacre.” These practices emerge alongside a cultural paradigm I have named the preservationist aesthetic, which frames the new global enclosures in moral terms as sites of historical and cultural preservation and emphasizes memory’s property form in the post-crisis cultures of late capitalism. It also places the drive for preservation in the form of collective memory at the heart of *both* new forms of enclosure *and* new practices of resistance. Mediated by this ideology, social, political, and economic exploitation are reframed as aesthetic problems in terms of loss, erasure, and ruin. Hence, alongside the proliferation of memory culture we see the corresponding proliferation of aesthetic trends such as ruin porn. In general, the preservationist aesthetic has a dual function: on one hand, it recovers and preserves those aspects of common history under the name of heritage that are threatened with erasure by the innovations of capitalist production, including nuclear technology; on the other hand, it produces new spheres of enclosure by colonizing those spheres previously excluded from the production process, transforming them into aesthetic experiences. In short, the preservationist aesthetic is an ideological mechanism for translating material exploitations into symbolic terms (that is, forms of extraction into forms of cultural representation). As a result, we are faced with a paradox: in defending against the threat of erasure, of “obsolescence and disappearance” that characterizes late capitalism, preservationist aesthetics contribute to the creation of new spheres of colonization and enclosure.²⁰ In this way, the forms of representation specific to this aesthetic regime facilitate neocolonial sensibilities by mediating capital’s social and material resources. Thus, despite the mandate to educate, the function of memory museums and similar memory media is to conciliate and disarm while at the same time commodifying and incorporating the social and material remains of previous stages of accumulation.²¹

Memory media, however, are not only sites of primitive accumulation but also resource aesthetics across which different materialities are at work. Outlined by Brent Ryan Bellamy, Michael O'Driscoll, and Mark Simpson in the introduction to a special issue of *Postmodern Culture*, the concept of resource aesthetics provides a framework for linking modes of exploitation (like uranium extraction) with modes of representation (Hecht's concept of rupture-talk, for example).²² Beginning with the "amnesiac history" of Fort McMurray as a storage site for radioactive waste, Bellamy et al. define the resource aesthetic as a site of contradiction between the figural and the material that requires a dialectical understanding of the relation between "the aesthetics of resources" and "the aesthetic as resource." Elaborating this constitution, Imre Szeman identifies the dual aspect of resources, their simultaneous materiality and unrepresentability, stating: "Resources are material in ways that, in part, evade aesthetics, evade representation. There's a double movement in thinking about aesthetics and resources that I want to keep alive: one in which we recognize their sheer necessity and blunt reality, and another in which we try to bring them into representation."²³ In these terms, the "blunt reality" of uranium extraction doesn't show up in popular discourses of nuclearity, which feature The Bomb or forgotten heroes like the nuclear operator. Hecht, among others, has even suggested that knowledge of the relationship between uranium extraction and nuclearity has, in fact, been withheld from uranium miners.²⁴ Resource aesthetics facilitate this dispossession of knowledge in support of accumulation practices like uranium extraction.

The Slow Violence of Nuclear Memory

Mediating contradictions between cultural narratives of atrocity (or accident-based trauma) and the slow violence of exploitation, memory media are therefore part of an apparatus of erasure that participates in material forms of dispossession. The modern museum is a prime example. While museums have long played an important role in the production of cultural value, contemporary museums take an active role in this process in the context of late capitalism, as Rosalind Krauss has shown.²⁵ According to Wolfgang Ernst, museums are "memory-producing machines" that, unlike their historical predecessor, are "transformers" rather than mere "receptacles."²⁶ No longer mere spaces for the sedimentation of historical memory, they are vehicles through which collective memory as a cultural resource is both produced and transmitted.²⁷ As cultural transformers, they are exemplars of a new mode of enclosure that converts the material remains of previous stages of accumulation into aesthetic objects under the auspices of cultural preservation. Take the United States Holocaust Memorial Museum, for example. As the inaugural memory museum, it not only helps to elucidate the conversion of mundane everyday objects into shrines of dispossession, it also serves as a microcosm of the new experience-based economy in which memory becomes a cultural resource. According to Alison Landsberg, one of the most striking

exhibits in this museum, which spans three floors and incorporates both historical artifacts and personal possessions, is the room on the second floor filled with “survivor shoes.”²⁸ Drawing on Fredric Jameson’s comparative analysis of Van Gogh’s peasant shoes and Warhol’s *Diamond Dust Shoes*, where the latter “embod[ies] the logic of the commodity” and the former retains a sense of “lived individuality,” each shoe “bears a trace of the absent body” and in doing so recreates a “whole missing object world.”²⁹ These “survivor objects,” in which religious and commodity fetishes seem to merge, resist the alienating logic of the commodity while contributing to a fantasy of immediacy in which the mediating object is rendered invisible.

Despite the resistance to erasure that underwrites memory’s preservation, the preservationist aesthetic nevertheless participates in the slow violence of nuclearity by reinforcing a series of elisions, beginning with the elision of Hiroshima as the origin of global memory culture.³⁰ Further elisions include: Hiroshima’s overshadowing of the long-term nuclear testing on the Marshall Islands, which saw sixty-seven tests over a period of twelve years (and whose explosive power and radioactive fallout far surpassed that of Hiroshima); the banalization of petro-crises, such as oil spills, against the atrocities of nuclear meltdown; an emphasis on atrocities (spills and meltdowns) that fail to acknowledge the everyday forms of exploitation that support these wide-scale atrocities. In the nuclear museum, these elisions take the shape of nuclear exceptionalism, which Hecht defines as “a technopolitical claim — emerging immediately after the end of World War II — that there was something radically unique about nuclear things. From 1945 onward, both cold warriors and their activist opponents cultivated this nuclear exceptionalism. Atomic weapons were portrayed as fundamentally different from any other human creation.”³¹ In “Nuclear Ontologies,” Hecht elucidates the stakes of such exceptionalism in the following way: “Asserting the ontological distinctiveness of ‘the nuclear’ carri[e]s political, cultural, and economic stakes amplified by morality-talk, which tend[s] to boil down to a simple duality: nuclear technology represent[s] either salvation or depravity.”³² The response to the radical uniqueness of the destructive capacity of atomic weapons is, of course, the radical uniqueness of the potential salvation offered by forms of nuclear energy. However, the other side of this exceptionalism, as she points out, is the rendering banal of nuclear power, where nuclear power is represented “not as a life-saving technology for the human race, but as simply another way to boil water. Radiation [is] just another industrial risk. Such representations seek to banalize nuclear things.”³³ Along with the sensational discourses of nuclear atrocity, the banalization of nuclear power serves to elide the slow violence of such energy regimes, in addition to the reality that other similar energy regimes (such as coal and oil) perform similar routine elisions through the polarization of the mundane and the spectacular.³⁴ Put differently, in the production of nuclear memory, the slow violence of global energy regimes (which includes both climate change and the new global enclosures) is eclipsed by the spectacle of nuclear atrocity and re-presented

as the preservation of nuclear memory.

The preservation of nuclear memory then is not a question of morality but a problem of representation. Linking the erasure of memory to processes of slow violence, Rob Nixon writes: “In the long arc between the emergence of slow violence and its delayed effects, both the causes and the memory of catastrophe readily fade from view as the causalities incurred typically pass untallied and unremembered.”³⁵ Slow violence — “a violence that occurs gradually and out of sight” as opposed to a violence that is “immediate in time” and “explosive and spectacular in space... erupting into instant sensational visibility” — is also, then, a form of forgetting.³⁶ For Nixon, the question becomes one of how to represent this slow violence of the everyday that is effaced by the spectacular violence of atrocity. Accordingly, he asks: “In an age when the media venerate the spectacular, when public policy is shaped primarily around perceived immediate need, a central question is strategic and representational: how can we convert into image and narrative the disasters that are slow moving and long in the making, disasters that are anonymous and that star nobody, disasters that are attritional and of indifferent interest to the sensation-driven technologies of our image-world?”³⁷ In other words, how can we represent the everyday forms of violence that fail to register as violence without reducing them to spectacle? In the context of nuclear memory, the question becomes: how can we represent the everyday violence of nuclearity characterized by uranium extraction and related forms of exploitation without reducing them to the spectacular violence of Hiroshima?

The answer lies (at least in part) in Patricia Yaeger’s concept of the energy unconscious, to which the concept of narrative erasure is central. Drawing on Jameson’s notion of the political unconscious, Yaeger defines the energy unconscious as not only a “cultural code or reality effect” but also a “field of force” whose causality lies elsewhere and shows up as an “energy invisibilit[y]” that constitutes a “particular kind of erasure.”³⁸ Building on Yaeger’s definition, Brent Ryan Bellamy describes it as a “structuring presence” that lies “outside the narrative” of energy; in Vivasvan Soni’s words, an “unsignifying opacity,” which Szeman describes further as an “incapacity to name the social, political and cultural significance of energy.”³⁹ As sites of accumulation, memory media are also registers of the energy unconscious, which take different forms in different media tasked with the work of remembering. Literary critic Stephanie LeMenager, for example, describes the energy unconscious of oil literature as a form of “embodied memory and habitus for modern humans, insofar as everyday events such as driving or feeling the summer heat of asphalt on the soles of one’s feet are incorporating practices, in Paul Connerton’s term for the repeated performances that become encoded in the body.”⁴⁰ Following Marshall McLuhan’s description of “infrastructure as media,” she argues further that infrastructure as embodied memory is also “a meeting point of ecology and history.”⁴¹ Bob Johnson makes a similar claim regarding petroculture’s embodied memory in his work on the role of fossil fuels in the production of American culture, arguing that forms of cultural

production featuring carbon derivatives not only structure both an experience and understanding of the world, but also the ways in which the suppression of carbon dependency drives its reappearance as embodied memory.⁴² In LeMenager's and Johnson's treatments, embodied memory signifies the return of a repressed energy infrastructure.

A Methodology of Exposure

The materialities at work in nuclear photography which register contradictions between the brute inputs of nuclear fallout and cultural representations of nuclearity — highlighted, for example, by the “atomic shadows” left by exposure to nuclear fallout — constitute an energy unconscious that looks quite different from that of carbon. The atomic unconscious that emerges in nuclear photography is less structural and more iconic, less embodied and more diffuse, relating to questions of visibility, invisibility, and exposure rather than habitus or embodiment.⁴³ Barbara Marcon, for example, talks about “atomic shadows” as a form of testimony; Ned O’Gorman and Kevin Hamilton refer to Atomic Age aesthetics as a “performance of collective memory” in which the forgotten origins of nuclear hegemony are buried within a cultural icon; and Lippit refers to the x-ray as “a kind of living remnant, a phantom subject” that “retains the dimension and shape of its object while rendering its inside.”⁴⁴ What each of these characterizations has in common is the “problem of exposure,” which elin o’Hara slavik argues is central to both photography and the history of the atomic age.⁴⁵ Nicole Shukin affirms this historical interdependency, stating that “in both their means and their ends photography and nuclear science share a history as well as material resources and techniques, particularly ‘exposure’ of bodies to light, either in the form of visible or invisible rays.”⁴⁶ Accordingly, as Thomas Pringle suggests, this allows photography to serve as a material index or “early variety of Geiger counter” that “repurpose[es] aesthetics into a functional diagnostic tool for *the general barometry of light*.”⁴⁷ slavik, and other theorist-practitioners of nuclear photography, utilize this methodology of exposure to “make visible the unseen, to reveal what is denied and hidden.”⁴⁸

What, exactly, does this methodology, which is so intimately connected to discourses of rupture, promise to reveal? In trauma theory, it promises, of course, to reveal repressed memories, which contribute to the broader cultural movement toward the re-valuing of forgotten histories. In the context of nuclearity, however, it promises to reveal the persistent materiality of nuclear exposure. Following the dialectic of the resource aesthetic, it takes two related forms: one material, the other figural. In the former constitution, the methodology of exposure reveals the material exposure of the photograph to the invisible rays of nuclear energy. In the latter, it emerges in conjunction with discourses of testimony and witnessing that render nuclear photographs, in Yaelle S. Amir’s words, “material witness[es] to the effects of nuclear energy.”⁴⁹ In her curatorial statement, Amir describes the material persistence

of nuclear traces in the following way: “The exhibition *Reactive Matters* explores the ways in which nuclear energy permeates our surroundings — its presence lingers in the soil we tread, the water we consume, and the roads we often travel.” While this statement sounds similar to LeMenager’s description of oil infrastructure as embodied memory, there is a clear distinction between the constitution of the carbon unconscious and that of the atomic. Instead of registering as a performance encoded in the body, atomic infrastructure registers as alienated memory through which the remains of nuclear disaster are animated as material witnesses. Fetishized, these material witnesses perform a double elision: first, they stand in as substitutes for the living witness, the *hibakusha*; second, as substitutes for the social relations of spectacular violence, they elide the social relations of slow violence underwrite the spectacle of atrocity.

This brief account of the relationship between nuclear memory and postcolonial capital demonstrates that memory is not just an object of analysis; it is also a methodology of exposure that promises to reveal the materiality of the energy unconscious at work within and across memory media. In elaborating its usefulness as a critical methodology for the energy humanities, I have demonstrated at least three things: (1) by placing the entwined histories of memory and energy alongside one another, with particular attention to the nuclear, I have demonstrated how each corresponds to colonial discourses of rupture; (2) by framing memory media (such as nuclear photography) as resource aesthetics, I have posited memory as both an aesthetic practice and a cultural resource that is embedded within cycles of accumulation, as well as a form of materiality and a mode of figuration where the former is eclipsed by the latter; and, finally, (3) by positing memory as a site of dispossession, I have suggested that the analysis of various memory media might help to track different expressions of the energy unconscious, which registers, in the case of the atomic unconscious, not only the energy invisibilities that accompany the transition to nuclearity but also the forgotten materiality of nuclear memory itself. Without such a materialist perspective, we are left with the false radiance of a moral revolution whose advocates sit on the winning side of nuclear history and whose discourses serve the interests of postcolonial capital.

Notes

1. The full transcript of Obama's tribute speech was reprinted by *The New York Times* the day of the commemoration. "Text of President Obama's Speech in Hiroshima, Japan," *The New York Times*, March 28, 2016, <http://www.nytimes.com/2016/05/28/world/asia/text-of-president-obamas-speech-in-hiroshima-japan.html>
2. Patricia Yaeger, "Editor's Column: Literature in the Ages of Wood, Tallow, Coal, Whale Oil, Gasoline, Atomic Power, and Other Energy Sources," *PMLA* 126.2 (2011) 305–326.
3. For a broader discussion of postcolonial capitalism and its relation to labor and knowledge, see Sandro Mezzadra's "How Many Histories of Labour? Towards a Theory of Postcolonial Capitalism," *Transversal: Unsettling Knowledges*, European Institute for Progressive Cultural Policies, 2012, <http://eipcp.net/transversal/0112/mezzadra/en>.
4. Michael Niblett, *Fueling Culture: 101 Words for Energy and Environment* (New York, NY: Fordham UP, 2017) 138.
5. The concept of "energy invisibilities" belongs to Patricia Yaeger. I am using it in relation to the atomic unconscious to suggest that the atomic unconscious is comprised of energy invisibilities that accompany the transition to nuclearity.
6. Jay Winter, "The Memory Boom in Contemporary Historical Studies," *Raritan* 21.1 (2001) 52–66.
7. Kerwin Lee Klein, "On the Emergence of *Memory* in Historical Discourse," *Representations* 69 (2000) 136.
8. Andreas Huyssen, *Present Pasts: Urban Palimpsests and the Politics of Memory* (Stanford UP, 2003)
9. Memory scholars such as Shoshana Felman discuss the relationship between Freud's work on trauma and the idea of "history as trauma" discussed by Huyssen. In her remarks on Cathy Caruth's analysis, Felman suggests that Freud was responsible for the transformation of all history into trauma: "In an exemplary analysis of Freud's as yet uncharted legacy of trauma in his last work *Moses and Monotheism*, Caruth remarkably, paradigmatically, shows how the book itself — Freud's testament on *history as trauma* — is the site of an inscription of a historical trauma: that of Freud's dramatic departure from Vienna, then invaded and annexed by Hitler's Germany." Shoshana Felman and Dori Laub, *Testimony: Crisis of Witnessing in Literature, Psychoanalysis, and History* (New York, NY: Routledge, 1992) 174. Indeed, though Caruth doesn't pen this phrase exactly (history as trauma), in her reading of Freud she asks: "What does it mean, precisely, for history to be the history of a trauma?" (15). Her answer to this question is: "For history to be a history of trauma means that it is referential precisely to the extent that it is not fully perceived as it occurs; or to put it somewhat differently, that a history can be grasped only in the very inaccessibility of its occurrence" (18). She concludes with the claim that "history, like trauma, is never simply one's own, that history is precisely the way we are implicated in each other's traumas" (24). History, in Caruth's analysis undergoes an essential transformation; the history of trauma in particular is transformed into history as trauma in general. Cathy Caruth, *Unclaimed Experience: Trauma, Narrative and History* (Baltimore: Johns Hopkins P, 1996).
9. Both Winter and Huyssen have argued this perspective. Winter, in particular, claims that "[t]he creation and dissemination of narratives about the past arise out of and express identity politics" (Winter, "The Memory Boom" 54).

10. Jay Winter, *Remembering War: The Great War Between Memory and History in the Twentieth Century* (Yale UP, 2006) 36.
11. In *Unclaimed Experience*, Cathy Caruth emphasizes the logic of rupture not only in her references to trauma's belated representation but also to its appearance as a "break in the mind's experience of time" (61). Transferring the language of psychic experience (in which the symptom is inscribed on the body as text) to narrative representation, Caruth argues that the trauma text is "the story of a wound that cries out, that addresses us in the attempt to tell us of a reality or truth that is not otherwise available," a wound that "is experienced too soon, too unexpectedly, to be fully known" (4).
12. The problem with such a model is not only that it relies on the analogical importation of an individual model of psychic trauma into the order of cultural representation, but also that it is based on a fundamental assumption that history proceeds chronologically. Walter Benjamin and Guy Debord, as well as a number of contemporary theorists of primitive accumulation, including Tony C. Brown and Massimiliano Tomba, are critical of this abstract, linear historical time for its complicity with not only the accumulation of capital but, in Debord's words, "the victory of the bourgeoisie." Guy Debord, *Society of the Spectacle*, trans. Ken Knabb (New York: Zone Books, 2006) 51. See also Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction," *Illuminations*, ed. Hannah Arendt, trans. Harry Zohn (New York: Schocken Books, 1968) 217-252; Tony C. Brown's "The Time of Globalization: Rethinking Primitive Accumulation," *Rethinking Marxism* 21.4 (2009) 571-584; and Massimiliano Tomba, "Historical Temporalities of Capitalism: An Anti-Historicist Perspective," *Historical Materialism* 17 (2009) 44-65.
13. Michael Rothberg, *Multidirectional Memory: Remembering the Holocaust in the Age of Decolonization* (Stanford UP, 2009) 89.
14. This postcolonial critique of trauma theory is echoed by Slavoj Žižek's materialist critique of trauma. Following Catherine Malabou in her elaboration of a "material unconscious," Žižek argues that the Freudian model of trauma is Western-centric and cannot account for experiences of trauma that do not take the form of a sudden, unexpected event (such as chronic civil war). Departing from Malabou, however, he maintains that even her critique focuses to specifically on content rather than form. Traumatic shock, he suggests, should not be understood as a repetition of substance, but of the very act of erasure. Such a position is useful in articulating the atomic unconscious. In this model, the methodology of exposure would reveal not the erased content, but this very act of erasure. Slavoj Žižek, "Descartes and the Post-Traumatic Subject," *Filozofski vesting* 29.2 (2008) 9-29.
15. Gabrielle Hecht, "Nuclear 2," *Fueling Culture: 101 Words for Energy and Environment*, eds. Imre Szeman, Jennifer Wenzel, and Patricia Yaeger (New York: Fordham UP, 2017) 246.
16. Gabrielle Hecht, "Nuclear Ontologies." *Constellations* 13:3 (2006) 322.
17. Hecht, "Nuclear Ontologies" 323.
18. Gabrielle Hecht, "Rupture-Talk in the Nuclear Age: Conjugating Colonial Power in Africa," *Social Studies of Science* 32.5-6 (2002) 691-727
19. Hecht, "Rupture-Talk" 720.
20. Andreas Huyssen, "Present Pasts: Media, Politics, Amnesia," *Public Culture* 12.1 (2000) 33.
21. The modern prison system is one such example of the incorporation of the remains of previous stages of accumulation. With the abolition of slavery, which Marx argues is one of the five forms of

extra-economic violence (alongside conquest, robbery, murder, and land enclosure) through which the processes of primitive accumulation take place, former slaves that could not be incorporated into the wage-labor system compose a large percentage of the prison population. See Karl Marx, *Capital Vol. I*, trans. Ben Fowkes (New York: Penguin, 1990 [1867]), and Angela Davis's *Are Prisons Obsolete?* (New York: Seven Stories P, 2003). We see a variation of this situation in the closure of former political prisons, such as Robben Island, that have been transformed into museums — the former inmates are often reincorporated as tour guides.

22. Brent Ryan Bellamy, Michael O'Driscoll, and Mark Simpson, "Introduction: Toward a Theory of Resource Aesthetics," *Postmodern Culture* 26:2 (2016).
23. Imre Szeman, "When Energy is the Focus: Methodology, Politics, and Pedagogy — A Conversation with Brent Ryan Bellamy, Stephanie LeMenager, and Imre Szeman," *Postmodern Culture* 26.2 (2016).
24. In the Canadian context, Peter C. Van Wyck claims that the Sahtu Dene of Great Bear Lake, who mined uranium used in the development of the bombs detonated in Japan, suffered a similar eclipse of knowledge. Tracing the trade routes of fissionable uranium in Britain, Canada, and the United States, he states: "Until the bombs were dropped on Hiroshima and Nagasaki in August 1945, virtually all of this was carried out in secret. Workers at the mine site were apparently unaware of the purpose of the ore, or at least this is the claim one finds most frequently." "The Highway of the Atom: Recollections Along a Route," *Topia* 7 (2002) 100n2.
25. Rosalind Krauss, "The Cultural Logic of the Late Capitalist Museum," *October* 54 (1990) 11.
26. Wolfgang Ernst, cited by Susan A. Crane, ed. *Museums and Memory* (Stanford UP, 2000) 27.
27. Walter Benjamin and Rosalind Krauss both anticipated this emerging role of the museum as processor by situating it in the context of the capitalist mode of production, elucidating transitions in the functions of the art object under its industrial mode and the exhibition within its later logic respectively. In "The Work of Art in the Age of Mechanical Reproduction," Benjamin illustrates the ways in which technologies of mass reproduction transformed the work of art from religious to commodity fetish (replacing the divine with the social relations of production), which results in the tipping of the scales in favor of exhibition rather than cult value. And, in "The Cultural Logic of the Late Capitalist Museum," Rosalind Krauss elucidates a similar transformation of the exhibition itself during capital's later stages. Accordingly, Krauss demonstrates the ways in which the synchronic or encyclopedic museum, under the influence of minimalism, "would forego history in the name of a kind of intensity of experience" (9). In short, it would become "a space from which the collection has withdrawn" (4). This new cult of experience represents the generalization of exhibition value, or the exhibitionist properties of the modern museum extended to their logical conclusion. Thus, while the space of exhibition was from the outset a space for working through social and political tensions (a role already evident in the seventeenth-century French salon), its institutionalization within the context of contemporary capital points to the specific role it would come to play in the processing of social and political life, particularly in terms of aesthetic experience.
28. Alison Landsberg, "America, the Holocaust, and the Mass Culture of Memory: Toward a Radical Politics of Empathy," *New German Critique* 71 (1997) 79.
29. Landsberg, "America, the Holocaust, and the Mass Culture of Memory" 79–80.
30. In his historical revision, Ran Zwigenberg places Hiroshima at the center of global memory

- culture. Arguing that the role of the Holocaust was, from the outset, intertwined with Hiroshima, he demonstrates how Hiroshima not only served as a reference point for the factors leading to the Holocaust but also provided the moniker “holocaust” which originally signified “nuclear anxieties”; *Hiroshima: The Origins of Global Memory Culture* (Cambridge: Cambridge UP, 2014) 12–13.
31. Maximilian Mayer, “Nuclear Ontologies, Technopolitics in Postcolonial Spaces, and the Cold War as Transnational History: An interview with Gabrielle Hecht,” *The Global Politics of Science and Technology — Vol. 1: Concepts from International Relations and Other Disciplines* (Berlin: Springer, 2014) 277.
 32. Mayer, “Nuclear Ontologies” 321.
 33. “Nuclear Ontologies” 278.
 34. Ned O’Gorman and Kevin Hamilton, “The Diffusion of an Atomic Icon: Nuclear Hegemony and Cultural Memory Loss,” *Rhetoric, Remembrance, and Visual Form* (New York: Taylor and Francis, 2012).
 35. O’Gorman and Hamilton, “The Diffusion of an Atomic Icon” 8–9.
 36. Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Cambridge: Harvard UP, 2011) 2.
 37. Nixon, *Slow Violence* 3.
 38. Yaeger 309.
 39. Brent Ryan Bellamy, “Into Eternity: On Our Waste Containments and Energy Futures,” *Paradoxa* 26 (2014) 145–158; Vivasvan Soni, “Energy,” *Fueling Culture: 101 Words for Energy and Environment* 133; Imre Szeman, “On Oil and Philosophy,” *Contours Journal* (2015), 36–40n.
 40. Stephanie LeMenager, *Living Oil* (Oxford UP, 2013) 104.
 41. LeMenager, *Living Oil* 27, 193.
 42. Bob Johnson, *Carbon Nation* (Lawrence: UP of Kansas, 2014).
 43. Despite my claims, the clear alignment of literature with the carbon unconscious and photography with the atomic unconscious is necessarily overdetermined. Their polarization is not so clear. Demonstrating the role of photography in the production of a carbon unconscious, LeMenager suggests that Dick Smith’s images of dead shore birds after oil spills recall “photography as itself memory practice — a means of taking something into the self, repurposing it for the self, giving it a story and place” (38). Foregrounding the role of literature in the production of an atomic unconscious, science fiction writers such as H.G. Wells, who included descriptions of nuclear explosions, were read by Leo Szilard long before he began working with Oppenheimer and anticipated the invention of the atomic bomb. Nevertheless, in our present moment the embodied memory of the carbon unconscious is more deeply aligned with a literary consciousness and the atomic with the photographic. For further discussion on the development of a photographic consciousness, see my article “Memory, Trauma, and the Matter of Historical Violence: The Controversial Case of Four Photographs from Auschwitz,” *American Imago* 71.4 (2014) 391–415.
 44. Barbara Macron, “Hiroshima and Nagasaki in the Eye of the Camera: Images and Memory,” *Third Text* 25.6 (2011) 792–793; “The Diffusion of an Atomic Icon” 189–190; Akira Mizuta Lippit, “Phenomenologies of the Surface,” *Qui Parle* 9:2 (1996) 39.
 45. elin o’Hara slavick, “Hiroshima: A Visual Record,” *The Asia-Pacific Journal* 7:30 (2009) <http://apjif.org/-elin-o’Hara-slavick/3196/article.html>
 46. Nicole Shukin, “The Biocapital of Living — and Art of Dying — After Fukushima,” *Postmodern*

Culture 26.2 (2016).

47. Thomas Pringle, "Photographed by the Earth: War and Media in Light of Nuclear Events," *Necus: European Journal of Media Studies* (2014) <http://www.necus-ejms.org/photographed-earth-war-media-light-nuclear-events/>.
48. slavick, "Hiroshima" 310.
49. Yaelle S. Amir, "Curatorial Statement," *Reactive Matters* (Newspace Center for Photography, Portland, OR, 2016).

The English word "holocaust", derived from the Greek language's term "holokaustos" meaning "completely burnt", is commonly defined as "a great destruction resulting in the extensive loss of life, especially by fire.". The English word "nuclear\nukes", derived from the Latin language's term "nucleus" meaning "kernel", from nucula, little nut, diminutive of nux, nuc-, "nut". In this case it is relating to weapons, or the use of weapons, which use the power produced when the nucleus of an atom is These pro-nuclear literacy primers construct postcolonial nuclear weapon states as atomic subalterns, while simultaneously provoking the troubling counter-discourses of nuclear nationalism, which perceive nuclearization as a strategy of postcolonial resistance. I argue Ghosh and Patwardhan's texts explicate the subjectivity of the real atomic subalterns: the victims of nuclearization who are successfully elided from state-sponsored hegemonic nuclear historiography. In emphasizing Rey Chow's assertion of "the " Mapping the Atomic Unconscious: Postcolonial Capital in Nuclear Glow more. by Katherine Lawless. During his visit to Hiroshima on May 27, 2016, the first ever to be made by a sitting U.S. president, Barack Obama claimed that " the memory of the morning of August 6, 1945, must never fade." 3 In my elaboration of the atomic unconscious of postcolonial capital, I adapt Michael Niblett's question regarding the mapping of energy regimes in relation to cultural media. Suggesting that patterns. Research Interests The atomic unconscious that emerges in nuclear photography is less structural and more iconic, less embodied and more diffuse, relating to questions of visibility, invisibility, and exposure rather than habitus or embodiment.⁴³ Barbara Marcon, for example, talks about "atomic shadows" as a form of testimony; Ned O'Gorman and Kevin Hamilton refer to Atomic Age aesthetics as a "performance of collective memory". This brief account of the relationship between nuclear memory and postcolonial capital demonstrates that memory is not just an object of analysis; it is also a methodology of exposure that promises to reveal the materiality of the energy unconscious at work within and across memory media.