

NEH Application Cover Sheet

America's Media Makers

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Field of Expertise: History and Philosophy of Science/Technology/Medicine

INSTITUTION

President and Fellows of Harvard College
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APPLICATION INFORMATION

Title: *Containment: A film about the nuclear landscape now and for the next 10,000 years*

Grant Period: From 8/2013 to 7/2015

Field of Project: Humanities

Description of Project: A feature documentary that would join film to humanities scholarship in investigating the historical production of nuclear waste, the present character of communities living with that waste, and the combined efforts of sociologists, anthropologists, writers, and scientists to imagine how to guard this material into the 10,000-year future. Drawing on important work in environmental (land) history, ethics, and politics, as well as work on the cultural anthropology of the nuclear world, the film "Containment" examines how the Cold War transformed the American landscape, how nuclear waste compels us today—in lands across the United States and beyond—to examine our most basic views about the control and ethics of land use, and how 24,000-year half-life of plutonium pushed scientists and humanists into the Congressionally-demanded business of imagining a ten-thousand year human future in order to mark and isolate nuclear waste.

BUDGET

Outright Request	\$380,634.00	Cost Sharing	\$361,927.00
Matching Request		Total Budget	\$742,561.00
Total NEH	\$380,634.00		

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America's Media Makers: Production Grants
Project: *Containment* – a documentary film
PI: Peter Galison, Harvard University

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Narrative

A. Nature of the Request

Nature of the Request

We are requesting production funds to finish a feature documentary that would join film to humanities scholarship in the investigation of the historical production of nuclear waste, the present character of communities living with that waste, and the combined efforts of sociologists, anthropologists, writers, and scientists to imagine how to guard this material into the 10,000-year future. Drawing on important work in environmental (land) history, ethics, and politics, as well as work on the cultural anthropology of the nuclear world, the film “Containment” aims to underscore three humanities themes:

Theme 1: The nuclear Cold War transformed the American landscape, and is now altering our understanding of “wasteland” and “wilderness.”

Theme 2. Nuclear waste compels us today—in lands across the United States and beyond—to examine our most basic views about control of the land, the ethics of land use, and our response to uncertainty.

Theme 3: The 24,000-year half-life of plutonium pushed scientists—but, importantly, also humanists—into the Congressionally-demanded business of imagining a ten-thousand year human future in order to mark and isolate nuclear waste.

With a cost share amount of \$361,927, (against a total budget of \$742,561) we are requesting a total of \$380,634 from the NEH (\$302,090 direct, \$78,544 indirect). Funds raised to date come, among others, from the Sundance Documentary Fund and the American Council of Learned Society among other sources. We are about 2/3 of the way through our shooting, and enclose a link to our 20 minute sample to convey the character of the project. The requested funds from the NEH would allow us to complete the film with some follow-on shooting in Carlsbad, New Mexico, the Savannah River communities near the Savannah River Site, and Fukushima Prefecture. These funds would also allow us to realize our outreach plan that includes presenting the film to traditionally underserved populations, and establishing a website that would not only include ancillary and pedagogical material for students and the interested public, but also provide supplementary filmed material that could be studied by scholars and citizens interested in exploring the topics of the film in greater depth. We include a letter of interest from their strand, POV.

B. Program Synopsis

This is a film about the Cold War past, the contested present, and the imagined far-future of nuclear waste. We—and not just in the United States—ran helter-skelter into the atomic age, putting speed above all, and leaving an expanding sprawl of radiological material. Siting and containing that waste has been and will remain one of the most expensive societal projects ever undertaken—easily, for the United States, reaching half a trillion dollars. Visually, we want to convey the scope and scale of this radio-waste legacy. The aim of the film is to be more than a white paper on the issue: we want to juxtapose on the one side, the all-too material reality of nuclear waste (its look, its location, its scale as well as the way

people work with every day, and the stance toward it taken by those who live nearby). On the other side rises the astonishing task undertaken by the department of Energy when it created the Future and Marker Panels: tasking a mix of humanists and scientists with the necessary and impossible task of imagining the 10,000 year future, and protecting that future from the radwaste we have left.

Act I: the Cold War past for which we use archival footage and the understanding of the past provided by our characters—organized around themes and structures that have emerged in Cold War historical writing, approaches that pay attention to the land as well as broader policy. The debt to historians of the land is clear—filming the nuclear territories above ground and below is central to our task.

Act II: the post-Cold War present in the midst as the various groups (nuclear workers, activists, ordinary citizens) struggle to come to terms with one another about what should be done with nuclear waste. For this part we are filming in part observationally—at meetings between townspeople and government officials, in the small churches and gathering places of the atomic towns, deep in the underground nuclear repository, and in the midst of one of the world’s largest nuclear weapons factories, now a clean-up site. Here too we supplement the filming with interviews, the whole informed by the work of humanistically-oriented nuclear anthropologists like Joseph Masco, Hugh Gusterson, and Adriana Petryna.

Act 3 is about the necessary—and some would say also impossible—task set by Congress: to anticipate the nature of society 10,000 years now, sufficiently well to grasp the means by which people all those generations in the future might stumble, inadvertently into the waste. And then, so Congress demanded, the DOE should erect monuments proof, as much as possible, against this intrusion. We handle the future through a mix of interviews with the futurist-humanists who actually wrote the Department of Energy scenarios, joined to a limited-animation graphic novel-like sequence drawn by one of the most admired contemporary graphic novelists, Peter Kuper, who has won broad acclaim for his visual interpretation of Kafka’s *Metamorphosis*. Taking off from the Marker Team’s own landscape architectural drawings, we have engaged David Lobser, one of the best of a new breed of 3D animators, to develop moving sequences through a dimensionalized version of the actual drawings made by the warning team. We will no doubt have some intercutting of the acts to hold the arc of the film more firmly in view.

In short, the goal of the film is to follow the waste, to track it historically, observationally, and futurologically—to show how in each stage it provokes deep questions about our humanity. A history of waste is, in a certain sense, a history of us from AD 1941 to AD 12,000.

C. Humanities Content

Theme 1: The nuclear Cold War transformed the American landscape, and is now altering our understanding of “wasteland” and “wilderness.”

[T]he trouble with wilderness is that it quietly expresses and reproduces the very values its devotees seek to reject. The flight from history that is very nearly the core of wilderness represents the false hope of an escape from responsibility, the illusion that we can somehow wipe clean the slate of our past and return to the tabula rasa that supposedly existed before we began to leave our marks on the world.

William Cronon, “The Trouble with Wilderness in Uncommon Ground: *Rethinking the Human Place in Nature*, NY: W. W. Norton & Co., 1995, 69-90.”

[T]he Rocky Mountain Arsenal is now among the worst toxic waste dumps in the United States. But that is not all it is. Partly because the site is so toxic that most people have avoided it for decades, it has emerged as one of the West’s most remarkable wildlife refuges. Its wildlife populations are more diverse and abundant than those anywhere else in the central Rockies, so the arsenal staff now devotes considerable energy not just to cleaning up toxic waste but to promoting environmental education at the

site. More and more visitors come to the arsenal to enjoy its “natural” wonders, leading some to dub it the “nation’s Most Ironic Nature Park.”

William Cronon, *Uncommon Ground*, pp. 27-8

One of the great movements in historical writing has been the rise of Environmental History. Through the work of William Cronon and others, we have come not only to historicize writing about environmental sciences and movements, but to see the *land itself* as being a character in history. Cronon’s first book, *Changes in the Land*, was stunning, in its clear demonstration that the land had not recently fallen from a state of Edenic grace into corruption. It had been modified, altered, and bounded back all the way to the times when Native Americans were burning brush to facilitate hunting and early settlers were fencing in livestock. Both radically altered the land: “wilderness” as a state of purity recedes ever farther as one peers deeper into the past.

As Cronon pushed his scholarship toward the historical present, these issues of purity and corruption grew ever clearer—and more contentious. When he argued, in “The Trouble with Wilderness” that the very category was a danger to responsible environmentalism, he set off a firestorm of debate. In a way the compendium of writings gathered in J. Baird Callicott and Michael P. Nelson’s nearly 700-page volume, *The Great New Wilderness Debate* (Athens Georgia: University of Georgia Press, 1998) reflects the heat of that Cronon contention. Amidst responses from left and right, America and abroad, native Americans and environmentalists, philosophers and legal writings, a new chapter opened on the meaning of land and especially wilderness land, in the American psyche. Work by humanists—and scientists—on nuclear lands at WIPP and beyond have begun to form an immense literature, now addressing sites across the U.K., Africa, Ukraine, and throughout the American West.ⁱ

This theme (the nuclear transformation of the land) will emerge in many ways in the film itself. We have already filmed, for example, the most biodiverse site west of the Mississippi, a site located in the heart of the Savannah River Site, the single most nuclear contaminated facility in the United States. There, in the Savannah River Ecological Laboratory, we have been filming the biologists working with radioactive alligators and turtles. But we are also using the first act of the film (discussed in the Treatment section below, using archival material), to show the construction of the site—at one of the most active moments of the Cold War. For it was there that much of the material (tritium) needed for the all-out race to get the hydrogen bomb was built, along with a third of the nation’s Cold War supply of plutonium. At 300 square miles, the site clearly stands out from miles above—it is a world unto itself. Understanding this land historically, the land of the Waste Isolation Pilot Plant and the land around Fukushima would bring to the problem of waste a materiality and visuality that will be helpful for all sides in the struggle to assign meaning to nuclear territories.

The historical story about Cold War nuclear lands is framed through and through by the work of historians. Though the story is told through the voices of people working at or living near the site, the frame, selection, and understanding of this history builds on the work of many historians of the Cold War, including Galison and Bernstein’s “In Any Light: The Building of the Hydrogen Bomb.” But telling this story of waste, risk, fear, through a visual means, grounded in the history of the land, could be more than an illustration of humanities work—the goal is to make the film part of scholarship itself.ⁱⁱ

In short, the goal is to build on the line of work that Cronon set out some years ago, making land the centerpiece, informed by written history but put on the screen.

Theme 2. Nuclear waste compels us today—in lands across the United States and beyond—to examine our most basic views about control of the land, the ethics of land use, and our response to uncertainty.

“Area G [Los Alamos National Laboratory’s primary nuclear waste site, bordering the lab and San Ildefonso Pueblo] opened in 1957 with the bulldozing of five Pueblo ruins. Each new burial pit has erased ruins and cultural sites that serve as points of reference for Pueblo peoples generally, and San Ildefonso in particular. Area G grew ...from a five-acre site in 1957...to a sixty-three acre site in 1993, thereby offering a peculiar index of U.S. national investments in the plateau. ... Area G became a highly politicized regional issue in the early 1990s, when antinuclear groups and Pueblo officials learned of plans to more than double the size of the nuclear waste site.”

Masco, *Nuclear Borderlands: The Manhattan Project in Post-Cold War New Mexico* (Princeton: Princeton University Press, 2006), p. 149

“Longtime Nuevomexicano land grant activist Antonio “Ike” De Vargas formed a new group ...to fight the [spotted owl-based restrictions on firewood gathering], and in a commentary published in the Santa Fe New Mexican wrote: ‘The most irritating thing to me is the arrogance displayed by the enviromaniacs in Santa Fe and their assertions that this land is their land. I think it is very important for these people to know and understand that many of our northern villages predated the U.S. Forest Service and the U.S. government and that any abuse of the land has been done by those two entities, not the people of these villages.’”

Masco, *Nuclear Borderlands*, 185.

Our societal response to nuclear sites is wildly diverse, as anthropologists like (board member) Joseph Masco, have shown. From outside New Mexico, people might think that the Pueblo or other Native Peoples, might respond the same way as the Nuevomexicanos. Or that Northern New Mexico might see the waste isolation site as did those in the south. Not true at all, as we have found by extended filming. Northern New Mexico, especially around Albuquerque and Santa Fe, fought bitterly to block the transport of nuclear waste through their cities. Southeastern New Mexicans, never ferociously against the nuclear waste repository and for at least a generation more conservative politically than the north, have grown overwhelmingly supportive of it. Many of the Pueblo residents have opposed the site—as on the Pueblo that Masco speaks about in the above quotation; while the Nuevomexicanos saw the environmentalists as carpetbaggers, and the nuclear industry and Department of Energy as offering desperately needed resources and jobs. Sacred versus profane, jobs versus contamination—the struggle over the meaning of the site has been cultural *and* consequential.

Humanists across the disciplinary spectrum have been involved. Think of the “ecocritic” Lawrence Buell, whose remarkable *Writing for an Endangered World*ⁱⁱⁱ and its predecessor volume have helped launch a myriad of studies that put the ecological squarely as a category of literary understanding. His notion, for example, “Toxic Discourse,” shows how broadly the theme of toxicity has penetrated literature—from the popular writings of Philip Dick (*Do Androids Dream of Electric Sheep?*) to John Brunner’s *The Sheep Look up*, or Paul Theroux’s *O-Zone*. He studies Don De Lillo’s *White Noise* for its section on the “airborne toxic event” A.R. Ammon’s 1993 National Book Award poem, *Garbage*—or Thomas Pynchon’s *W.A.S.T.E.* For Buell, it is crucial to see the stream of waste as symbolic and grounded in evidence.

More generally, as our nuclear humanists have taught us—including Masco, Buell, or philosopher of science Shrader-Frechette, the nuclear never was confined to “merely” an argument or issue surrounding national defense. Or even to a pro- versus con- argument—or against--accepting waste into a locality. Trust and fear, environmentalism and “wise use” stances toward the land co-exist and saturate our discussions. Concerned geologists and scientists (including the now Secretary of the Nuclear Regulatory Commission, Allison Macfarlane) have written about the danger of burying the waste at Yucca Mountain. Their 2006 *Uncertainty Underground* a striking counterpoint to Schrader-Frechette’s detailed critique of that site in her 1993 *Burying Uncertainty: Risk and the Case Against geological Disposal of Nuclear Waste*. From another field: the juridical writing of environmental lawyer Michael B. Gerrard, *Whose Backyard, Whose Risk. Fear and Fairness in Toxic and Nuclear Waste Siting* puts nuclear issues at the crossroads of law and community, litigation and conceptual analysis.^{iv} What we are seeing is a

remarkable intersection of humanist concerns from literature and philosophy to Cold War history, anthropology, legal writing, and sociology.^v

“Containment” is not an advocacy film—on the contrary, we mean this cluster of themes, the present, contestation over nuclear land use, risk, consent, environmental justice, and rightful ownership to emerge strikingly throughout the observational (present) part of “Containment.” If the first part of the film is dominated by a historical sensibility, this second comes into focus through a present-oriented, more ethnographic or observational one. Here, in the present, we encounter, at all three of our sites a confrontation among groups that can seem insuperable at every level. But intriguingly we find that there are moments, even amidst global disagreement (about the ultimate status of land, about the long-term future of nuclear power, about nuclear weapons accord), there are nonetheless finite arenas of overlap that can be quite important. An American Indian group and the nuclear industry—at loggerheads over so much—can come together over the urgency of moving nuclear waste out of fragile pools near the reactors. We see this local accord—what I have elsewhere called “trading zones”—in the assembly of the many discordant groups at many meetings of President Obama’s Blue Ribbon Commission on Nuclear Waste (which we have filmed).^{vi}

The disposition of nuclear waste today is fiercely contested—bringing into the mix some of the least powerful and poorest groups, politicians and activists at every scale from local to state, regional, national, and global. It implicates the international politics and economics of energy production and it catalyzes broad and deep reflection about purity, danger, and uncertainty. For all these reasons, film could offer us a step, however partial, toward addressing the problem of nuclear waste with the beginnings of a common experience.

Theme 3: The 24,000-year half-life of plutonium pushed scientists—but, importantly, also humanists—into the Congressionally-demanded business of imagining a ten-thousand year human future in order to mark and isolate the waste.

“I wrote this first volume of *Foundations of Futures Studies* ... for people who wish to educate themselves for tomorrow, who want to understand the alternative possibilities for the coming future, and who want actively to control their future rather than merely accept it, passively and fatalistically. ...”
Wendell Bell, *Foundations of Futures Studies. History, Purposes, and Knowledge*. (New Brunswick, USA and London, UK: Transaction Press), p. xvii.

“An enormous range of expertise is often involved in designing social action. Take, for example, the decision to bury or not to bury low-level military nuclear waste in the Waste Isolation Pilot Plant (WIPP) in New Mexico. [T]o be considered are events or processes that might disturb the site and release radioactive materials into the environment any time within the next 10,000 years. Tornados? Earthquakes? Hurricanes? Floods? Volcanoes? Climate changes, such as a new ice age? A direct hit from a meteor from outer space? Human intrusion, such as mining or drilling...? How can the site be marked for such a long period to keep people away? Would people 1,000 or 5,000 years from now even understand warning markers written in contemporary languages? Would warning markers...attract future people to the site...?”
Wendell Bell, *Foundations of Futures Studies*, pp. 91-92.

The Department of Energy may not have expected the arrival of humanists in the late 1980s, but they arrived, and in force. In the long-running and furious national, regional, and local debate over siting the Waste Isolation Pilot Plant near Carlsbad, New Mexico, Congress set out its concerns, and the Environmental Protection Agency demanded, that the site be marked and the future warned for 10,000 years. Ten millennia was something of a compromise—on the one side it matched in order of magnitude

the vast time scale was set by the 24,100 year half-life of plutonium. On the other, 10,000 years was roughly the outside limit of recorded human history.

So the Department of Energy had to warn—they turned the task to their Sandia National Laboratory at Albuquerque, a lab that, with Livermore and Los Alamos, had primary responsibility for the development, delivery, and maintenance of nuclear weapons. Sandia then turned to an extraordinary group of people who, they hoped, would figure out how future societies might inadvertently penetrate the WIPP site, and then use that knowledge to design a system of warning markers that would prevent such an accidental intrusion.

The assembled group, sixteen people, came from a myriad of disciplines: astronomy, physics, geology, and materials science. But also (and in the end more importantly) the team came from sociology, semiotics, archeology, landscape architecture, science fiction, scientific illustration, anthropology, and futurology. Dividing into four groups of four, the futurists (on instruction from the Department of Energy) began to imagine future scenarios—stories, “little movie scripts” as some called them, that would, so Sandia hoped, cover the range of possible in-principle blunderings into the site. Each would become a cautionary tale, one that could be countered. For example, the team constructed a scenario of a tunnel dug from Houston to Los Angeles—the diggers never saw the surface markers. So the marker designers began planning on burying magnetic markers that could be detected from the side or bottom of the site. A returning space vehicle could crash into the site that might, years from now, be stripped of its surface markers for some reason—so the marker makers began constructing a radar-reflecting nuclear trefoil sign that could be detected by air- or spacecraft.

By interviewing and putting front and center this sociology of the future—by putting archeologists, anthropologists, illustrators, semioticians, and science fiction writers who worked on the project in front of the camera, we are setting humanists in a novel position. Not just as framing or commenting on the events of the world, but as primary historical actors themselves. As indicated in the treatment, we will be focusing on the scenario writing—and bringing these “little movie scripts” into visibility through a partially animated graphic novel.

Someone watching the film should come away with a sense of the profound conundrum this project presented. On the one side, the legally demanded, morally compelling argument that we must mark this waste. It exists, in huge and dangerous quantities—we have an obligation to the future that the future and marking teams felt acutely. On the other side, the future team registered a profound sense of the impossibility of extending futurology into the ten millennium future. As Ted Gordon, a former NASA engineer and for the last decades leading futurist, and one of our main characters, put it with a mixture of amusement, pride, and astonishment: “Ten thousand years? We can barely do twenty or thirty.”^{vii}

Scenarios in hand, the marker designers then set to work. One group thought that only universal signs could be trusted to last ten millennia—another thought that was a mistake. We should, they thought, expect the future to be perfectly capable of decoding our signs and symbols, our science, our warnings, our histories, just the way we unraveled the Rosetta Stone. Following this battle may not foretell the future 10,000 years out, but it will tell us a great deal about how, over the last 20 or so years, we constructed our own vision about what is lasting and what is memorable in human culture.

D. Project Format: “Containment” makes use of a variety of audio-visual styles and approaches. We spent several years gaining access to two of the most highly guarded nuclear waste sites in the world, The Waste Isolation Pilot Plant in Southern New Mexico and the Savannah River Site in South Carolina. In each of these sites we have closely filmed the process by which nuclear waste is handled. These scenes are observational, process-oriented and give a sense for the extraordinary precautions that such toxic materials require. Around each of these sites, we have filmed the lives of individuals who have had to make sense of the nuclear waste facilities in their midst, from mine workers who feel lucky to have a good job to other community members who are deeply unsettled by the what they perceive of as the too-dangerous risk of living so close to so much radioactive material. Intercut with these human sequences from the present will be highly constructed animated scenes of possible futures that depict inadvertent

intrusion into the nuclear waste repositories. The film will cut back and forth in time, from our vexed present to stories from the future—imagined by groups of scholars convened by the Department of Energy itself—in which our descendants for the next 10,000 years find ways to misunderstand our warnings, dig into the waste site, and release radioactive materials into the accessible environment. The film makes use of interviews with the creators of these scenarios, as well as those tasked with designing warning markers to keep people out of the site. And, finally, the film will feature archival material, mainly of the Cold War origins of our current state of nuclear waste.

E. Audience and Distribution: Our roll-out sequence would be to distribute *Containment* through procedures we developed to distribute and market our previous film collaboration, *Secrecy* (a film about national security secrecy and democracy), starting with an interactive website, through film festivals, theaters and broadcast (domestic/international). (Sundance Channel broadcast *Secrecy*; New Video and Netflix distributed the DVD; Netflix, iTunes streams the film). With Bullfrog, we created an educational DVD, Argot Pictures distributed theatrically, and Caitlin Boyle at Film Sprout handled semi-theatrical screenings. For *Secrecy*, we also produced a free, downloadable curriculum (used in high schools or universities) with the collaboration of “Choices for the 21st Century” based at Brown University. That curriculum is available without cost on our website, (secrecyfilm.com) and very widely distributed and publicized to the several thousand schools with which they are affiliated.

Growing from our previous relationship with Film Sprout—a highly successful organization devoted to connecting films to a grassroots audience--the following plan outlines a two-tiered speaking and screening tour in support of *Containment*. This plan is designed to cultivate and expand the audience, building off of the film’s distribution in film festivals, theatrical venues, and national broadcast and, to further and augment audience engagement and informal education opportunities in the wake of such traditional distribution. Audience cultivation and engagement will be accomplished through direct interactions between the filmmakers and audiences, and through a series of guided community screenings intended to foster real-time community involvement.

As filmmakers, we are committed to creating an outreach plan that will promote dynamic and vital encounters between media-makers and audiences of differing socioeconomic, political, educational and cultural backgrounds. It will be Film Sprout’s aim, through the coordination of the *Containment* screening and speaking tour, to encourage audiences to see this film as an opportunity for civic, intellectual and cultural engagement in communities who might not otherwise be exposed to the project. In this regard, as well, we are eager, for example, to place short video/animation content onto PBS’s Learning Media online Library.

The first component of the *Containment* outreach is envisioned to comprise five “marquee” screenings in select venues near those American cities where nuclear energy production, waste and storage is of paramount consequence to legislators, policymakers, industry stakeholders, and ordinary citizens. The screenings, which will be timed to straddle the 12 weeks before and after the film’s national broadcast and/or the 12 weeks following the film’s theatrical release (which in turn will follow its circuit of festival premieres), will each feature not only the film itself, but also a presentation by the filmmakers, along with local experts and stakeholders, followed by a town hall-style public discussion of the issues presented in the film. While impossible to guarantee audience numbers, our past experience suggest that several hundred people will attend each “marquee” venue, and the screenings will be promoted and publicized as news pegs on which journalists in both traditional and new media can hang local and national stories about nuclear energy waste disposal policy.

The following chart, while necessarily subject to revision, is meant to describe the kinds of events, locales, and possible speakers. Many of these locations are selected because of pre-existing relationships that Film Sprout has developed in recent years. While the details may change, we are confident that we

can plan on five "marquee" screenings, with no less than two attendant satellite screenings per tent-pole event, for a total of fifteen screenings in the year following the film's opening. What follows is a graph of this plan:

ANTICIPATED OUTREACH TOUR CITIES AND VENUES

Venue, City, State	Prospective Partner Organization(s)	Prospective Special Guests & Speakers	Prospective Satellite Screening Sites
Walter Reader Theater, Lincoln Center, New York City	(b) (4)	(b) (4)	(b) (4)
The Gerding Theater at the Armory, Portland, OR	(b) (4)	(b) (4)	(b) (4)
Utah Film Center, Salt Lake City, UT	(b) (4)	(b) (4)	(b) (4)
University Hall,	(b) (4)	(b) (4)	(b) (4)

Augusta State University, Augusta, GA	(b) (4)	(b) (4)	(b) (4)
Kenworthy Performing Arts Center, Boise, ID	(b) (4)	(b) (4)	(b) (4)

These showcase screenings are intended to be community-outreach and informal education forums that provide clear steps forward in two realms: First, how to gain access to reliable, nonpartisan, research-backed information on nuclear waste disposal and storage policy and practices as consumers and citizens; and Second, how to understand the web of legislative, judicial, political, and environmental circumstances currently affecting US nuclear energy and waste disposal decision-making; In addition to these showcase screenings, we will target a series of museum venues, for example, (b) (4)

, the (b) (4), (b) (4) the (b) (4) and the (b) (4)

Further, these showcase and museum screenings—all of them metropolitan areas currently “downriver” from planned or existing nuclear production or waste storage sites—will also provide a model for a series of smaller, facilitated screenings and conversations to take place in additional, satellite cities and to be hosted by local, grassroots, campus and civic organizations for audiences. Film Sprout will seek to collaborate with those local and regional organizations at the forefront of nuclear energy policy debates, lawmaking, citizen outreach and education, and research. These organizations will be engaged to collaborate on planning venues, creating discussion materials, publicizing events, and promoting the film screenings. At the end of the tour, Film Sprout will produce a final report detailing the scope and impact of the screenings.

F. Project evaluation: In addition to Film Sprout (see E. above), we will work with an evaluation team that will help collect data on the film’s impact. Outreach partners will develop relationships with environmental groups and museums serving audiences at the front-lines of nuclear energy production and/or waste disposal as the film nears completion.

G. Rights and permissions: Rights will be held by Redacted Pictures, the production entity that is creating the film. We have releases from all of our shoots on all of our sites and a contract with our

animators that grants us permission to use the work. We will have some amount of archival materials, especially around the construction of the Savannah River Site, and we will clear these rights using best practices. Likely costs for archival materials not found in the public domain is around \$20,000.

H. Humanities Advisers

Graphic Novel: Hillary Chute—a rising star in the English Department at the University of Chicago, has become one of the leading scholars on the graphic novel as a literary form. Prof. Chute has revolutionized the study of the genre within the Modern Language Association. She was Associate Editor of a book *MetaMouse* (2011) with Art Spiegelman which, alongside her (2010) *Graphic Women: Life Narrative and Contemporary Comics*, was received with acclaim. Her forthcoming volume ties the graphic novel to historical trauma of war, with special attention to Spiegelman in the United States and manga artist Keiji Nakazawa (who was born in and survived Hiroshima) in Japan. We are working with Hillary Chute alongside one of our leading graphic novelists at work today, Peter Kuper, to work through how to interpret, through graphic narrative, the futurists' scenarios.

Philosophy Advisor: Arnold I. Davidson is the Robert O. Anderson Distinguished Service Professor Department of Philosophy, Department of Comparative Literature, Divinity School, University of Chicago. Davidson has written extensively on ethics and political philosophy, the philosophy of history, Michel Foucault, Pierre Hadot, the history of religion, and the nature of interpretation. Author of, among other volumes, *Philosophy As a Way of Life: Spiritual Exercises from Socrates to Foucault* with Hadot, he has studied many aspects of historical epistemology—joining moral philosophy to the philosophy of knowledge. He will be advising “Containment” about the ethics of land, waste, and environmental justice—and on the nuclear waste planners' idea of establishing an “atomic priesthood” as a means of transmitting memory outside of physical markers.

Environmental History Advisor: William Cronon, Frederick Jackson Turner and Vilas Professor of History, Geography and Environmental Studies, University of Wisconsin, Madison. Cronon just finished his term as president of the American Historical Association—his work is directly important in the whole framing of the project. As the NEH will know, Professor Cronon has advised many NEH media projects. His body of work has been fundamental in launching this generation of work in the land and environmental history. Some of his volumes include *Changes in the Land: Indians, Colonists, and the Ecology of New England* (1983); the Bancroft prize winning, *Nature's Metropolis: Chicago and the Great West* (1991); and his co-edited, *Uncommon Ground: Rethinking the Human Place in Nature* (1996).

Ethnography Advisor: Joseph Masco, Associate Professor of Anthropology at the University of Chicago, is the winner of both the Rachel Carson and the Robert K. Merton prizes. His 2006 *Nuclear Borderlands: The Manhattan Project in Post-Cold War New Mexico* has rapidly become one of the best anthropological studies of nuclear lands. He has a forthcoming book on affect in national security, will be coming out with Duke University Press. Masco will be advising on the conflicts and alliances of present communities living and working around nuclear waste in New Mexico, the Southeast United States, and Japan.

Law Advisor: Martha Minow, Jeremiah Smith, Jr. Professor of Law, is the Dean of Harvard Law School, where she teaches human rights, civil procedure, privatization, first amendment law, and issues of science, technology and the law. She supervises work in film and human rights, and consults regularly on Fred Wiseman's films. Author of many books and articles, these include: Minow, Martha L. "Living Up to Rules: Holding Soldiers Responsible for Abusive Conduct and the Dilemma of the Superior Orders Defence," *52 McGill Law Review* 1 (2007) and "Outsourcing Power: How Privatizing Military Efforts Challenges Accountability, Professionalism, and Democracy," *46 Boston College Law Review* 989

(2005). In nuclear matters, regulations, laws, and responsibility are central--we work with her on the relation of law and nuclear waste.

Historian of Film and the Environment: Gregg Mitman, the Vilas Research and William Coleman Professor of History of Science, Medical History, and Environmental Studies at the University of Wisconsin-Madison. Mitman has served on NEH panels. He is an historian at Madison, founder of the environmental film festival there, former head of the Gaylord Nelson Institute for Environmental Studies, and author of numerous works connected to health, the moving image, and toxicity: *Reel Nature: America's Romance with Wildlife on Film*. Cambridge, Mass.: Harvard University Press, 1999. Winner of the 2000 Watson Davis and Helen Miles Davis Prize from the History of Science Society; Co-editor, with Michelle Murphy and Christopher Sellers, *Landscapes of Exposure: Knowledge and Illness in Modern Environments*. Osiris, 2d ser., 19 (2004). Mitman is the leading American academic working on environmental history and film—he will be consulting on precisely that intersection.

Shigehisa Kuriyama, the Reischauer Institute Professor of Cultural History, Department Chair. Professor Kuriyama's research explores broad philosophical issues (being and time, representations and reality, knowing and feeling) through the lens of specific topics in comparative medical history (Japan, China, and Europe). Author of *The Expressiveness of the Body and the Divergence of Greek and Chinese Medicine* (1999), Dr. Kuriyama studies the different views of health and medicine held by the ancient western and eastern civilizations.⁴¹ This book was the 2001 winner of the William H. Welch Medal of the [American Association for the History of Medicine](#). Shigehisa Kuriyama will be consulting with us about the culture surrounding health and radiation in post-Fukushima rural Japan, and in understanding the Japanese use of long-term markers to warn about the danger of Tsunamis.

I. Media team:

Producer/Director Peter Galison is the Pellegrino University Professor of the History of Science and of Physics at Harvard and Director of Harvard's Collection of Historical Scientific Instruments. In 1997 Galison was awarded a John D. and Catherine T. MacArthur Foundation Fellowship; won a 1998 Pfizer Award (for *Image and Logic*) as the best book that year in History of Science; in 1999 he was received the Max Planck Prize. Books include *How Experiments End* (1987), *Einstein's Clocks, Poincaré's Maps* (2003), and most recently, *Objectivity* (2007, with L. Daston). His theoretical physics work addresses unified field theory and phenomenology. He has worked extensively with de-classified material in his historical writings about 20th-century physics—and has appeared in and consulted for many PBS science programs. In 2000 he co-produced the film *Ultimate Weapon* (broadcast: History Channel) about the moral political debate surrounding the building of the H-bomb—and co-directed *Secrecy* with Robb Moss (broadcast: Sundance Channel). He co-curated “Iconoclasm” at the German Media Museum, and collaborated with artist William Kentridge on a performance/exhibit for *Documenta-13* (“The Refusal of Time”). He was a juror for the Sundance/Sloan award on film and science.

Producer/Director Robb Moss most recent two films (*The Same River Twice*, '03 and *Secrecy* '08, directed with Peter Galison) premiered at the Sundance Film Festival. *The Same River Twice* was nominated for a 2004 Independent Spirit Award, showed theatrically in more than eighty cities in the United States, and was listed by Jonathan Rosenbaum of the Chicago Reader as the Best Documentary of 2003. He has received grants from the MacArthur Foundation, The Ford Foundation, The Sundance Documentary Fund, and the American Council on Learned Societies. His work has been shown at the Museum of Modern Art, Lincoln Center, has been on the juries at such festivals as Sundance, Denver,

San Francisco, Chicago, Ann Arbor, Seattle, New England. He is on the Board of Directors for ITVS, is a creative advisor at the Sundance Documentary labs and has taught filmmaking at Harvard for 25 years.

Editor: Chyld King was co-editor for Errol Morris's Academy Award winning film, *The Fog of War*. Most recently he cut the Emmy nominated, *The Amish*, for PBS's American Experience, as well as two episodes for the Frontline and American Experience Series, *God in America*. He was the editor for Redacted Film's first feature, *Secrecy*.

J. Progress: In the past three years, we have been researching the issue of nuclear waste, gaining access to sensitive sites, making contacts with community members, and finding creative partners for our 2D (future scenarios animation) and 3D (Maya produced 3D simulations of warning markers) interventions. We have also been accumulating interviews and filming in our principle sites at The Waste Isolation Pilot Plant in Southern New Mexico and the Savannah River Site in South Carolina and Plant Vogtle in Georgia. During the NEH grant period, we would finish the production phase of the project, including mounting a major shoot in Japan (see Plan of Work below), film one more time in the communities of Shell Bluff, Georgia and Carlsbad, New Mexico, as well as finish the graphic novel/animation piece of the project. Following the completion of production, we would do the final post-production editing, sound design, mixing and on-line to prepare the project for its release in the Fall of 2014.

K. Plan of Work—Research and Film Work Already Undertaken:

August 2009-August 2010

Directors Peter Galison and Robb Moss research the history of the Waste Isolation Pilot Plant Nuclear Repository near Carlsbad, New Mexico. This included travel to the site and preliminary interviewing and shooting in the area. Begin discussions with Professor Hillary Chute about how we might represent the future scenarios of Inadvertent Human Intrusion into the WIPP Site for the next 10,000 years. These scenarios are from the 1999 Department of Energy commissioned report (written by a group of futurists, linguists, archaeologists and science fiction writers) that would help design markers to keep future generations from inadvertently entering the WIPP site for a period of 400 generations. Returned a year later to the WIPP Site with Cinematographer Leonard Retel Helmrich for major shoot in the nuclear waste facility (above and below ground). Begin logging and editing material with our editor, Chyld King. Research into the History of the Environment with consultant Professor Gregg Mitman.

January 2011-August 2011

Filming Obama's Blue Ribbon Commission on the Future of Nuclear Waste's visit to Northern and Southern New Mexico. This visit reveals how much the Northern part of New Mexico (Albuquerque and Santa Fe) disapproves of the WIPP site, and how much the Southern part of the State (Carlsbad) supports the disposal of nuclear waste at WIPP. Continuing to work with Professor Chute to identify artists and to imagine how a Graphic Novel style would help describe the complexity of attempting to communicate with our own species over millennia. Enacted a major shoot at the Savannah River Site (SRS), a 325 Square Mile nuclear factory that produced perhaps 40% of the Plutonium for Cold War Nuclear Weapons production. It is now a facility that has been re-engineered to clean up the nuclear waste they themselves produced. We also began to film in the communities that surround the SRS as well as the Nuclear Power Plant Vogtle, just across the Savannah River. Research in this section includes consultations with Professor Martha Minow at the Harvard Law School. Continuing to log and edit the footage with Chyld King.

June 2012—June 2013

Return to film in the communities in rural Georgia and South Carolina, along the nuclear corridor of the Savannah River. Working with Professor Chute and Graphic Novelist Peter Kuper, we begin animating the future scenarios of Inadvertent Human Intrusion. Pre-production for upcoming shoot in Japan. Continue editing existing material in preparation to complete the project in July, 2014.

NEH Granting Period

Production: August 2013-July 2014

Outreach and Distribution: August 2014-July 2015

Early August 2013

As we have been working for several years on this project, we will use the first month of our NEH grant period to re-engage our Humanities advisers in close conversations about our work to date and our finishing plans. This would mean intensive Skype meetings with Professors Cronon and Mitman over a several day period to look at work and discuss ongoing filmmaking and Humanities based strategies going forward. We would also mount Skype meetings with our remaining Board members to enlist their ideas as well. After our initial meetings with everyone, we will make a plan to show them cuts of the film every 3 months until the film is completed.

Late August 2013

Working closely with Professor Shigehisa Kuriyama, we will travel to the Fukushima Prefecture. This site was not intended to be a waste site—but now, like many sites of accidents, weapons testing, and decommissioning—has become one. We will be filming in and around the exclusion zones that surround the disabled nuclear power plants in Fukushima, Japan. The Fukushima story encompasses both the compromised cooling pools and the region itself. Worldwide, Ninety percent of spent nuclear fuel is currently stored in precarious pools. Nothing has made this issue more salient than the chain of catastrophes at Fukushima Daiichi where the 3/11 tsunami flooded reactors, precipitated explosions, and melted three reactors. When the American Nuclear Regulatory Commission called for 50-mile exclusion zone in the weeks following the Japanese disaster, they were only partially reacting to the threat of reactor core meltdowns: up to the highest levels of the Commission, officials were concerned that the spent fuel pools would lose containment, catch fire, and spew enough radiation into the air to force the evacuation of greater Tokyo with its 35 million inhabitants. We will be exploring how the land itself has become a form of nuclear waste. And we will explore the Japanese marking system, begun in 869AD, that tried, unsuccessfully, to warn future generations not to build along those parts of the coastline where tsunamis have occurred. It is a tragic model of the difficulty of speaking to the millennial future. Logging and editing new material.

September-December 2013

Finalize our work with Peter Kuper to create Graphic Novel/Animations of future Inadvertent Intrusion into the WIPP site. This period, will also include final shooting in the communities surrounding the Savannah River Site and the Waste Isolation Pilot Plant, as well as editing into the existing materials the final futures animation and the Japanese footage. In December we will send links to our cut and gather responses as we move forward to a fine cut. Begin outreach efforts with Film Sprout (the project's outreach coordinator). Identify evaluation team to begin establishing metrics for the success of the project.

January-May, 2014

Fine Cut and Picture Lock (including graphics and music). In March we will circulate a fine cut to our advisers in advance of locking picture.

June-July 2014: Final Screenings with our Advisors

Mix, on-line, duplication, ready the film for distribution

August 2014-July 2015

Distribution of film, including detailed outreach (described under E. above), festivals, theatrical, broadcast and home video.

L. Fundraising plan: Over the past three years we have raised \$280,000:

The Sundance Documentary Fund	\$ 45,000
Milton Fund	\$ 35,000
ACLS	\$ 20,000
LEF Foundation	\$ 5,000
Film Study Center Harvard	\$ 5,000
Bluestein Fund	\$ 25,000
Revson Fund	\$ 10,000
Individual Donors	\$135,000

This money was used to do pre-production, begin the production, and start to identify and work with our graphic novel and 3-D animation partners. Our application to the NEH is to finish the project, in the following amounts: Grant Request is for \$380,634 (\$302,090 direct costs, \$78,544 indirect costs). Total Cost Share amount is \$361,927 (\$287,244 direct costs, \$74,683 indirect costs). Total Cost remaining for project is: \$742,561.00. Working with Peter Broderick, one of the leading figures in independent documentary distribution, we will connect the film to as many distribution outlets as possible, including festival, theatrical, broadcast, home video, and grass roots outreach.

M. Organization profile: Harvard University, established in 1636, is devoted to excellence in teaching, learning, and research, and to developing leaders in many disciplines who make a difference globally. Harvard faculty are engaged with teaching and research to push the boundaries of human knowledge. The University has twelve degree-granting Schools in addition to the Radcliffe Institute for Advanced Study, 2100 faculty, an enrollment of over 20,000 degree candidates, and more than 360,000 alumni around the world. The Faculty of Arts and Sciences, where the PI is based, boasts a number of interfaculty initiatives and special degree programs that unite the Humanities with other disciplines. One of these is the Critical Media Practice Degree, a secondary degree for students who wish to integrate media production into their academic work. This secondary degree program was designed by Peter Galison along with 27 other colleagues—including Robb Moss—around the University in the humanities, the arts, and the human sciences. The CMP degree offers training in production and postproduction in different media formats and genres, including documentary and ethnographic film and video; hypermedia, internet, and database projects; approaches to working with audio, including phonography, exhibition, and music composition, as well as video and multimedia installation.

N. List of Collection Materials

NA

O. Preliminary interviews: The following is a partial list of people we have interviewed for this project:

Gregory Benford, Professor Emeritus, Physics and Astronomy UC Irvine
Reverend Willie Tomlin, Pastor, Grove Baptist Church, Waynesboro
Tonya Bonitatibus, Riverkeeper, Savannah Riverkeepers
Yoichi Funabashi, Chairman, Rebuild Japan Initiative, former editor-in-chief Asahi Shimbun
Bob Forrest, Former Mayor of Carlsbad New Mexico
Allison MacFarlane, Chair of NRC, Professor of Environmental Policy and Social Sciences
Kevin Kamps, Radioactive Waste Watchdog, Beyond Nuclear
Annie-Laura Stephens, Concerned Citizens of Shell Bluff
Tom Clements, Environmental Advocate, Alliance for Nuclear Accountability
Ted Gordon, Futurist, Founder of The Futures Group, retired

Reverend Claude Howard

Roger Nelson, Chief Scientist, the Waste Isolation Pilot Plant, Carlsbad, NM

Hugh Gusterson, Professor of Sociology and Anthropology, George Mason University

Wendell Bell, Professor Emeritus, Sociology, Yale University

Arjun Makhijani, President, Institute for Energy and Environmental Research

David Givens, Director, Center for Nonverbal Studies, adjunct Professor, Communication and Leadership Studies, Gonzaga University

Safdar Abidi, Architect, Vice-President Cannon Design

Don Hancock Director, Nuclear Waste Program, Southwest Research and Information Center

Maureen Kaplan, Archaeologist, Eastern Research Group

ⁱ The following works are only a sample of this literature, one that can be extended in a myriad of directions, see, e.g. Benford, 1999; Bryan-Wilson, 2003; d'Agata 2011; U.S. Office of Technology Assessment, 1991; U.S. DOE, Office of Environmental Management, 1985; Edwards, 1996; Gerrard, 1995; Gusterson, 1996; Hecht 2012; Hevly and Findlay, 1998; Hora et al., 1991; Kuletz 1998; Macfarlane and Ewing, 2006; Masco, 2006; McCutcheon, 2002; National Research Council, 1995, 1996, 2003; Oreskes, 2004; Petryna, 2002; Shrader-Frechette, 1993; Shulman, 1992; Trauth et al., 1993; Wynne, 1989, 2011; Zimmerman 1993

ⁱⁱ The film should be part of what might one think of as a visual science and technology studies, a branch of that the broader interdisciplinary study of science (philosophy, history, sociology, anthropology) that VSTS would open disciplinary space. While anthropology, history, philosophy, sociology, and gender studies of science cross in STS, STS has had nothing analogous to the longstanding and generative subfield, Visual Anthropology—with its decades of productive film-making, theoretical writing, and, cross-talk with cultural anthropology all the way back to “Nanook of the North” (1922). From Margaret Meade and Gregory Bateson to Jean Rouch, David MacDougall, Lucien Taylor or Stéphane Breton, Visual Anthropology has prospered, e.g. MacDougall, Grimshaw, Barbash, and Taylor. True, many in STS have been interviewed by filmmakers, much rarer: film made with STS ideas guiding direction, editing, and visual language. This medium offers a way to expand STS concerns: locality, disputes, contextualization, materiality, trust, risk, fear. On STS visualization and Visual Anthropology, e.g. Alder, 1997; Barbash and Taylor, 1997; Biagioli, 1999; Brain and Wise, 1999; Cambrosio and Keating, 1993; Canales, 2010; Daston and Galison, 2007; Dumit, 2003; Galison, 1987; Galison, 2003; Galison, 2004; Galison and Thompson, 1999; Geimer, 2002; Grimshaw, 2001; Hecht, 1998; Hecht 2012; Holton, 1973; Jones and Galison, 1998; Kaiser, 2005; Landecker, 2007; Latour, 1990; Lynch and Law, 1999; Lynch and Woolgar, 1990; Lynch and McNally, 2003; MacDougall, 1998; Mitman, 2009; Pauwels, 2006; Pernick, 1996; Manghani, 2006; Rasmussen, 1997; Renov, 1993; Rudwick, 1988; Schaffer, 1988; Shapin and Schaffer, 1985; Shell, 2012; Treichler, 1998. On fear and risk, e.g. Jasanoff 1986; Weart 1988.

ⁱⁱⁱ Lawrence Buell, *Writing for an Endangered World: Literature, Culture, and Environment in the U.S. and Beyond* (Cambridge: Harvard University Press, 2001), ch. 1.

^{iv} Michael B. Gerrard, *Whose Backyard, Whose Risk: Fear and Fairness in Toxic and Nuclear Waste Siting* (Cambridge: MIT Press, 1995).

^v Nuclear waste is a political and ethical issue that has felled governments in Sweden, launched massive protests in Germany, and precipitated furious debate in Japan and the U.S. It divides countries, regions,

and even splinters northern from southern New Mexico. Sweden is rightly proud of consent recently achieved, but all over the world people are pushing to know what consent means: a town, a county, the next state, the region? But the questions, especially after Fukushima, are larger, global ones: Who decides who lives in proximity to nuclear waste? For too long, we in the multi-disciplinary history, sociology, philosophy, and anthropology of science have focused unremitting attention on nuclear weapons and power, perhaps drawn by the dark-side glamour of catastrophe, accidental meltdowns or war. But waste, the distaff side of technology, presents an issue at once technical, sociological, and ethico-political. We now have riveting studies from Chernobyl to the American “Atomic West” joining anthropology and history to land. Land is very much part of the film. One thinks here of e.g. Gusterson, 1996; Hecht 2012; Hevly and Findlay, Kuletz 1993; 1998; Macfarlane and Ewing, 2006; Masco, 2006; Oreskes, 2004; Petryna, 2002; Shrader-Frechette, 1993; Wynne 2011.

^{vi} The PI’s concept of such trading zones, as a way of exploring local linguistic and practical agreement despite global clashes about underlying values, have become a widely-used analytical tool within science and technology studies and in many other fields: from studies of high-energy physics to Porter’s (1995) analysis of statistics, to Jenkins’ study of the confrontation over sea turtles killed in shrimp nets (involving fishers, fishery managers, environmentalists, schoolchildren, scientists). Or to Fuller’s trading zone analysis of the Everglades in which agricultural interests, Native Americans, Federal regulators, and environmentalists negotiate local accord. Or to Nowotny, Scott and Gibbon’s use of trading zones to capture “Mode-2” science and technology, and institutions. Or to (Balducci & Mäntysalo’s forthcoming 2013) international collaboration on urban planning using the trading zone in their approach—as a way of handling the many conflicting groups who want to shape the city. Applications of the trading zone, e.g. Collins et al., 2010; Fuller, forthcoming; Galison, 1997; Gorman, ed., 2010; Nowotny et al., 2001, Porter (1995).

^{vii} From our interview with Ted Gordon. Gordon’s own, field founding work on futurology can be found in his *The Future* (New York: St. Martin’s Press, 1965)

“Containment” -- Treatment (Synopsis is abbreviated from this document)

This is a film about the Cold War past, the contested present, and the imagined far-future of nuclear waste. We—and not just in the United States—ran helter-skelter into the atomic age, putting speed above all, and leaving an expanding sprawl of radiological material. Siting and containing that waste has been and will remain one of the most expensive societal projects ever undertaken—easily, for the United States, reaching half a trillion dollars. Visually, we want to convey the scope and scale of this radio-waste legacy. The aim of the film is to be more than a white paper on the issue: we want to juxtapose on the one side, the all-too material reality of nuclear waste (its look, its location, its scale as well as the way people work with every day, and the stance toward it taken by those who live nearby). On the other side rises the astonishing task undertaken by the department of Energy when it created the Future and Marker Panels: tasking a mix of humanists and scientists with the necessary and impossible task of imagining the 10,000 year future, and protecting that future from the radwaste we have left.

Because we are filming observationally as well as in interviews, and because we are following these communities, we are, after having consulted with Marc Ruppel from the NEH, providing a discursive treatment rather than a script. Not all elements discussed below appear in the sample, of course.

Act I: the Cold War past for which we use archival footage and the understanding of the past provided by our characters—organized around themes and structures that have emerged in Cold War historical writing, approaches that pay attention to the land as well as broader policy. The debt to historians of the land is clear—filming the nuclear territories above ground and below is central to our task.

In Act I, two exemplary characters will guide us through the last several decades. Both have been involved with the issue for three decades—on opposite sides. Roger Nelson grew up around radiation—his father was a uranium miner, and the family went from mine to mine throughout his childhood. Choosing to work in remediation was very deliberate—Dr. Nelson is now the Chief Scientist at the Waste Isolation Plant. We have filmed him above ground, showing politicians around the mine, and working and driving in deep caverns. Nelson’s view is that burying the waste is long overdue: he thinks the failure to have done so decades ago was the joint result of misguided state and national politics, and the bad faith or incurious objections of environmentalists and citizens who thought they could block nuclear weapons or power by impeding the burial of waste. Tom Clements, a local activist around the Savannah River area, has spent an equally long time amidst the waste. But Clements, a fifth generation Georgian, judges the history to have unfolded very differently: a mixture of Cold War secrecy that hid the true depth of the waste problem and the rush to cut costs and time that put waste disposition lower than almost everything in the long run of the Site. Both Nelson and Clements are deeply attached to the land, to the very material aspects of mining, waste, and the legacy we will leave. Since they both move around with us in their respective landscapes (Clements accompanies us to surface burial grounds, through the SRS, and to other sites nearby; Roger throughout the WIPP complex); This gives us a chance to connect ideas visually with the material world in a way that would not be possible on the sound stage alone.

Act II: the post-Cold War present, we find ourselves in midst of various groups (nuclear workers, activists, ordinary citizens) as they struggle to come to terms with one another about what should be done with nuclear waste. For this part we are filming in part observationally—at meetings between townspeople and government officials, in the small churches and gathering places of the atomic towns, deep in the underground nuclear repository, and in the midst of one of the world’s largest nuclear weapons factories, now a clean-up site. Here too we supplement the filming with interviews, the whole informed by the work of humanistically-oriented nuclear anthropologists, including Joseph Masco, Hugh Gusterson, and Adriana Petryna.

Two particularly salient characters in Act 2 are Kevin McElwee—a former sheriff, now an underground miner at the WIPP Site; and Reverend Willie Tomlin—a pastor in Shell Bluff. McElwee, like so many workers at the Waste Isolation Pilot Plant, very clearly believes he’s safer clearing the way for transuranic waste than he was a local sheriff. We see him in his routine—at home getting ready to head to the mine at 4am, dealing with his farm animals and working in the salt shafts. Reverend Tomlin’s trajectory in Burke County Georgia could not be more different—many of his congregants live on dirt roads, the African-American citizens of Shell Bluff have benefitted very little from SRS or the reactors near at hand, though a few had work years ago at what they called “the bomb plant.” Tomlin’s community, though often in tough times, are anything but disconnected. He and others led the fight against “at-large voting” that had prevented any African-Americans from being elected to office even though they were above half the county’s population. They brought the case to the Supreme Court—*Rogers v. Lodge*, 458 U.S. 613 (1982), and won. As so often has been the case since the civil rights period, the church played a central role for the African-American community, and it has been mobilizing against the radioactive waste released into the nearby environment. Again, two very different takes on waste, health, and the environment. During this section of the film, we are following our actors—in church, at homes, and (as in the sample) on the river.

Act III is about a necessary—and some would say also impossible—task set by Congress. To anticipate the nature of society 10,000 years from now, the futurists had to narrate different stories about possible dangers so they could grasp the means by which people might stumble into the waste. And then, so Congress demanded, the DOE should erect monuments proof, as much as possible, against this intrusion. We handle the future through a mix of interviews with the futurist-humanists who actually wrote the Department of Energy scenarios. Their stories are joined to limited-animation graphic novel-like sequence drawn by one of the most admired contemporary graphic novelists, Peter Kuper. Peter has won broad acclaim for his visual interpretation of Kafka’s *Metamorphosis*. Taking off from the Marker Team’s own landscape architectural drawings, we have engaged David Lobser, one of the best of a new breed of 3D animators, to develop moving sequences through a dimensionalized version of the actual drawings made by the warning team.

Over the last two years, we have systematically interviewed many of the extraordinarily diverse teams assembled by the Department of Energy to augur the future and design monuments to warn. We have filmed the Nebula-Prize winning astrophysicist/science fiction author Gregory Benford (who is in the sample), along with astronomers, archeologists, semioticians and many others. But perhaps our two leading humanist-futurists are Yale sociologist Wendell Bell and futurist Ted Gordon (Gordon figures in the sample). Long-time friends, these two figures helped make futures studies into a well-regarded academic and consulting field of work. Bell had helped plan constitutions in the emerging post-colonial Caribbean and Pacific following World War II. Gordon had begun as a rocket scientist, designing the upper stage of the Saturn Vb, and working for years with Werner von Braun (in his American stage). Both turned to futurology and both were tapped to write the extraordinary scenarios that form the basis of our third act. What we will see of these futures is this: a first appearance with the feminist world (in sample); a second, medley of competing images of the future, and a final, third occurrence with a highly developed scenario about the establishment of a kind of atomic priesthood, built around a theme park in honor of a fictional character, Nickey Nuke. This is the only scenario that the writers thought actually might work—because it involved the handing down of an oral tradition or myth. We will no doubt intercut elements of these acts to hold the arc of the film more firmly in view.

In short, the goal of the film is to follow the waste, to track it historically, observationally, and futurologically—to show how, in each stage, it provokes deep questions about our humanity. A history of waste is, in a certain sense, a history of us from AD 1941 to AD 12,000.

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January 7, 2013

Dr. Marc N. Ruppel
National Endowment for the Humanities
Division of Public Programs
1100 Pennsylvania Avenue, NW
Washington, DC 20506

Dear Dr. Ruppel,

I would be pleased to serve as a humanities adviser on Dr. Peter Galison's National Endowment for the Humanities (NEH) grant proposal, "Containment," and I agree to undertake the advisory role as described in the project narrative. As a humanities scholar, I find this project extremely compelling and an embodiment of the themes that visual and environmental historians and literary analysts have put front and center. In addition, Professor Galison's film and outreach efforts will engage the public on one of the most significant issues of land history and environmental ethics that our society faces today. With my experience as a scholar researching issues of form and history, and helping to define word-and-image study for the 21st-century (I founded, for example, the Modern Language Association's division on Graphic Narratives), I will advise the project on its truly innovative range of graphics. "Containment" will mix different registers of representation, such as film, animation, and still, hand-drawn frames that will tell, or in some cases simply suggest, a story through their succession. This approach to documentary film narrative, which draws on the capabilities of multiple forms, and puts them into productive, provocative conversation, seems appropriate to me for a nonfiction film that covers so much ground and in a way defies genre, covering the political, sociohistorical, scientific, aesthetic, and psychological proportions of nuclear waste projects and their own projected futures. I am excited about "Containment" and believe it will—in part through its careful attention to visual aesthetics—change the categories with which we are used to understanding film.

Sincerely,
Dr. Hillary L. Chute
Neubauer Family Assistant Professor
English Language and Literature
University of Chicago

Visiting Scholar, 2012-2013
American Academy of Arts and Sciences

HILLARY L. CHUTE

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English Department
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ACADEMIC POSITIONS

2010- Neubauer Family Assistant Professor, English, University of Chicago
2012-2013 Visiting Scholar, American Academy of Arts and Sciences
2007-2010 Junior Fellow, Harvard Society of Fellows, Harvard University

EDUCATION

2006 Ph.D, English, Rutgers University
Dissertation: Contemporary Graphic Narratives: History, Aesthetics, Ethics
2003 M.A., English, Rutgers University
1998 B.A., English, with High Honors, Oberlin College

PUBLICATIONS (partial list)**Books**

“Disaster is My Muse”: Visual Witnessing, Comics, and Documentary Form
Under contract with Harvard University Press.

Outside of the Box: Cartoonist Interviews by Hillary Chute

Under contract with University of Chicago Press (planned for Fall 2013).

MetaMaus, by Art Spiegelman

Associate Editor; Pantheon, 2011.

*Eisner Award, 2012 *National Jewish Book Award, 2011 *Translations: French, German

Graphic Women: Life Narrative and Contemporary Comics

Columbia University Press, 2010.

Heath Anthology of American Literature, 6th Edition (Contemporary Volume)

Contributing Editor on graphic narrative; Houghton Mifflin/Cengage, 2009.

Edited Journal Issues

Comics and Media, special issue of *Critical Inquiry*

Edited and introduced with Patrick Jagoda. Will include co-authored piece with Alison Bechdel.
Forthcoming Winter 2014.

Graphic Narrative, special issue of *Mfs: Modern Fiction Studies*

Edited and introduced with Marianne DeKoven (Winter 2006).

Selected Articles and Book Chapters

“Mapping Bodies: Space, Feminism, and Form,” in *Feminist and Queer Narrative Theories*,
ed. Robyn Warhol and Sue Lanser, under review at Ohio State University Press.

“Comics as Archives: *MetaMetaMaus*,” *e-misférica* special issue *On the Subject of Archives*
(online) (Summer 2012).

<http://hemisphericinstitute.org/hemi/en/e-misferica-91/chute>

“Graphic Narrative,” in *The Routledge Companion to Experimental Literature*, edited by
Brian McHale, Alison Gibbons, and Joe Bray, Routledge, 2012.

“Comic Books and Graphic Novels” (co-author with Marianne DeKoven), in *The
Cambridge Companion to Popular Fiction*, edited by David Glover and Scott
McCracken, Cambridge UP, 2012.

“Comics Form and Narrating Lives,” *Profession* (Winter 2011).

“The Popularity of Postmodernism,” *Twentieth-Century Literature* special issue
Postmodernism, Then (Fall/Winter 2011).

“Leftovers.” *About Images* series, Nomadikon, Bergen (online) (June 2011).
<http://www.nomadikon.net/ContentItem.aspx?ci=207>

“Materializing Memory: Lynda Barry’s *One Hundred Demons*,” in *Graphic Subjects: Critical Essays on Autobiography and Graphic Novels*, edited by Michael Chaney, U of Wisconsin P, 2011.

“Art Spiegelman,” entry in *The Blackwell Encyclopedia of Twentieth-Century American Fiction*, edited by Patrick O’Donnell, Justus Nieland, and David Madden, Blackwell Publishers, 2011.

“Graphic Narrative,” entry in *A Dictionary of Cultural and Critical Theory*, edited by Michael Payne and Jessica Rae Barbera, Wiley-Blackwell, 2010.

“‘Victim. Perpetrator. Bystander’: Critical Distance in Sarah Kane’s Theater of Cruelty,” in *Sarah Kane in Context*, edited by Laurens de Vos and Graham Saunders, Manchester UP, 2010.

“Divisions in Comics Scholarship,” Forum, *PMLA* (January 2009).
 “*Ragtime, Kavalier & Clay*, and the Framing of Comics,” *Mfs: Modern Fiction Studies* (Summer 2008).

“The Texture of Retracing in Marjane Satrapi’s *Persepolis*,” *Women’s Studies Quarterly* special issue *Witness* (Spring/Summer 2008).

“Analyzing Graphic Narrative,” *Literature & Thought* (South Korea) (Spring 2008).

“Temporality and Seriality in Spiegelman’s *In the Shadow of No Towers*,” *American Periodicals* (Fall 2007).

“‘The Shadow of a Past Time’: History and Graphic Representation in *Maus*,” *Twentieth-Century Literature* (Summer 2006).

HONORS AND AWARDS

Visiting Scholar Research Fellowship, American Academy of Arts and Sciences, 2012
 Mellon Residential Fellowship for Arts Practice and Scholarship (university collaborator with Alison Bechdel), University of Chicago, 2011
 Franke Institute Funding grant, University of Chicago, 2011
 Early Career Award, Rutgers University Graduate School, 2010
 Neubauer Family Fellowship, University of Chicago, 2010-2015
 Milton Fund Fellowship, Harvard University, 2007-2008
 David L. Kalstone Memorial Fund Award, Rutgers University, 2008
 Catherine Moynahan Prize (for the best graduate essay of the year), Rutgers English Department, 2006
 Mellon Dissertation Fellowship, 2005
 Swann Foundation at the Library of Congress Fellowship Academic Grant, 2004-2005
 Teaching Assistantship Award, Rutgers English Department, 2004-2005
 Dissertation Fellowship, Rutgers English Department, 2003-2004
 Teaching Assistantship Awards, Rutgers English Department, 2000-2003
 Graduate Fellowship, Rutgers English Department, 1999-2000
 McGregor-Oresman Scholar Fellowship, Oberlin College, 1997-1998

INVITED LECTURES

Over 70 invited lectures, presentations and panels since 2003.

PROFESSIONAL MEMBERSHIPS

Modern Language Association
 American Studies Association
 Modernist Studies Association
 American Association of University Professors

WILLIAM J. CRONON
Frederick Jackson Turner
& Vilas Research Professor
of History, Geography, &
Environmental Studies

January 7, 2013



DEPARTMENT OF HISTORY
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Dr. Marc N. Ruppel
National Endowment for the Humanities
Division of Public Programs
1100 Pennsylvania Avenue, NW
Washington, DC 20506

Dear Dr. Ruppel,

This letter will confirm that I would be delighted to serve as a humanities adviser on the National Endowment for the Humanities (NEH) America's Media Makers Production grant proposal entitled "Containment" with Dr. Peter Galison. I agree to undertake the advisory role as described in the project narrative. Professor Galison's film has significant potential to encourage a national dialogue and engage the public on one of the most significant issues of land history and environmental ethics that our society faces today: what happens in communities living with nuclear waste?

As an environmental historian who has worked on place-based land-use change and conflicts over the full sweep of American history, and who studies changing ideas of nature and the history of American conflicts and politics, I would hope to be able to contribute a number of valuable perspectives to this exciting project. I'm delighted to be included on the team of advisors, and certainly hope that NEH will be able and willing to support this proposal.

Sincerely,

A handwritten signature in blue ink that reads 'WJ Cronon'. The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

WILLIAM CRONON BIOGRAPHY

WILLIAM CRONON studies American environmental history and the history of the American West.

Cronon's research seeks to understand the history of human interactions with the natural world: how we depend on the ecosystems around us to sustain our material lives, how we modify the landscapes in which we live and work, and how our ideas of nature shape our relationships with the world around us. His first book, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (1983), was a study of how the New England landscape changed as control of the region shifted from Indians to European colonists. In 1984, the work was awarded the Francis Parkman Prize of the Society of American Historians.

In 1991, Cronon completed a book entitled *Nature's Metropolis: Chicago and the Great West*, which examines Chicago's relationship to its rural hinterland during the second half of the nineteenth century. In 1991, it was awarded the Chicago Tribune's Heartland Prize for the best literary work of non-fiction published during the preceding year; in 1992, it won the Bancroft Prize for the best work of American history published during the previous year, and was also one of three nominees for the Pulitzer Prize in History; and in 1993, it received the George Perkins Marsh Prize from the American Society for Environmental History and the Charles A. Weyerhaeuser Award from the Forest History Society for the best book of environmental and conservation history published during the preceding two years.

In 1992, he co-edited *Under an Open Sky: Rethinking America's Western Past*, a collection of essays on the prospects of western and frontier history in American historiography. He then edited an influential collection of essays entitled *Uncommon Ground: Rethinking the Human Place in Nature*, examining the implication of different cultural ideas of nature for modern environmental problems, published by Norton in the fall of 1995.

Cronon is currently at work on a history of Portage, Wisconsin, from the end of the last Ice Age down to the present. It will explore how people's sense of place is shaped by the stories they tell about their homes, their lives, and the landscapes they inhabit. He is also completing a book entitled *Saving Nature in Time: The Environmental Past and the Human Future* (based on the Wiles Lectures which he delivered at Queens University in Belfast, Northern Ireland, in May 2001) on the evolving relationship between environmental history and environmentalism, and what the two might learn from each other.

In July 1992, Cronon became the Frederick Jackson Turner Professor of History, Geography, and Environmental Studies at the University of Wisconsin-Madison after having served for more than a decade as a member of the Yale History Department. In 2003, he was also named Vilas [pronounced "Vy-lus"] Research Professor at UW-Madison, the university's most distinguished chaired professorship.

Cronon has been President of the American Society for Environmental History, and serves as general editor of the Weyerhaeuser Environmental Books Series for the University of Washington Press. During the spring of 1994, he organized and chaired a faculty research seminar on "Reinventing Nature" at the University of California's Humanities Research Institute in Irvine, California. In January, 1996, he became Director of the Honors Program for the College of Letters and Science at the University of Wisconsin-Madison, a post he held until 1998, and from 1997-2000 he served as the founding Faculty Director of the new Chadbourne Residential College at UW-Madison. Cronon chaired UW-Madison's Lakeshore Nature Preserve Committee from 2004-2007, leading its first-ever strategic planning process and leading the team that created its prize-winning website. He is a founding faculty fellow of UW-Madison's Center for Culture, History, and Environment (CHE), created in 2006, and served as its Director from 2007-11. He has been a member of the Governing Council of The Wilderness Society since 1995, and of the National Board of the Trust for Public Land since 2003. He served as President of the American Historical Association during 2012.

Born (b) (6), in (b) (6), Cronon received in his B.A. (1976) from the University of Wisconsin, Madison. He holds an M.A. (1979), M.Phil. (1980), and Ph.D. (1990) from Yale, and a D.Phil. (1981) from Oxford University. Cronon has been a Rhodes Scholar, Danforth Fellow, Guggenheim Fellow, and MacArthur Fellow; has won prizes for his teaching at both Yale and Wisconsin; in 1999 was elected a member of the American Philosophical Society' and in 2006 was elected a Fellow of the Wisconsin Academy of Sciences, Arts and Letters as well as the American Academy of Arts and Sciences.

January 2013



January 7, 2013

Dr. Marc N. Ruppel
National Endowment for the Humanities
Division of Public Programs
1100 Pennsylvania Avenue, NW
Washington, DC 20506

Dear Dr. Ruppel,

This letter will confirm that I would be delighted to serve as a humanities adviser on the National Endowment for the Humanities (NEH) America's Media Makers Production grant proposal entitled "Containment" with Dr. Peter Galison. I agree to undertake the advisory role as described in the project narrative. Professor Galison's film has significant potential to encourage a national dialogue and engage the public on one of the most important issues of land history and environmental ethics that our society faces today: what happens in communities living with nuclear waste? My expertise is in ethics and political philosophy, about which I have taught and written in the United States and Europe for the last 25 years. Addressing the conflict over who ought to live with nuclear waste, "Containment" raises significant philosophical questions about our application of contemporary moral and political thought. Galison's ability to embody these complex questions in compelling cinematic narrative form will bring these issues to the public imagination in a most effective way.

I look forward to consulting on these ethical issues as well as on the vexed issue of guarding memory over millennia.

Sincerely,

Arnold I. Davidson
Robert O. Anderson Distinguished Service Professor
Department of Philosophy, Divinity School, and Department of Comparative Literature
University of Chicago

Arnold I. Davidson

(b) (6)

(b) (6)

USA

(b) (6)

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Insegnamento attuale

Robert O. Anderson Distinguished Service Professor
 The University of Chicago
 Department of Philosophy
 1115 East 58th Street
 Chicago, Illinois 60637
 USA

professore di Storia della
 filosofia politica (docente a contratto)
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Divinity School
 Department of Comparative Literature
 Committee on the Conceptual and Historical Studies of Science
 Morris Fishbein Center for the History of Science and Medicine
 Associate Member, Department of Romance Languages and Literatures
 Director, France-Chicago Center
 and
 Executive Editor, Critical Inquiry
 Chair, Area in the Philosophy of Religions, Divinity School

Formazione accademica

College of Arts and Sciences, Georgetown University, 1973.
 Iscrizione, Graduate School of Arts and Sciences, Georgetown University, 1974.
 M.A. con "distinction" in Philosophy, Georgetown University.
 Ph.D. in Philosophy, Graduate School of Arts and Sciences, Harvard University, 1981.
 Titolo della tesi di dottorato: Morality. Religion and Our Basis in the World:
 Problems Around Kant.

Insegnamento precedente (selezione)

Professeur invité, Institut Universitaire de France (2005)
 Professore invitato, Università degli Studi Suor Orsola Benincasa, Napoli, Italia (2002)
 Professeur invité, Institut de la Pensée Contemporaine, Université de Paris 7 (2002)
 Professeur invité, Collège International de Philosophie (2001)
 Visiting Professor, Department of the History of Science, Harvard University (1999).
 Professeur invité, Collège de France, Paris (1997-98).
 Visiting Professor of the Humanities, University of California/Davis (1996).
 Distinguished Visitor and Professor of Critical Theory, University of California/Davis,
 Institute for the Humanities (1993).
 Assistant Professor, Department of Philosophy, Program in the History of Science, Program
 in Comparative Literature, Stanford University (1981-84; autunno, 1985-86).
 Visiting Assistant Professor of Philosophy, Princeton University (1984-85).

Premi e Fellowships

Whiting Fellowship in the Humanities, Harvard University.
 Bowen Prize in Moral, Social, and Political Philosophy, Harvard University.
 PEW Foundation Grant, Stanford University.
 Fellow, California Humanities Institute.
 Visiting Fellow, Michigan Humanities Institute, University of Michigan.

Marta Sutton Weeks Fellow, Stanford Humanities Center, Stanford University.
Honorary Fellow, University of California/Davis, Institute for the Humanities.
Fellow, Wissenschaftskolleg zu Berlin (Institute for Advanced Study, Berlin), 1994-1995
Eletto a una 'chaire d'État', Collège de France, 1998.
Eletto al Consiglio dell'Institut de la Pensée Contemporaine, Université de Paris 7
John Simon Guggenheim Memorial Foundation Fellowship, 2003-2004
Eletto 'membre invité' dell'Institut Universitaire de France, 2005
Eletto al Consiglio scientifico del Centre International d'Étude de la Philosophie Française Contemporaine, École Normale Supérieure, Paris, France

Conferenze e seminari invitati (selezione)

Over 90 conference presentations and invited lectures.

Pubblicazioni (selezione)

Libri

The Emergence of Sexuality: Historical Epistemology and the Formation of Concepts.
Harvard University Press, 2001. (Traduzioni in spagnolo e francese con una nuova prefazione, di prossima pubblicazione in italiano).
La philosophie comme manière de vivre (Co-autore con Pierre Hadot e Jeannie Carlier).
Albin Michel, 2001. (Traduzione in italiano e inglese, di prossima pubblicazione in russo, greco, e spagnolo; una nuova edizione ampliata uscirà in italiano nel 2008, Einaudi)
Curatore della traduzione inglese di tutti i corsi di Michel Foucault al Collège de France.
Palgrave Macmillan (tredici volumi di cui cinque sono già pubblicati; ogni volume comprende la mia prefazione):
—“Society Must Be Defended” —Abnormal —The Hermeneutics of the Subject
—Psychiatric Power —Security, Territory, Population
Co-curatore di Michel Foucault. Philosophie. Gallimard, 2004 (un'antologia degli scritti di Foucault, 940 pagine; traduzione in coreano)
Curatore di Pierre Hadot. Exercices spirituels et philosophie antique. Albin Michel, 2002.
(Traduzione in italiano, spagnolo, olandese, cinese, etc.)
Curatore di Foucault and His Interlocutors. The University of Chicago Press, 1997.
Curatore di Pierre Hadot. Philosophy As a Way of Life: Spiritual Exercises from Socrates to Foucault. Basil Blackwell Press, 1995.
Co-curatore di The Late Derrida, The University of Chicago Press, 2007.
Co-curatore di Questions of Evidence: Proof, Practice, and Persuasion. The University of Chicago Press, 1995.
Co-curatore di Reconstructing Individualism. Stanford University Press, 1986.

Articoli (selezione)

“Prefazione” a Pierre Hadot. Esercizi spirituali e filosofia antica. Einaudi, 2005.
Co-curatore e co-autore dell'introduzione, “Foucault : Nouveaux déploiements” in Cahiers Parisiens, 1, 2005.
“Introduction” a Michel Foucault. Psychiatric Power. Palgrave Macmillan, 2006.
“Realtà romanzesche” in Il Sole-24 Ore, 30 luglio, 2006.
“Arnold Davidson interviewed by Benjamin Cohen” in The Believer, vol. 4, no. 4, May, 2006.
Curatore di aut-aut, numero 331 (luglio-settembre 2006) su “Michel Foucault e la storia della sessualità” con la mia introduzione, “Dall'assoggettamento alla soggettivazione: Michel Foucault e la storia della sessualità”. (un brano della mia introduzione è stato pubblicato in Il Sole-24 Ore, 24 settembre, 2006).
“Michel Foucault e la tradizione degli esercizi spirituali” in Michel Foucault. Vent'anni dopo, A cura di Mario Galzigna, di prossima pubblicazione, Feltrinelli.

SHIGEHISA KURIYAMA

栗山茂久

Department of EALC
Harvard University
2 Divinity Ave.
Cambridge, MA 02138

Email: [REDACTED] (b) (6) Tel: 617-496-2754

Employment

2011-present Chair, Department of East Asian Languages and Civilizations
2005-Present Reischauer Institute Professor of Cultural History, joint appointment in Departments of East Asian Languages and Civilizations and the History of Science, Harvard University.
1994-2005 Associate Professor, then Professor, International Research Center for Japanese Studies
1989-1993 Assistant Professor, Graduate Institute of the Liberal Arts, Emory University.
1987-9 Assistant Professor Department of History, University of New Hampshire, (UNH Faculty-in-Residence, 1986-7). Joint appointment in the Humanities Program.

Academic Training

Ph.D. Harvard University. Department of the History of Science (1986).
A.M. Harvard University. Department of East Asian Languages and Civilizations (1978).
A.B. *summa cum laude* Harvard University. Department of East Asian Languages and Civilizations (1977).

Selected Honors

William H. Welch Medal, American Association for the History of Medicine (2001), for *The expressiveness of the body, and the divergence of Greek and Chinese medicine*.
Oriental Medical Journal Award (2000) to *The expressiveness of the body, and the divergence of Greek and Chinese medicine*, “for the most significant English-language text in the study of early medical history.”
Basham Prize, International Association for the Study of Traditional Asian Medicine (1994).
ACLS China Studies Fellowship (1991-92).
Shryock Medal, American Association for the History of Medicine (1987).

Invited Fellow

April-June 2011, Visiting Researcher, Institut des Études Avancées, Nantes
October-November 2010, Visiting Professor, Nagoya University
March 2008 Institut des Études Avancées, Nantes
April 2007 Institute of History and Philology, Academia Sinica
February-June 2004 Visiting Professor, Beijing University for Foreign Studies
May 2002 École des Hautes Études en Sciences Sociales

Book

The expressiveness of the body, and the divergence of Greek and Chinese medicine (New York: Zone Books, 1999). Translations published in Chinese, Greek, and Spanish.

Selected Articles

“Hiddenness in Chinese medicine,” to appear in Paula Varsano ed., *Hiddenness in Chinese culture* (SUNY Press)

“Money as a humor,” forthcoming in Elizabeth Hsu and Peregrine Horden eds., *The body in balance* (Oxford: Berghahn)

"The forgotten fear of excrement," *Journal of Medieval and Early Modern Studies* 38 (2008): 413-442.

"Sutoresu no kōkogaku," (The archaeology of stress), in Kitazawa Kazutoshi and Kuriyama Shigehisa eds., *Karada no dentō to kindai* (Tradition and modernity in the body) (Tokyo: Seikyusha, 2004).

"The history of Japanese irritability," in Annick Horiuchi, Pascal Crozet eds. *Traduire, transposer, naturaliser; la formation d'une langage scientifique moderne hors des frontières de l'Europe au XIXe siècle* (Paris: Harmattan, 2004).

"Angry women and the evolution of Chinese medicine," Chapter 12 in Michael Worton and Nana Wilson-Tagoe, *National healths; gender, sexuality and health in a cross-cultural context* (London: Cavendish Press, 2004).

"'Toki wa kane nari' no nazo (The engima of 'Time is money')," in Hashimoto Takehiko and Kuriyama Shigehisa eds. *Chikoku no tanjō. Kindai Nihon ni okeru jikan ishiki no keisei* (The birth of tardiness; the formation of time consciousness in modern Japan). (Tokyo: Sangensha, 2001): 321-343. Revised English version, "The engima of 'Time is money'" Kuriyama Shigehisa and Hashimoto Takehiko, eds. *The birth of tardiness*, special issue of *Japan review*, Vol.14, spring 2002: 217-230.

Select Edited Volumes

Edited with Kitazawa Kazutoshi, *Karada no dentō to kindai* (Tradition and modernity in the body) (Tokyo: Seikyusha, 2004).

Edited with Hashimoto Takehiko, *Chikoku no tanjō. Kindai Nihon ni okeru jikan ishiki no keisei* (Tokyo: Sangensha, 2001). English version published as *The birth of tardiness; the formation of time consciousness in modern Japan*, special issue of the *Japan review* (Vol.14, Spring, 2002).

Recent Invited Lectures

- 2012 Catholic University of Sao Paulo, Sao Paulo, Brazil
Center for Medieval and Renaissance Studies, Ohio State University
Keynote lecture, Symposium on “Medicine and Buddhism,” University of California, Berkeley
Sheridan Center for Teaching and Learning, Brown University
Interdisciplinary Doctoral Program in the Humanities, Princeton University
Japan Forum, Reischauer Institute, Harvard University
- 2011 Institut des Études Avancées, Nantes
Cluster of Excellence, “Asia and Europe in a Global Context,” University of Heidelberg

Current Professional Activities

- External Review Board, Humanities Core Curriculum, University of Hong Kong
Executive Board: D. Kim Foundation for the History of Science and Technology in East Asia
Advisory Board: Harvard-Yenching Institute
Advisory Board: *Gesnerus; International Journal for the History of Medicine*
Advisory Board: Institut des Études Avancées, Nantes
Advisory Board: *Studies in Ottoman Science*
Advisory Board: *Japan Review*
Advisory Board: *Harvard Journal of Asian Studies*



HARVARD UNIVERSITY
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FAX 617-496-6040

January 7, 2013

Dr. Marc N. Ruppel
National Endowment for the Humanities
Division of Public Programs
1100 Pennsylvania Avenue, NW
Washington, DC 20506

Dear Dr. Ruppel,

This letter will confirm that I would be delighted to serve as a humanities adviser on the National Endowment for the Humanities (NEH) America's Media Makers Production grant proposal entitled "Containment" with Dr. Peter Galison. I agree to undertake the advisory role as described in the project narrative. Professor Galison's film has significant potential to encourage a national dialogue and engage the public on one of the most important issues of land history and environmental ethics that our society faces today: what happens in communities living with nuclear waste? With my experience in the history of science and medicine in Japan I will advise the project on the sections of the film dealing with Fukushima.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. Kuriyama', with a long horizontal stroke extending to the right.

Shigehisa Kuriyama
Reischauer Institute Professor of Cultural History
Chair, Department of East Asian Languages and Civilizations
Professor, Department of the History of Science

Joseph P. Masco

Department of Anthropology
The University of Chicago
1126 East 59th Street
Chicago, IL 60637
(773) 834-7807 (office) (773) 702-4503 (fax)
jmasco@uchicago.edu

EDUCATION

University of California, San Diego (Anthropology)
Ph.D., March 1999
M.A., June 1991
University of Washington (The Comparative History of Ideas)
B.A., June 1986

POSITION

2008- Associate Professor, Department of Anthropology, University of Chicago (service on 59 Ph.D committees since 2001)
Director of Graduate Studies, Department of Anthropology, 2010-11, 2012-13
Faculty, Committee on the Conceptual and Historical Studies of Science, 2004-
Faculty, Committee on International Relations, 2004-
Faculty, International Studies Program Committee, 2010-
Faculty Associate, Chicago Center for Contemporary Theory, 2008-
2001-8 Assistant Professor, Department of Anthropology, University of Chicago
2000-1 Assistant Professor, Department of Anthropology, University of Oregon

PUBLICATIONS (partial list)

Books:

(under contract) The Theater of Operations: National Security Affect From the Cold War to the War on Terror Duke University Press. (324pgs; final submission in winter quarter 2013)
2006 The Nuclear Borderlands: The Manhattan Project in Post-Cold War New Mexico
Princeton: Princeton University Press.

Articles and Essays (Selected list from over 30 publications):

(Forthcoming) "As We May Think, 2012" Sandra Trappen and Patricia Clough (eds) Special Issue of *Social Text: Periscope* on "War, Economy, Labor, and Life".
(Forthcoming) "Experimental Subjects" in Zoe Wool (ed) Soldier Exposure and Technical Publics: A Collaborative Visual Essay, *PublicBooks.org*.
(Forthcoming) "Afterward" in William Garriott (ed) Police In Practice. New York: Palgrave (Assembling the Global in Anthropology Series).
(Forthcoming) "Pre-empting Biosecurity: Threats, Fantasies, Futures" in Bioinsecurities edited by Nancy Chen and Lesley Sharp. Santa Fe: School of Advanced Research Press.
2013 "Auditing the War on Terror: The Watson's Institute's Cost of War Project" *American Anthropologist* (Public Anthropology Section). 115(2): June Issue.
2012 "The End of Ends" Anthropology Quarterly (special issue on "Extreme: Humans At Home in the Cosmos" edited by Debhora Battaglia, Valerie Olson and David Valentine) 85(4): 1109-1126.
2010 "Atomic Health, Or How The Bomb Altered American Notions of Death" in Jonathan Metzl and Anna Kirkland (ed) Against Health. New York: New York University Press, p133-156.

- 2010 “Sensitive But Unclassified: Secrecy and the Counter-Terrorist State” Public Culture 22(3): 433-63.
- 2009 “Life Underground: Building A Bunker Society” Anthropology Now 1(2): 13-29.
- 2005 “A Notebook on Desert Modernism: From the Nevada Test Site to Liberace’s 200-Pound Suit” in Susan Harding and Daniel Rosenberg (eds) Histories of the Future. Durham: Duke University Press, 19-49pp.
- 2005 “‘Active Measures’, or How a KGB Spymaster Made Good in Post-9/11 America” Radical History Review 93: 285-300.
[This “Homeland Security” issue of RHR won the “Best Special Issue” award from the Council of Editors of Learned Journals.]
- 2004 “Mutant Ecologies: Radioactive Life in Post-Cold War New Mexico” Cultural Anthropology 19(4): 517-550.

HONORS AND AWARDS

Selected Research Fellowships:

- American Council of Learned Societies, Ryskamp Fellowship, 2007-8.
- Resident Scholar Award, Woodrow Wilson School for International Studies, 2007-8 (declined).
- Grant for Research and Writing, Program on Global Security and Sustainability, The John D. and Catherine T. MacArthur Foundation, 2004-6.
- National Endowment for the Humanities, Resident Research Fellow, School of American Research (Santa Fe), 2004-5.
- American Academy of Arts and Science, Visiting Scholar Award, 2004-5 (declined).
- Richard Carley Hunt Fellowship, Wenner-Gren Foundation For Anthropological Research, 2000.
- Grant for Research and Writing, Program on Global Security and Sustainability, The John D. and Catherine T. MacArthur Foundation, 1999.
- Dissertation Research Fellowship (Department of Anthropology, UC, San Diego), 1993-4.

Selected Grants, Honors, Awards:

- Maurice Daumas Prize from the International Committee for the History of Technology, 2011.
- Rachel Carson Prize, Society for the Social Studies of Science, 2008.
- John C. Cawelti Award Honorable Mention, American Culture Association, 2007.
- Robert K. Merton Prize Co-winner (Section on Science, Knowledge and Technology) American Sociology Association, 2006.
- Adolph Lichtstern Research Grant, The Department of Anthropology, The University of Chicago, 2002, 2004, 2011.
- Social Sciences Divisional Research Grant, The University of Chicago, 2002, 2004, 2007, 2009, 2011.

PANELS ORGANIZED

More than 110 presentations and 5 panels organized since 1994.

PROFESSIONAL AFFILIATIONS

American Anthropological Association
 American Ethnological Society
 Society for Cultural Anthropology
 Society for the Anthropology of North America
 American Studies Association
 Society for Social Studies of Science
 Society for the History of Technology

THE UNIVERSITY OF CHICAGO
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1126 EAST 59TH STREET
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January 7, 2013

Dr. Marc N. Ruppel
National Endowment for the Humanities
Division of Public Programs
1100 Pennsylvania Avenue, NW
Washington, DC 20506

Dear Dr. Ruppel,

This letter will confirm that I would be delighted to serve as a humanities adviser on the National Endowment for the Humanities (NEH) America's Media Makers Production grant proposal entitled "Containment" with Dr. Peter Galison. I agree to undertake the advisory role as described in the project narrative. Professor Galison's film has significant potential to encourage a national dialogue and engage the public on one of the most important issues of land history and environmental ethics that our society faces today: what happens in communities living with nuclear waste?

I have twenty years of research experience of issue of nuclear weapons, waste, and nuclear security politics in the United States. My 2006 book, *The Nuclear Borderlands: The Manhattan Project in Post-Cold War New Mexico* focused on the long-term effects of the nuclear revolution in New Mexico for communities divided by race, ethnicity, and class. I will advise the project on cross-cultural politics of radioactive waste storage and contamination, environmentalisms, and deep future dangers in the American West.

Sincerely,



Joseph Masco
Associate Professor
Director of Graduate Studies
Department of Anthropology
Committee on Conceptual and Historical Studies of Science



HARVARD LAW SCHOOL

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Fax (617) 495-5115

January 9, 2013

Dr. Marc N. Ruppel
National Endowment for the Humanities
Division of Public Programs
1100 Pennsylvania Avenue, NW
Washington, DC 20506

Dear Dr. Ruppel,

I have had the fascinating opportunity to talk with Dr. Peter Galison as he develops his current film and research, and I would be pleased to serve as a humanities adviser on his National Endowment for the Humanities (NEH) grant proposal, "Containment." Accordingly, I agree to undertake the advisory role as described in the project narrative. As a humanities scholar, I find this project compelling in both content and expression. Its use of visual images and multiple narratives offer rich explorations of themes resonant with environmental history and multiple story-telling traditions. In addition, Professor Galison's film and outreach efforts will engage the public on one of the most significant issues of land history and environmental ethics that our society faces today. I would be happy to draw on my background in history, law, and narrative to advise the project.

Sincerely,

Martha Minow
Dean and Jeremiah Smith, Jr. Professor
Harvard Law School

VITA

Martha L. Minow
Griswold 200
Harvard Law School
Cambridge, MA 02138
(617) 496-4601
email: minow@law.harvard.edu

(b) (6)

Current Academic Appointments:

Dean, Harvard Law School
Jeremiah Smith, Jr. Professor, Harvard Law School
Lecturer, Harvard Graduate School of Education
Senior Fellow, Harvard Society of Fellows

Current Activities:

Advantage Testing Foundation, Trustee
American Law Dean's Society, Director
American Law Institute, Member
The Covenant Foundation, Director
Facing History and Ourselves, Trustee
Harvard Center on Ethics, Senior Fellow
Legal Services Corporation Board, Vice Chair
Law, Violence, and Meaning series, Univ. of Michigan Press, co-editor
Revson Foundation, Chair of the Board (until January, 2012)
SCE Foundation, Trustee
Skadden Fellowship Foundation, Trustee

Education:

Yale Law School, J.D. 1979
Articles and Book Review Editor, Yale Law Journal, 1978-1979; Editor, Yale Law Journal, 1977-1978
Harvard Graduate School of Education, Ed.M. 1976
University of Michigan, A.B. 1975
Phi Beta Kappa, Magna Cum Laude
James B. Angell Scholar, Branstrom Prize
New Trier East High School, Winnetka, Illinois, 1968-1972

Honors and Fellowships:

Gold Medal for Outstanding Contribution to Public Discourse, College Historical Society of Trinity College, Dublin, 2012
Top Women of Law, Massachusetts Lawyers Weekly, 2012
Doctor of Laws (honorary), Northwestern University, 2012
Doctor of Humane Letters (honorary), Jewish Theological Seminary, 2012
Doctor of Humane Letters (honorary), Dominican University, 2012
New Trier Township High School Alumni Achievement Award, 2012
Stephen S. Goldberg Award for Distinguished Scholarship in Education Law 2011, Education Law Association
Scribes Book Award 2011—Honorable Mention,
Doctorate in Law (doctorem uris utriusque)(honorary), McGill University, 2011
Doctor of Humane Letters (honorary), Hebrew College, 2011
Fellow, American Philosophical Society, elected 2010
Doctor of Law (honorary), University of Toronto Faculty of Law, 2006
Holocaust Center Award, Peabody, Mass., 2006
Sacks-Freund Award for Excellence in Teaching, Harvard Law School, 2005
Radcliffe Graduate Society Medal 2003
Doctor of Education (honorary), Wheelock College, 1998

Fellow, American Academy of Arts & Sciences, 1992
Fellow, Legal History Program, University of Wisconsin, 1984 &
1985
Mellon Fellow, Aspen Institute for Humanistic Studies, 1982

Publications

Books:

In Brown's Wake: Legacies of America's Educational Landmark (Oxford University Press 2010)(Stephen S. Goldberg Award for Distinguished Scholarship in Education Law 2011, Education Law Association; Scribes Book Award 2011—Honorable Mention)

Government By Contract, co-edited with Jody Freeman (Harvard University Press 2009)

Just Schools: Pursuing Equality in Societies of Difference, co-edited with Richard Shweder and Hazel Markus (Russell Sage Foundation 2008)

Civil Procedure: Doctrine, Practice and Context, Co-authored with Mark Brodin, Thomas Main, and Stephen Subrin, Aspen (Aspen, 2000; 2d edition 2004. 3rd edition, 2008)

Teacher's Manual, Civil Procedure: Doctrine, Practice, and Context, Co-authored with Mark Brodin, Thomas Main and Stephen Subrin (Aspen, 2000, 2004).

Mary Joe Frug's Women and the Law, revised edition, co-edited with Judith Greenberg and Dorothy Roberts (Foundation Press, 1998, 2nd edition; 2004, 3rd edition); with Judith Greenberg, Dorothy Roberts, Lisa Crooms, and Libby S. Adler, 2007, 4th edition).

Imagine Coexistence: Restoring Humanity After Violent Ethnic Conflict (co-edited with Antonia Chayes)(Jossey-Bass: San Francisco 2003)

Breaking the Cycles of Hatred: Memory, Law and Repair, introduction, with commentaries by others, edited by Nancy Rosenblum, (Princeton University Press 2002).

Partners, Not Rivals: Privatization and the Public Good (Boston: Beacon Press 2002).

Engaging Cultural Differences, co-edited with Richard Shweder and Hazel Markus (NY: Russell Sage Foundation 2002).

Between Vengeance and Forgiveness: Facing History After Genocide and Mass Violence (Boston: Beacon Press, 1998) (awarded the American Society of International Law Certificate of Merit, 2000).

Not Only For Myself: Identity, Politics and Law (New York: The New Press, 1997) (Gustavus Meyers Award for Outstanding Book on Human Rights).

Law Stories, Co-edited with Gary Bellow (Ann Arbor: University of Michigan Press, 1996).

Family Matters: Readings on Family Lives and the Law, Editor (New York: The New Press, 1993).

Narrative, Violence and the Law: The Essays of Robert M. Cover, Co-edited with Michael Ryan and Austin Sarat (Ann Arbor: University of Michigan Press, 1992).

Making All the Difference: Inclusion, Exclusion, and American Law (Ithaca, NY: Cornell University Press, 1990).



January 7, 2013

Dr. Marc N. Ruppel
National Endowment for the Humanities
Division of Public Programs
1100 Pennsylvania Avenue, NW
Washington, DC 20506

Dear Dr. Ruppel,

This letter will confirm that I would be delighted to serve as a humanities adviser on the National Endowment for the Humanities (NEH) America's Media Makers Production grant proposal entitled "Containment" with Dr. Peter Galison. I agree to undertake the advisory role as described in the project narrative. Professor Galison's film has significant potential to encourage a national dialogue and engage the public on one of the most significant issues of land history and environmental ethics that our society faces today: what happens in communities living with nuclear waste? I bring significant research expertise to the film in the fields of environmental history, environmental justice, and the history of science and medicine, as well as experience working as a curator, scholar, and producer of environmental film. I will advise the project in ways that I believe will help to ensure the film deepens and enriches both scholarship in the environmental humanities and public engagement, particularly around questions of place, time, and justice in the environmental imaginaries that shape our past, present, and future.

Sincerely,

Gregg Mitman
Vilas Research and William Coleman Professor of the History of Science, Medical
History, and Environmental Studies

The Nelson Institute for Environmental Studies

122 Science Hall University of Wisconsin-Madison 550 N. Park St. Madison, Wisconsin 53706-1491

608/265-5296 Fax: 608/262-0014 www.nelson.wisc.edu

GREGG MITMAN

Medical History and Bioethics
University of Wisconsin – Madison
1300 University Avenue
Madison, WI 53706
Phone: (608) 262-9140; Email: gmitman@med.wisc.edu

EDUCATION

Ph.D., 1988 University of Wisconsin-Madison. Department of History of Science.
M.A., 1984 University of Wisconsin-Madison. Department of History of Science.
B.Sc., 1981 Biology, Dalhousie University (with Distinction).

PROFESSIONAL POSITIONS

University of Wisconsin-Madison,
Interim Director, Nelson Institute for Environmental Studies, 2008-2012.
Director, Center for Culture, History, and Environment, 2007-2008.
William Coleman Professor of the History of Science, 2005-
Interim Chair, Department of History of Science, 2003-2004.
Professor of Medical History, History of Science, and Science & Technology Studies,
2001-
Max Planck Institute for History of Science, Visiting Scholar, 2008.
National Humanities Center, Glaxo-Smith Kline Senior Fellow, 2004-2005.
University of Minnesota, Program in History of Science and Technology, Visiting
Professor, 2000-2001.
Max Planck Institute for the History of Science, Berlin, Visiting Scholar, 1999-2000.
Princeton University, Shelby Cullom Davis Center for Historical Studies, Visiting
Fellow, 1997-1998.
University of Oklahoma. Department of the History of Science, Professor, 1999-2000;
Associate Professor, 1995-1999; Assistant Professor, 1991-5.

HONORS AND AWARDS

William H. Welch Medical from the American Association for the History of Medicine, 2012.
Ralph Gomory Prize, Business History Conference, 2012.
Vilas Research Professorship, University of Wisconsin-Madison, 2011- .
WARF Named Professorship, University of Wisconsin-Madison, 2009.
Outstanding Achievement Award, Wisconsin Library Association, 2008.
Alexander von Humboldt Stiftung, Renewed Research Fellowship, 2008.
Vilas Associate Award, University of Wisconsin, 2006-2008.
Dean's Professorship, College of Letters and Science, 2005-2010.
Aldo Leopold-Ralph W. Hidy Award, American Society for Environmental History, 2006.
John S. Guggenheim Memorial Foundation Fellowship, 2004-2005.
American Council of Learned Societies, Senior Research Fellowship, 2004-2005.
National Humanities Center, Glaxo-Smith Kline Senior Research Fellowship, 2004-2005.
Oregon Center for the Humanities, Research Fellowship, 2004 (Declined)
National Library of Medicine Research Fellowship, 2003.
Watson Davis and Helen Miles Davis Book Prize from the History of Science Society,
2000.
Alexander von Humboldt-Stiftung Fellowship, 1999-2000.
Shelby Cullom Davis Center for Historical Studies Fellowship, Princeton University,
1997-1998.
Gustave O. Arlt Award in the Humanities from the Council of Graduate Schools, 1994.

WARF Fellow, University of Wisconsin-Madison, 1987-1988.
Charlotte W. Newcombe Fellowship, Woodrow Wilson National Fellowship
Foundation, 1986-1987.

PROFESSIONAL ADVISORY POSITIONS (select)

National Endowment for the Humanities, "History of Science, Religion, Philosophy" Panel, 2010.
External Evaluator, Ontario Council on Graduate Studies, York University Graduate
Programme in the Humanities, June 2007.
American Council of Learned Societies Evaluator, 2005.
Nominator, MacArthur Fellows Program, 2005.
Isis, Editorial Advisory Board (2004-2006).
Cultural Geographies, Editorial Advisory Board, 2000 - .
Environmental History, Editorial Board, 2002 – 2010.
Environmental Justice, Editorial Board, 2008 - .
Journal of the History of Biology, Associate Editor, 2001 – 2007.
Studies in History and Philosophy of Biological and Biomedical Sciences, Consulting
Editor.
National Science Foundation Review Panel, Science and Technology Studies Program,
1997-1999.
NEH Panel member for evaluating 1995 Summer Stipend Research Awards.

PUBLICATIONS

BOOKS

Breathing Space: How Allergies Shape Our Lives and Landscapes. New Haven: Yale University
Press, 2007. Winner of the 2012 William H. Welch Medal from the American
Association for the History of Medicine and Outstanding Achievement Award,
Wisconsin Library Association, 2008.
Co-editor. With Lorraine Daston. Thinking with Animals: New Perspectives on
Anthropomorphism (New York: Columbia University Press, 2005).
Co-editor. With Michelle Murphy and Christopher Sellers. Landscapes of Exposure:
Knowledge and Illness in Modern Environments. *Osiris*, 2d ser., 19 (2004).
Reel Nature: America's Romance with Wildlife on Film. Cambridge, Mass.: Harvard University
Press, 1999. Winner of the 2000 Watson Davis and Helen Miles Davis Prize from the
History of Science Society.
The State of Nature: Ecology, Community, and American Social Thought, 1900-1950.
Chicago: University of Chicago Press, 1992. Winner of the 1994 Gustave O. Arlt Award
in the Humanities from the Council of Graduate Schools.

ARTICLES

Over 30 articles in refereed journals and edited volumes in environmental history and the history
of science and medicine, including articles that won the 2012 Ralph Gomory Prize from the
Business History Conference and the 2006 Aldo Leopold-Ralph Hidy Award for the best article
published in Environmental History.

INVITED PAPERS

Over 100 invited lectures and keynote addresses at universities and professional meetings in
Austria, Brazil, Germany, Great Britain, New Zealand, Norway, and the United States. Guest
appearances on National Public Radio's *Weekend Edition*, National Public Radio's *Science
Friday*, National Public Radio's *The Diane Rehm Show* and Wisconsin Public Radio's *Here on
Earth*.

January 7, 2013

Dr. Marc N. Ruppel
National Endowment for the Humanities
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Washington, DC 20506

Dear Dr. Ruppel,

This letter will confirm that I would be delighted to serve as a humanities adviser on the National Endowment for the Humanities (NEH) America's Media Makers Production grant proposal entitled "Containment" with Dr. Peter Galison. I agree to undertake the advisory role as described in the project narrative. Professor Galison's film has significant potential to encourage a national dialogue and engage the public on one of the most important issues of land history and environmental ethics that our society faces today: what happens in communities living with nuclear waste? With my experience in the area of public health and harms of technological products, I will be glad to advise the project on risk, perception of risk, and the history of epidemiological assessment of harm. This brilliant project promises to push forward in a way that will advance beyond what is possible in traditional print form. Galison's proven track record in extending work to film makes this an immensely valuable enterprise.

Sincerely,
Robert N. Proctor
Professor of the History of Science
Stanford University

Robert N. Proctor
Professor of the History of Science
History Department
Stanford University
Stanford, CA

Education

Ph.D. Harvard University, Department of History of Science, 1984
M.S. Harvard University, Department of History of Science, 1977
B.S. Indiana University (Bloomington), Department of Biology, 1976

Selected publications

"Three Roots of Human Recency: Molecular Anthropology, The Refigured Acheulean, and the UNESCO Response to Auschwitz," *Current Anthropology* (2003), winner of the 2004/2005 Award for Exemplary Interdisciplinary Anthropological Research from the American Anthropological Association.

Racial Hygiene: Medicine Under the Nazis (Harvard University, 1988; now in 6th printing).

Value-Free Science? Purity and Power in Modern Knowledge (Harvard University Press, 1991). An effort to historicize the ideals of objectivity and Wertfreiheit.

Cancer Wars: How Politics Shapes What We Know and Don't Know About Cancer (Basic Books, 1995). Inspired a four-part PBS/Channel 4 television documentary; translated into Japanese (2001) and parts into German.

The Nazi War on Cancer (Princeton University Press, 1999). Winner of 1999 Viseltar Award. Translated into: Italian, Turkish, Polish, Japanese, German, and French.

Anti-Agate: The Great Diamond Hoax and the Semiprecious Stone Scame, *Configurations*, 9 (2001): 381-412 (also online).

Tobacco and the Global Lung Cancer Epidemic, *Nature Reviews Cancer*, 1 (2001): 82-86.

"The Nazi War on Tobacco: Ideology, Evidence, and Public Health Consequences," *Bulletin of the History of Medicine* (1997).

Prizes and Fellowships

- Fellow of the American Academy of Arts and Sciences, 2002-

- Visiting scholar, Hamburger Institut für Sozialforschung, Hamburg, Germany, 1995
- Senior Scholar in Residence, U.S. Holocaust Research Institute, Holocaust Memorial Museum, Washington, D.C., 1994
- Visiting Fellow, Shelby Collum Davis Center for Historical Studies, Princeton, 1992-1993
- research grant, National Center for Human Genome Research, National Institutes of Health, 1992-1993
- Penn State Distinguished Scholar Medal Recipient, 1997.

Online Articles and Interviews

- [The Agateer](#)
- [Anti-Agate: The Great Diamond Hoax and the Semiprecious Stone Scam](#)
- [Nazi Medicine and Public Health Policy](#)
- [Rendez-vous with Robert Proctor](#)
- [The anti-tobacco campaign of the Nazis: a little known aspect of public health in Germany, 1933-45](#)
- [Die Lungen des "erwählten Volkes" sind rein](#)
- [Molecular Anthropology, the refigured Acheulean, and the UNESCO Response to Auschwitz](#)
- [Commentary: Schairer and Schöniger's forgotten tobacco epidemiology and the Nazi quest for racial purity](#)
- [A Historical Reconstruction of Tobacco and Health in the U.S., 1954-1994](#)
- [Three Roots of Human Recency](#)
- [Hindsight](#)

January 8, 2013

(b) (6)

Dr. Marc N. Ruppel
National Endowment for the Humanities
Division of Public Programs
1100 Pennsylvania Avenue, NW
Washington, DC 20506

Dear Dr. Ruppel,

This letter will confirm my commitment to serve as film editor on the National Endowment for the Humanities (NEH) America's Media Makers Production grant proposal entitled "Containment" with Dr. Peter Galison. I happily agree to undertake the editorial role as described in the project narrative.

I have been fortunate to work with Peter and Robb on a previous film, as well as on "Containment" for much of this year. Editing a film like this, which seeks to escape the traditional formal expectations of documentary, makes for a unique challenge, and one that I'm pleased to undertake.

Please contact me at (b) (6) if you have any questions about my role on this project.

Sincerely,

Chyld King

Film and Television Editor

Chyld King

Film & Television Editor

(b) (6)

(b) (6)

(b) (6)

Selected Credits

- 2012 Editor, *Containment*, Redacted Pictures
Feature Documentary
Directors: Robb Moss & Peter Galison
Work in progress.
- 2011 Editor, *The Amish*, PBS American Experience
Director: David Belton
Broadcast February 2012
Emmy nomination for Exceptional Merit in Nonfiction Filmmaking
- 2009-10 Editor, *God in America*, PBS Frontline and American Experience
Episodes: "A New Adam" and "A New Eden"
Broadcast October 2010
- 2004-2008 Editor & Co-Producer, *Secrecy*, Redacted Pictures
Feature Documentary
Directors: Robb Moss & Peter Galison
Official Selection 2008 Sundance Film Festival
- 2004 Editor, *Citations*, Northern Light Productions
Video Segments for permanent display at the National Archives,
Washington, D.C.
- 2004 Editor, *Art Close Up*, WGBH Boston
Segments: Evan Ziporyn, Steve McQueen, Krzysztof Wodiczko
Producer: Marty Ostrow
- 2002 Co-Editor, *The Fog of War*, Sony Pictures Classics
Feature Documentary, Director Errol Morris, Release 2003
Winner, Academy Award, Best Documentary
Winner, Independent Spirit Award, Best Documentary
Nominee, A.C.E. Eddy Award, Best Edited Documentary
- 2001 Editor, *Errol Morris' First Person*, IFC Television
Episodes: "Smartest Man in the World",
"Leaving the Earth" (Parts I and II)
Contributing Editor: "The Only Truth", "Mr. Personality"
- 2000 Editor, *Errol Morris' First Person*, Bravo Television
Episodes: "Mr. Debt"
"You're Soaking In It"
Contributing Editor: "Little Grey Man"

Biographical Sketch

Peter Galison
Joseph Pellegrino Professor, Harvard University
History of Science Department, 1 Oxford Street, Science Center 468, Cambridge, MA 02138
Office: (617) 496-4507
Email: galison@gas.harvard.edu
Web page: www.fas.harvard.edu/~hsdept/bios/galison.html

A. PROFESSIONAL PREPARATION

<u>College/University</u>	<u>Major</u>	<u>Degree & Year</u>
Harvard University	History and Science	B. A., Summa cum Laude, 1977
Harvard University	History of Science	M.A., 1977
Cambridge University	History and Philosophy of Science	M. Phil., 1978
Harvard University	Physics and History of Science	Ph.D., 1983

B. ACADEMIC/PROFESSIONAL APPOINTMENTS

Director, Collection of Historical Scientific Instruments, Harvard University (5/07 – Present)
Joseph Pellegrino University Professor, Harvard University (1/06 – Present)
Treaty of Utrecht Visiting Professorship, Utrecht University, The Netherlands (3/10 – 11/10)

C. PUBLICATIONS Publications Related to Proposal—Science, Society; Science and Visualization

Galison, Peter. *Einstein's Clocks, Poincaré's Maps*. 2003. W.W. Norton: New York. Translations into Chinese, Czech, French, German, Greek, Italian, Korean, Portuguese, Spanish, and Turkish. A New York Times Notable Book. Web: Google Books.

Galison, Peter. *Image and Logic: A Material Culture of Microphysics*. 1997. Chicago: University of Chicago Press. Winner, Pfizer Award for Best Book in History of Science, 1998. Forthcoming translations into Korean and Spanish. Web: Google Books

Galison, Peter. *Objectivity* (With L. Daston), Boston: Zone, 2007. Translation into German, forthcoming into French. Web: Google Books

Produced and directed by Peter Galison and Robb Moss. *Secrecy*. 87 min. 2008. Released at Sundance Film Festival, 2008. Winner, Special Jury Prize Documentary, International Film Festival Boston, 2008; Best Documentary, Newport International Film Festival. <http://www.secrecyfilm.com/>

Produced by Peter Galison and Pam Hogan. *Ultimate Weapon: The H-Bomb Dilemma*. 44 min. Premiere on History Channel, 2000. <http://www.fas.harvard.edu/~hsdept/bios/galison-ultimate-weapon.html>

Other Significant Publications

Galison, Peter. *How Experiments End*. 1987. Chicago: Chicago Univ. Press. Google Books.

Galison, Peter and B. Bernstein. "In Any Light: Scientists and the Decision to Build the Superbomb." *Historical Studies in the Physical Sciences* 19 (1989): 267-347.

Galison, Peter. "Removing Knowledge" *Critical Inquiry* 31 (2004): 229-43.
<http://www.secrecyfilm.com/learnmore.html>. Reprinted in Robert N. Proctor and Londa Schiebinger, ed., *Agnatology*. Stanford: Stanford University Press, 2008.

Galison, Peter and Bruce Hevly, eds. *Big Science: The Growth of Large-Scale Research*. Stanford: Stanford University Press, 1992. Web: Google Books.

Galison, Peter (co-edited with Caroline A. Jones), *Picturing Science, Producing Art*. New York: Routledge, 1998. Web: Google Books.

D. SYNERGISTIC ACTIVITIES

Example 1. Co-Curator, Exhibition “Iconoclash,” 3 May – 4 August 2002, German Media Museum (ZKM) Karlsruhe, Germany. This multi-disciplinary exhibit opened connections between science, art and religion; how each struggled with the conflict between images and iconoclasm. I curated the science component around themes from *Image and Logic*: cloud chamber, particle physics, astrophysics, and computer simulated electron flow—to make these themes visible to a wider, museum-going audience. See Galison “Images Scatter into Data, Data Gather into Images,” in *Iconoclash. Image Wars in Science, Religion, and Art*. Eds. Latour, Weibel. MIT Press, 2003.

Example 2. Innovative Course: Filming Science. Fall 2000-present. With Robb Moss, designed and ran a very new kind of course that combines filmmaking with work in Science Technology and Society. Students study pairings of documentary films and STS texts—for example, Michel Negroponte’s W.I.S.O.R. and Bruno Latour’s *Aramis: For the Love of Technology*. Students studied history and theory of STS/Visual Anthropology and each filmed and edited a 10-minute film on laboratory work.

Example 3. Director, Collection of Historical Scientific Instruments, Harvard University (5/2007-present). This museum, open to the public, combines exhibition of scientific instruments from 17th century surveying tools to contemporary devices from biology, physics, and medicine. Under Galison’s direction the museum has mounted exhibitions from a re-creation of the Wunderkammer at Wurms by artist Rosamund Purcell to a major display around Benjamin Franklin’s scientific work. Other exhibits include one on prints as a form of instrument in early modern Europe, an exhibit of patent models.

Example 4. Collaboration with Artist William Kentridge, preparation of exhibit and performance for Paris and Kassel (Documenta) crossing Kentridge’s work on film, mechanical construction, and drawing with Galison’s studies of the coordination of clocks, time, and synchronization that lay the groundwork for Einstein and Poincare’s work on relativity. The exhibit and performance will probably travel widely after it opens in Paris and Kassel.

Example 5. Lecturer to Broader Audiences: Galison has delivered lectures to large, non-academic audiences e.g. at the World Economic Forum (Davos, Switzerland, 2008); World Science Festival (New York City, 2008); Boston Science Festival (2010).

E. COLLABORATORS AND OTHER AFFILIATIONS

Graduate and Postdoctoral Advisors: History of Science: G. Holton (Harvard), E. Hiebert (Harvard); H. Georgi (Harvard), J. Preskill (Caltech), S. Glashow (Boston University).

Graduate Students Advised: H. Stevens (Harvard) ; N. Zakariya, (Chem. Heritage Foundation); C. Ramalingam (Cambridge); J. James, (MPI-Berlin, Chemistry); M. Mills, (Penn); S. Mullet (N/A); H. Shell (MIT); G. Shen, (York); W. Thomas (American Institute of Physics); O. Halpern (New School) ; M. Vicedo (Toronto). **TOTAL: 11 graduated last five years (in addition: 15 current graduate students).**

Collaborators last five years: L. Daston (MPI, Berlin); W. Kentridge (Johannesburg); R. Moss (Harvard)

Biographical Sketch

Robb Moss
Rudolf Arnheim Lecturer on Filmmaking, Harvard University
Department of Visual and Environmental Studies, 24 Quincy St. Cambridge, MA 02138
Office: 617 495-4456
robbmoss@fas.harvard.edu

A. PROFESSIONAL PREPARATION

<u>College/University</u>	<u>Major</u>	<u>Degree & Year</u>
University of California at Berkeley	Social Science Field Major	A.B., Phi Beta Kappa 1972
Massachusetts Institute of Technology	Visual Studies	M.S. 1979

B. ACADEMIC AND PROFESSIONAL APPOINTMENTS

Rudolf Arnheim Lecturer on Filmmaking	Harvard University	1999 to present
Director of Undergraduate Studies, VES Dept.	Harvard University	1994-1999, 2006-2008
Senior Preceptor	Harvard University	1994
Visiting Lecturer	Harvard University	1986

C. PUBLICATIONS MOST CLOSELY RELATED TO THE PROPOSAL

Secrecy (2008) non-fiction HDCam 81 min. A film about the vast, invisible world of government secrecy.
Producer/Director (with Peter Galison),
Premiered at The Sundance Film Festival

Lessons From Thin Air (1997)

Explores problems of learning and teaching science. I made several films with the Science Media Group at the Harvard/Smithsonian during this period. Director/Camera/Editor, beta 58 min.
Nationwide Public Television broadcast Oct. '97

C.2 OTHER PUBLICATIONS

The Same River Twice (2003) A film about the lives of five friends as they travel from youth to middle-age.
Producer/Director/Camera, non-fiction, 35mm color 78 min.
Premiered at The Sundance Film Festival

The Tourist (1991)

Shot in Africa, Asia, and Central America, the film is an autobiographical essay about fertility, fertility and documentary filmmaking. Director/Camera/Writer/Editor 16mm 58 min.
Premiered at the Telluride Film Festival

D. SYNERGISTIC ACTIVITIES

1. In 2000, I began co-teaching "Filming Science," with Peter Galison, a course about what happens to science when it is filmed, and what happens to film when science is its project. Students read essays, watch films, and videotape in laboratories, or other sites of scientific inquiry. The course is comprised of graduate and undergraduate students (including freshmen), and crosses disciplines in every direction.
2. From the mid-1980s to the mid-1990s, I worked with the Science Media Group (part of the Harvard/Smithsonian at Harvard), shooting, editing and consulting with their PI, Matt Schneps, an astrophysicist who created the SMG. Consulted on techniques to film the teaching and learning of science.

3. I currently serve on the Board of Directors for the Independent Television Service. ITVS is the independent arm of Public Broadcasting, and sponsors the PBS series “Independent Lens.”
4. I serve as a creative advisor to the Documentary Storytelling labs at the Sundance Institute. Sundance invites young international filmmakers to bring their works-in-progress to the labs for a week. This work allows me to work closely with these filmmakers to strengthen their non-fiction storytelling skills.
5. I served as the Board Chair/President of the Association of Independent Video and Filmmakers (AIVF) NYC, 1995-2001

E. COLLABORATORS AND OTHER AFFILIATIONS

Not applicable.

GRADUATE AND POSTDOCTORAL ADVISORS

Not applicable.

THESIS ADVISOR AND POSTGRADUATE-SCHOLAR SPONSOR

Not applicable.



January 7, 2013

To Whom it May Concern,

I am writing to express my support for Peter Galison and Robb Moss in their efforts to complete production of their film, "Containment," about the burial of nuclear waste. In the aftermath of the Fukushima Daiichi Nuclear Power Plant disaster in Japan following the massive earthquake and tsunami, the problem of nuclear waste took center stage, raising the issue to a new global awareness; this film will be a valuable and necessary educational tool.

20 Jay Street
Suite 940
Brooklyn, NY 11201

P: 212-989-8121
F: 212-989-8230
www.pov.org

POV
A Project of
American
Documentary
www.amdoc.org

Having seen and admired Mr. Galison and Mr. Moss's previous collaborative work, "Secrecy," about national security and democracy, I am very keen to see how they handle the urgent problem of nuclear waste and the future of energy in the United States. In "Secrecy" these filmmakers took a complex subject and handled it with clarity, complexity and visual inventiveness and I have every expectation that they would do the same for a film about the disposition of nuclear waste.

While we cannot commit to a PBS broadcast until we are able to preview a more complete version of the film, I do want to say that we at POV are aware of the project, think highly of the filmmakers and their work, and are very eager to see the piece as it evolves toward completion.

POV is a project of American Documentary, Inc., a non-profit media organization dedicated to exploring the potential of independent media in public life. Now in its 25th season on PBS, POV has just received a record 16 Emmy nominations as part of the 33rd Annual News & Documentary Emmy Awards. POV has produced and presented over 365 of the most important and challenging independent documentary films of our time. POV films have been honored with 27 Emmys, 15 George Foster Peabody Awards, and 10 Alfred I. duPont-Columbia Broadcast Journalism Awards. In 2007 the National Academy of Television Arts and Sciences presented POV with a Special Industry Emmy Award recognizing 20 years of excellence in documentary programming.

Should you have any questions or care to discuss POV's support of this project further I can be reached at clopez@pov.org or via (b) (6).

Sincerely,

A handwritten signature in cursive script that reads "Ms. Cynthia Lopez".

Cynthia Lopez
Executive Vice President
Co-Executive Producer
American Documentary | POV



Caitlin Boyle
Film Sprout
25 E. 21st Street, 7th Fl.
New York, NY 10010
(212) 782-3729

January 7, 2013

To the National Endowment for the Humanities:

It is my pleasure to write a letter in support of the grant proposal submitted for the documentary film and outreach project *Containment*, by Peter Galison and Robb Moss.

Our role in the film's outreach would be to go beyond traditional film distribution avenues—many of them private, entertainment-driven venues—to bring its story to a broader and more motivated constituency in town halls, public libraries, government agencies, think tanks, institutions of higher learning, and Capitol Hill. Such settings are where considered and thoughtful policies are cultivated and nurtured—and where *Containment* is poised to do some of its most valuable work

As the founder of the film outreach and distribution firm Film Sprout, I have been the architect of dozens of audience engagement campaigns for documentary films seeking not only to raise ambient awareness about a pressing social issue, but to drive substantive, informed, and purposeful debate and action on that issue among policymakers and consumers. *Containment*, whose storytelling aims to alert the world's energy decision-makers and consumers to the web of practical and ethical problems surrounding nuclear waste disposal, is a film whose potential to contribute to and stimulate such debate is particularly vital.

Containment is intended to lend clarity and nuance to a topic currently plagued by and buried—quite literally—outside the realm of public debate. In my judgment, grant support for a targeted speaking and screening tour showcasing the film to policymakers, legislators, environmental advocates, and citizens living near nuclear waste sites would certainly serve as a potent tool for education, community-building, legislative action, and information sharing on one of the most critical and under-explored scientific policy debates of our time.

Sincerely,

A handwritten signature in cursive script that reads "Caitlin A. Boyle".

Caitlin Boyle
Founder and President
Film Sprout

Description of sample:

We have included a 20 minute sample of “Containment.”

Vimeo link is: (b) (4) password is: (b) (4)

The sample is meant to convey the complex relationships between nuclear waste sites and the communities who live near them, the movement between our present nuclear condition and the future societies who inadvertently intrude into the waste sites, and the visual play between our live action and animation. The film will not advocate for a particular viewpoint regarding nuclear waste, nor will it shy away from the strong feelings that some people have about the problem of living with the waste, or the people who are comfortable with working with nuclear waste. We mean for the film to explore the multiplicity of experiences that grow out of the problem of housing nuclear waste for now, and for the next 10,000 years. The following is a list—in the order in which they appear--of those whom we see in the 20 minute sample:

Gregory Benford, Professor Emeritus, Physics and Astronomy UC Irvine
Reverend Willie Tomlin, Pastor, Grove Baptist Church, Waynesboro
Tonya Bonitatibus, Riverkeeper, Savannah Riverkeepers
Yoichi Funabashi, Chairman, Rebuild Japan Initiative, former editor-in-chief Asahi Shimbun
Bob Forrest, Former Mayor of Carlsbad New Mexico
Allison MacFarlane, Chair of NRC, Professor of Environmental Policy and Social Sciences
Kevin Kamps, Radioactive Waste Watchdog, Beyond Nuclear
Annie-Laura Stephens, Concerned Citizens of Shell Bluff, sister of Claude Howard
Tom Clements, Environmental Advocate, Alliance for Nuclear Accountability
Ted Gordon, Futurist, Founder of The Futures Group, retired
Reverend Claude Howard, Viet Nam Veteran, brother of Annie-Laura Stephens



Budget Form

Applicant Institution: *Harvard University*

Project Director: *Peter Galison*

Project Grant Period: *08/01/2013 - 07/30/2015*

[click for Budget Instructions](#)

	Computational Details/Notes	(notes)	Year 1	(notes)	Year 2	(notes)	Year 3	Project Total
			08/01/2013- 07/30/2014		08/01/2014- 07/30/2015		n/a	
1. Salaries & Wages								
Peter Galison (PI)	<i>cost-shared</i>		\$ (b) (6)	25%	\$ (b) (6)	25%	%	\$ (b) (6)
Robb Moss	<i>cost-shared</i>		\$ (b) (6)	25%	\$ (b) (6)	25%	%	\$ (b) (6)
		%		%		%		\$0
		%		%		%		\$0
		%		%		%		\$0
		%		%		%		\$0
2. Fringe Benefits								
Galison and Moss	<i>cost-shared</i>	27.7% for faculty & other academic appts	\$ (b) (6)		\$ (b) (6)			\$ (b) (6)
								\$0
3. Consultant Fees								
								\$0
4. Travel								
Domestic: 7, 3-day RT trips to Boston	for interview subjects		\$5,250					\$5,250
Domestic: 2, 5-day trips to New Mexico (2x) and Georgia / South Carolina for location shoots	for Producer, Director, Cinematographer, Recordist, Associate Producer (5 ppl)		\$16,750					\$16,750

Foreign: 1, 8-day trip to Japan for 4 people, plus local travel	for Producer, Director, Cinematographer, Recordist (4 ppl)		\$23,600				\$23,600
							\$0
5. Supplies & Materials							
Radio Microphones			\$2,000				\$2,000
							\$0
6. Services							
Editor	\$ (b) (6) per month, 8 months		\$ (b) (6)		\$ (b) (6)		\$ (b) (6)
Camera operator	\$1500 per day for work on travel (domestic and foreign) and Boston interviews		\$30,000				\$30,000
Sound recordist	\$700 per day for work on travel (domestic and foreign) and Boston interviews		\$14,000				\$14,000
Transcription	Transcriptionist @ \$15-20 per hour. 1, 60 minute tape takes 3-4 hrs to transcribe.		\$13,800				\$13,800
Translator	Translator on-site in Japan @ \$400 per day		\$3,200				\$3,200
Animator	\$18,000 flat fee		\$18,000				\$18,000
Evaluator	4 focus groups; estimate based on previous evaluator estimates				\$14,765		\$14,765
Film Sprout	Outreach programming				\$30,000		

7. Other Costs							
Archival footage	Cost varies by film house. Archival clips of cold-war nuclear materials and related footage.				\$23,000		\$23,000
Close captioning					\$725		\$725
Production Insurance	\$500 per month for 10 mos		\$5,000				\$5,000
Production Overhead			\$6,000				\$6,000
Web Development and Design	Extended, interactive data presentation for outreach purposes				\$10,000		
Equipment Rental (boom pole, mixer, lighting, etc.)	\$20 days @ \$300		\$6,000				\$6,000
8. Total Direct Costs	Per Year		\$325,099		\$264,234		\$0
9. Total Indirect Costs							
	Per Year	26%	\$84,526		\$68,702		\$0
10. Total Project Costs	(Direct and Indirect costs for entire project)						\$742,561
11. Project Funding	a. Requested from NEH		Outright:				\$380,634
			Federal Matching Funds:				\$0
			TOTAL REQUESTED FROM NEH:				\$380,634
	b. Cost Sharing		Applicant's Contributions:				\$361,927
			Third-Party Contributions:				\$0
			Project Income:				\$0
			Other Federal Agencies:				\$0
			TOTAL COST SHARING:				\$361,927

12. Total Project Funding

\$742,561

Total Project Costs must be equal to Total Project Funding ----> (\$742,561 = \$742,561 ?)
Third-Party Contributions must be



DEPARTMENT OF HEALTH & HUMAN SERVICES

Program Support Center
Financial Management Services
Division of Cost Allocation

26 Federal Plaza, Room 41-122
New York, New York 10278
Phone: (212) 264-2069
Fax: (212) 264-5478
Email: dcany@psc.gov

May 10, 2012

Mr. Dan Shore
Vice President for Finance and Chief Financial Officer
Harvard University
Massachusetts Hall
Cambridge, MA 02138

Dear Mr. Shore:

A negotiation agreement is being faxed to you for signature. This agreement reflects an understanding reached between your institution and a member of my staff concerning the rates or amounts that may be used to support your claim for costs on grants and contracts with the Federal Government. The agreement must be signed by a duly authorized representative of your institution and faxed to me; retain a copy for your file. Our fax number is (212) 264-5478. We will reproduce and distribute the agreement to awarding agencies of the Federal Government for their use.

Requirements for adjustments to costs claimed under Federal Grants and Contracts resulting from this negotiation are dependent upon the type of rate contained in the negotiation agreement. Information relating to these requirements is enclosed.

As a consideration of this agreement, the following conditions were agreed to:

1. The over-recovery of (\$1,956,536) resulting from the settlement of the actual fringe benefit rates for fiscal year ended June 30, 2011 has been taken into consideration in computing the fixed fringe benefit rates for fiscal year ending June 30, 2013. This amount must be included in computing the actual fringe benefit rates for fiscal year ending June 30, 2013.
2. The carryforward amounts resulting from the settlement of the actual fringe benefit rates for fiscal year ended June 30, 2011 are as follows:

	UNDER(OVER) RECOVERY APPLIED TO FYE 6/30/13 <u>RATE</u>
<u>SCHOOL</u>	
Medical & Dental	(\$2,026,338)
SPH	(\$284,227)

These amounts must be included in computing the actual fringe benefit rates for fiscal year ending June 30, 2013.

- 3. Carry forward amounts must be applied on an "on-going" basis. Accumulated balances will not be accepted.
- 4. The following accrued vacation time rates are included in the published fringe benefit rates:

Exempt Staff	10.5%
Unionized Non-Exempt Staff	10.5%

- 5. The carryforward amounts resulting from the settlement of the actual accrued vacation time rates for fiscal year ended June 30, 2011 are as follows:

	UNDER\ (OVER) RECOVERY
	APPLIED TO
	FYE 6/30/13
<u>CATEGORY</u>	<u>RATE</u>
Exempt	(\$982,660)
Non-Exempt Unionized	\$ 619,261

These amounts must be included in computing the actual accrued vacation time rates for fiscal year ending June 30, 2012.

- 6. A fringe benefit cost and vacation time rate proposal based on actual costs for the fiscal year ending June 30, 2012 is due by December 31, 2012.

A proposal encompassing all activities of your institution together with the required supporting information must be submitted to my office at the address shown on page 3 for each fiscal year your institution claims costs under grants and contracts awarded by the Federal Government. This proposal is due within six months after the close of your fiscal year. Therefore, a proposal for fiscal year ending June 30, 2014 will be due in my office not later than December 31, 2014. The proposal will be used to establish rates/amounts for the fiscal year subsequent to the last period covered by an approved final, fixed, or predetermined rate(s). Failure to submit a timely proposal will be interpreted as a forfeiture of reimbursement for indirect costs. Therefore, unless a proposal is received by December 31, 2014 future awards made by the Department of Health and Human Services will be for direct costs only and will not provide for the recovery of costs contained in this agreement. In addition, the costs claimed against awards already made may be subject to disallowances.

If you are unable to submit your proposal by the prescribed date, you may request an extension. This request must be submitted prior to the due date of the proposal and must contain a justification for the extension and the date the proposal will be submitted.

Your proposal and relevant correspondence should be addressed to:

Department of Health and Human Services
Division of Cost Allocation
26 Federal Plaza, Room 41-122
New York, New York 10278
(212) 264-1823

In addition, please acknowledge your concurrence with the comments and conditions cited above by signing this letter in the space provided below and **FAX (212-264-5478)** it to me with the enclosed negotiation agreement.

Sincerely,


Robert I. Aaronson
Director, Division of
Cost Allocation

Enclosures

Concurrence: 

Name

Title

Date

COLLEGES AND UNIVERSITIES RATE AGREEMENT

EIN: 1042103580B1
 ORGANIZATION:
 Harvard University
 Massachusetts Hall
 Cambridge, MA 02138-

DATE: 05/10/2012
 FILING REF.: The preceding
 agreement was dated
 06/02/2011

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

SECTION I: INDIRECT COST RATES

RATE TYPES: FIXED FINAL PROV. (PROVISIONAL) PRED. (PREDETERMINED)

EFFECTIVE PERIOD

<u>TYPE</u>	<u>FROM</u>	<u>TO</u>	<u>RATE (%)</u>	<u>LOCATION</u>	<u>APPLICABLE TO</u>
PRED.	07/01/2011	06/30/2015	69.00	On-Campus	Research
PRED.	07/01/2011	06/30/2015	34.00	On-Campus	Other Sponsored Act.
PRED.	07/01/2011	06/30/2015	26.00	Off-Campus	All Programs
PROV.	07/01/2015	Until Amended			Use the same rates and conditions as those cited for fiscal year ending June 30, 2015.

*BASE

Total direct costs excluding capital expenditures (buildings, individual items of equipment; alterations and renovations), that portion of each subaward in excess of \$25,000; hospitalization and other fees associated with patient care whether the services are obtained from an owned, related or third party hospital or other medical facility; rental/maintenance of off-site activities; student tuition remission and student support costs (e.g., student aid, stipends, dependency allowances, scholarships, fellowships).

ORGANIZATION: Harvard University

AGREEMENT DATE: 05/10/2012

SECTION I: FRINGE BENEFIT RATES**

<u>TYPE</u>	<u>FROM</u>	<u>TO</u>	<u>RATE(%)</u>	<u>LOCATION</u>	<u>APPLICABLE TO</u>
FIXED	7/1/2011	6/30/2012	27.60	All	Faculty
FIXED	7/1/2011	6/30/2012	44.20	All	Exempt
FIXED	7/1/2011	6/30/2012	56.40	All	Union (Non-Exempt)
FIXED	7/1/2011	6/30/2012	46.50	All	Union (Hourly)
FIXED	7/1/2011	6/30/2012	10.40	All	Temporary
FIXED	7/1/2011	6/30/2012	25.20	All	Post Docs
FIXED	7/1/2011	6/30/2012	18.70	All	Teach. Asst.
FIXED	7/1/2012	6/30/2013	27.30	All	Faculty
FIXED	7/1/2012	6/30/2013	44.60	All	Exempt
FIXED	7/1/2012	6/30/2013	57.60	All	Union (Non-Exempt)
FIXED	7/1/2012	6/30/2013	47.10	All	Union (Hourly)
FIXED	7/1/2012	6/30/2013	8.30	All	Temporary
FIXED	7/1/2012	6/30/2013	24.30	All	Post Docs
FIXED	7/1/2012	6/30/2013	20.40	All	Teach. Asst.
PROV.	7/1/2013	Until amended			Use the same rates and conditions as those cited for the fiscal year ending June 30, 2013.

**** DESCRIPTION OF FRINGE BENEFITS RATE BASE:**

For the Exempt employee category and the Non-Exempt Unionized employee category: Salaries and wages excluding vacation leave pay.

For all other employee categories: Salaries and wages

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SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:

The fringe benefits are charged using the rate(s) listed in the Fringe Benefits Section of this Agreement. The fringe benefits included in the rate(s) are listed below.

Treatment of Paid Absences: Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims for the costs of these paid absences are not made.

Effective July 1, 2007, the following Treatment of Paid Absences is applicable to the Exempt employee category and the Non-Exempt Unionized employee category:

Treatment of Paid Absences: The costs of vacation leave pay are included in the organization's fringe benefit rate and not included in the direct cost of salaries and wages. Claims for direct salaries and wages must exclude those amounts paid or accrued to employees for periods when they are on vacation leave.

Sick leave, holiday pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims for the costs of these paid absences are not made.

1. The rates in this agreement have been negotiated to reflect the administrative cap provisions to OMB Circular A-21 published by the Office of Management and Budget on May 8, 1996. No rate affecting the institution's fiscal periods beginning on or after October 1, 1991 contains total administrative cost components in excess of that 26 percent cap.

2. Equipment means an article of nonexpendable, tangible personal property having a useful life of more than one year, and an acquisition cost of \$5,000 or more per unit.

3. Activities Performed Partly-On, Partly-Off Campus: The University uses the rate applicable to the location where the preponderance of the time and effort will be expended. Accordingly, each contract or grant is assigned only one indirect cost rate.

4. The Off-Campus rates apply to effort conducted on premises not owned by the University at locations sufficiently far removed from the campus to prohibit the normal use of University facilities and services.

5. Fringe Benefits: The University distributes Fringe benefit costs to its departments and sponsored activities (including Federal programs) on the basis of annual rates applied to direct salaries and wages in lieu of individual direct charges. Over or under distribution of fringe benefit costs are carried forward in estimating future rates.

Included in the fringe benefit rates are: Pension, University Health Services, FICA, Health and Dental Plans, Worker's Compensation, Unemployment Compensation, Parking, Tuition Assistance (Employee Only), Life Insurance, and Disability Insurance.

In addition, for the Exempt employee category and the Non-Exempt Unionized employee category the fringe benefit rates include accrued vacation leave effective July 1, 2007.

The approved fringe benefit rates applicable to extra compensation are as follows:

Extra Compensation:
Pensionable: 15.0%
Non-Pensionable 8.0%

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SECTION III: GENERAL

A. LIMITATIONS:

The rates in this Agreement are subject to any statutory or administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the organization were included in its facilities and administrative cost pools as finally accepted; such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as facilities and administrative costs are not claimed as direct costs; (3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the organization which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. ACCOUNTING CHANGES:

This Agreement is based on the accounting system purported by the organization to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement require prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from facilities and administrative to direct. Failure to obtain approval may result in cost disallowances.

C. FIXED RATES:

If a fixed rate is in this Agreement, it is based on an estimate of the costs for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to a rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs.

D. USE BY OTHER FEDERAL AGENCIES:

The rates in this Agreement were approved in accordance with the authority in Office of Management and Budget Circular A-21 Circular, and should be applied to grants, contracts and other agreements covered by this Circular, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

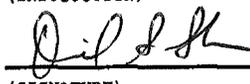
E. OTHER:

If any Federal contract, grant or other agreement is reimbursing facilities and administrative costs by a means other than the approved rate(s) in this Agreement, the organization should (1) credit such costs to the affected programs, and (2) apply the approved rate(s) to the appropriate base to identify the proper amount of facilities and administrative costs allocable to these programs.

BY THE INSTITUTION:

Harvard University

(INSTITUTION)



(SIGNATURE)

(NAME)

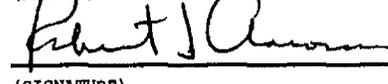
(TITLE)

(DATE)

ON BEHALF OF THE FEDERAL GOVERNMENT:

DEPARTMENT OF HEALTH AND HUMAN SERVICES

(AGENCY)



(SIGNATURE)

Robert I. Aaronson

(NAME)

Director, Northeastern Field Office

(TITLE)

5/10/2012

(DATE) 0601

HHS REPRESENTATIVE: Michael Leonard

Telephone: (212) 264-2069