

Survival Odds

Mortality in Corporate Time

by S. Lochlann Jain

This article examines the current rhetoric of cancer survivorship in relation to the emergence of new statistical models of cancer incidence, treatment, and mortality record keeping. In this article I examine the paradoxical effect of the moral economies of survivorship and agency in relation to the recent use of personal agency in combating disease used in direct-to-consumer medical advertising.

Fortunate and favored, the survivor stands in the midst of the fallen. . . . The Survivor . . . has a price to pay. Many of his own people lie among the dead. (Canetti 1984:227–228)

Several years ago, my family visited the Commonweal center in Bolinas, California. My mother, a physician, wanted to find out more about the therapeutic approaches to cancer at the famous retreat center. At that time I mentally listed all the people I thought would want to know about such a “comforting” retreat—I’m quite sure my inner voice had something of a paternal tone to it as I imagined all the sick, tired people wandering over the green hills and looking across the “inspirational” views.

Such medical travel was not uncommon in my family. On a previous trip we had visited the barracks where lepers had been sent on the island of Molokai, Hawaii, until Hansen’s disease was largely cured in the 1940s. That place, too, was breathtakingly beautiful, set against the cliffs and ocean that must have seemed to those people like prison bars.

My mother’s insatiable empathy for the ill had not yet seeped down to me, and thus I did not think of ill people as well people who had had some misfortune. Rather, ill people fell into a category: people engaged in appropriate categories of behavior; they went to, they were sent to, the sorts of places that sick people go. People with cancer seemed like a different race or genre of person; if anything, I imagined I would die violently but quickly in a car crash on Interstate 280 between San Francisco and Stanford, or, statistically more likely, on Route 17 over the Santa Cruz Mountains. But I never really thought about it that much.

Maybe that’s why diagnosis felt literally Kafkaesque, as though the doctor’s ungracious stutter, “Umh, do you know

what this test shows?” turned me into some kind of pitiable insect. That’s another story filled with chaos and drugged-out memories. This story begins when, months later but still flush with the shame of diagnosis, I wrote anonymously to a retreat center in Vancouver called Callanish that modeled itself loosely on Commonweal. I received a response immediately, a gentle letter letting me know about the week-long retreats for people dealing with and dying of cancer. Callanish was not shy. People dying of cancer? I remembered how when my friend Mary Dunlap’s death was imminent, she couldn’t find any physician in San Francisco who could help her with that part—the dying part—of pancreatic cancer. On her tour of the physicians of the city (at least the ones covered by her health insurance plan), they would all say, “There is nothing more we can do for you.” She found that once the possibility of life seeped from medicine, the doctors were done. After all, you are supposed to gather your resources to “battle” cancer. “Succumbing” to cancer was something one did, apparently, on one’s own.

But I wasn’t dying of cancer; I wasn’t metastatic. I was deeply lonely and alienated, and, let’s be honest, I was cruising. I wanted to find out more about this “cancer” thing. Everyone talked about it as if it signified some coherent concept, but I found only paradoxes and things that made no sense. For example, the pamphlets told me that once my surgical incision had healed, I could return (return?) to “washing walls.” The “Look Good Feel Better” workshops sponsored by the cancer clinic and the cosmetics industry told me that if I applied makeup, I could look great all the way through chemo and no one would even know. (Really? People wouldn’t know something was up if I started to wear base and penciled in eyebrows?) And so on. A few cells gone wacko, and then, wow, everything changed.

Months later, a call from the head retreat person let me know that there had been a cancellation. I asked to be in a retreat with others in their thirties. I didn’t want to be with a bunch of old people as I had been in the chemotherapy room; I felt done with my role of making all the other cancer

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nerds feel as though at least things could have been worse. Without ever making a full commitment, I booked my flights for “cancer camp.” Only later—after partaking in several other retreats—did I realize how groovy it might have been. It might have been about how to beat the odds or remain cheerful rather than the actual in-depth work it offered of examining death and illness. After all, hope and exceptionalism pervade cancer culture like a shrill thread, everyone hanging on for dear life and yet still dangling.¹

Lauren Berlant might consider cancer hope a “cruel optimism,” which, she writes, “names a relation of attachment to compromised conditions of possibility . . . whatever the *content* of the attachment, the continuity of the form of it provides something of the continuity of the subject’s sense of what it means to keep on living on and to look forward to being in the world” (Berlant 2006:21). Survival itself, or rather the hope for survival, might be taken as cruel optimism’s basest form. It may just be what keeps people going through harsher and harsher experimental chemotherapies. Then again, the attachment to hope offers another sort of cruel optimism; evidence of this attachment on a cultural level takes many forms. Recently, for example, an academic review of an article I submitted for publication states: “While reading this essay, I was trying to imagine [my friend going through cancer treatment] . . . dealing with it through some sort of other discourse [than hope and survivorship]. I couldn’t.” Lance Armstrong, with his odd mix of self- and corporate promotion, presents another widely distributed image of the promises and potentials of hope. Another form of attachment to hope offers itself in hospital and pharmaceutical ads, as if these companies are giving patients the life or death choice to take up the alms they have on offer.

Such attachments come with costs. If on the one hand we have to hold onto them for the poor cancer patient who needs them to get through treatment, well, this cruel optimism serves other interests, too. I believe that the attachment to hope saves us from doing the dirty work of really looking at what is being survived and how—*that* politics and suffering is more easily black-boxed behind chipper wrapping paper. Here I take a different angle in examining the discourses of cancer.

In this article I explore how the disjuncture between the mortal time of a human life marked by its end in death and the immortal time of the corporation and the medicines it proffers mesh with the rhetorical narratives of cancer, particularly the language of survivorship. In the first section of the paper I offer an analysis of the politics and idea of survival against the odds. Others have examined how numbers have infused our understandings of health and medicine in ways

1. Initially the term “survivor” was pegged to cancer in order to ensure that the medical system recognized the specific medical issues of people who had endured cancer treatments. However, in the past decade, the notion of survivorship against the odds—the enumeration of survivorship—has come increasingly to matter in popular accounts of the disease. That is what I want to focus on here.

that dramatically differ from previous models of illness and treatment (Christakis 1999; Dumit 2002; Jain 2007; Rosenberg 2002:246–260; Valier and Timmermans 2008:509). Based on this observation, I examine a locution common in popular contemporary cancer reporting, commentary, and social interaction: that of survival against the odds. How do we understand these odds, and what are the social implications of such language?

I then turn to an analysis of the recent Gardasil campaign to understand how this campaign played on cancer fear and offered opportunities to fight the odds even before a diagnosis. This campaign can give further insight into the individual and corporate stakes in such language.

Coming to Survivorship

That retreat, the first of several week-long retreats I have attended, offered my first lesson in how people struggle with the hegemony of the various languages of survivorship. Ironically, in popular culture the cancer survivor has been recently presented as nearly a superhuman figure. One person told me that when he introduces himself as someone with Hodgkin’s disease, he gets no response, whereas when he says he is a cancer survivor, a congratulations most often follows. An obituary hanging on my office wall describes a fellow scholar who died of cancer as so committed to her work that she missed not a day of teaching because of cancer (i.e., until she croaked). Lance Armstrong so doggedly prides his survivor status that the *Onion* newspaper can joke that he has challenged cancer to a rematch (Onion 2006).

Not exactly a community, not exactly a movement, not exactly an identity, the survivor insignia offers something like a scar, a little mark added to the many kinds and styles of bodies to which it adheres, something that aims toward marking and interpellating and rendering parallel or similar an experience. At any rate, it works in tandem with the medical categories to coconstitute social notions of disease.²

Cancer “survivorship” first developed as a term in the 1980s, when it came to designate the particular medical needs of people who had gone through treatments for cancer. Since then, though, the term has taken on a new cultural valence. Seeking “survival” certainly fits into this structure as a strategy to manage what Erving Goffman (1963) would have called a “spoiled identity.” Though the disease still carries a stigma, it’s nothing like the 1970s, largely due to the “coming out” of several celebrities since then.

2. “Survivor” takes the sting out of the stigma, but the rhetoric may also be understood as part of a broader cultural cancer management technique. Recall, for example, sociologist Talcott Parsons’s (1981) still relevant description of “sick role” from the 1950s. Parsons hypothesized that the break from responsibility required by illness was rendered legitimate when the ill person followed culturally determined conventions of being ill, such as seeking health care and trying to become healthy (Parsons 1981:70).

The investments in this figure run deep, and on several occasions I have witnessed people in support groups discussing both their dismay at the term “survivor” and also the cultural barrier against criticizing it. As one person in my support group said, “It is as if to be against the survivor rhetoric is to be against living.” The survivor figure can present terribly difficult positions for people with cancer who are not, in fact, surviving, in ways I analyze elsewhere.

We assume survival until we don’t. The doctor survives the clinical trial, the child survives the parent, the well survive the sick. You don’t really think about it until you are called into the position of survivorship, asked in some way to inhabit the category, live amid those in that category who are not, in fact, surviving. I know that feeling, the muted exhilaration of the survivor. You wake up in the morning not dead or sick. You wake up happy and miserable at the same time, guilty of your happiness as you think of the two women from your support group who are currently dying, as if one’s own survivorship were somehow contingent, itself, on the statistics and those who are contained within them. To me, cancer is not a “Why me?” thing. In a world of plastics, nuclear fallout, pesticide runoff, it’s just a distributive thing. Why not you? Or me? As it happens, though, it was me. Or it was then.

All manner of explanation fills the cancer void. As one woman on my retreat said, “Maybe I haven’t laughed enough. But then I look around the room and some of you laugh a lot more than I do and you’re still here.” Another person was tortured by the fact that she had suffered from an invisible pain syndrome that no one seemed to believe. She had wished she had something visible, something like cancer, and now she did. Others try to understand cancer as a lesson that they were dealt because they needed to change something in their lives. My first therapist made me feel like I was being sexually harassed when he asked at my first appointment, “Which breast is it in?” At my next appointment, when I plucked up my courage to ask him why he had wondered, he said that some people think cancer in the left breast indicates that the person is not expressive enough. He didn’t say that this was his theory, but why did he ask?

I remember at that first cancer retreat looking around at the other seven participants and wondering who would die first. Lisa, about my age, had a 2-year-old daughter at home. Breast cancer. Liz, from Montreal. Leukemia. Sharon from Ottawa, worked for Canada Health. Breast cancer. Then there was Tina, a nurse. Oral cancer. Alice, a mother of a 12-year-old, who had stage III ovarian cancer about to start her third course of treatment. Beth had received the high-dose bone marrow transplant therapy a decade ago in Montreal and had been ill ever since. Kate, an English educator, was diagnosed the same day as I was (though about 25 years later in her own life) but with metastatic disease.

I knew at the time that engagement in such a pastime was wrong. Unlike my father, who delights at weddings in predicting how long a marriage will last, I told no one. One might attempt to explain or justify his or her own survival,

as I did through garnering facts such as age and stage (though such facts matter only for a population). But living in prognosis by definition belies prediction and explanation: you don’t 70% die; you live or die (Jain 2007). As it turned out, I was right. The three oldest and sickest, women in their fifties (which seemed much older then than it does now), are now gone. But in a weird way, it nearly seemed as though the bearing out of my assessment made their slow and excruciating deaths more reasonable, if still not fair. Can that be true? Rationalization is one way to bury the piles of the dead.

And there are other explanations: the treatment, my vegetarian diet, my good constitution, my kindly nature and good will? Some of these explanations are impossible to justify in the usual ways. For example, cancer surgeons’ success rates—potentially, if inexactly, measurable by tracking rates of recurrence—are not even collected.³ Other explanations and secret theories belie objective measurement. Some survivors of the Halsted radical mastectomy credited that surgery with their survival long after the procedure was abandoned by most surgeons (Lerner 2001). Others attributed survival to high-dose chemotherapy and autologous bone marrow transplant even though it was found after 5 years of offering the harrowing procedure to have lower survival rates (Rettig et al. 2007). Who knows? Just because it killed more people than it saved does not mitigate the fact that it may have saved some.

Another theory of cancer survival clings to the notion that the more difficult the chemotherapy course, the more effective it is; the boundaries between aggressive treatment and efficacious treatment are constantly blurred.⁴ In this tangle of uncertainty, the only sure thing seems to be the statistics: at least they offer concrete numbers. But what are you supposed to think when you show the doctor the chart with stage and prognosis written on it, as I did, and ask him what it means and he doesn’t skip a beat and says, “Exactly what it says.”

Beating the stats in some ways provides precisely the individuated battle that an American needs these days. Survivorship forms a powerful metaphor for the subjects of cancer, a figure standing in for hope; for the potential success of various scientific, political, and economic cancer wars; and of personal spirit. Everyone loves a survivor. The term corresponds nicely, also, to other interests that like to foreground agency in the face of poor prognoses. Hospitals and pharmaceutical companies advertise everywhere that our choices to use their services may save our lives.

The media, especially, love the survivor story. One avowed cancer survivor writes, “I had a quote 40% chance for survival for 5 years and 25% for 10 years,” she recalls. ‘Now did I live by those statistics? No. Did I let them influence the way I battled the disease? No.’ [Kristine] Chip says she persisted by

3. Interview with surgeon, American Society of Clinical Oncology, 2009.

4. I take this up in detail in “The Mortality Effect: Counting the Dead in the Cancer Trial” (Jain 2010).

relying instead on the principle, “With a positive attitude and hope, you can conquer anything” (Steinberg 2003:41). The lone survivor of the “rare and aggressive cancer” cuts a heroic figure these days, unlike the dork who dies of a banal quotidian cancer. But what interests me here is the way that Chip’s own agency is configured in relation to statistics about cancer. She battles odds here; she specifically does not battle other *people* who will die, statistically anyway, so that she may live.

But the possibility of surviving the odds is relatively recent. Indeed, it may not be a coincidence that the culture of the cancer survivor rose in tandem with the consolidation of cancer statistics and the disclosure of those to the patient (Christakis 1999). The Oxford English Dictionary (OED) attributes the first use of the word “survivor,” dated to 1624, to John Donne’s *Devotions upon Emergent Occasions, Meditation XVII*.⁵ For Donne (1975), the shared endeavor of death as a facet of the interconnection of human life forms the core of his meditation: “No man is an island, entire of itself; . . . any man’s death diminishes me, because I am involved in mankind. . . . Never send to know for whom the bell tolls; it tolls for thee” (87).⁶

Moving on from Donne, the OED dispenses with this sense of inextricable collectivity. Instead, the individual is distinguished, and distinguished precisely by his or her longevity, by his temporal dislocation from the collective: “a person, animal, or plant that outlives another or others; one remaining

alive after another’s death, or after some disaster in which others perish” or “outliving another or others: remaining alive after some disaster in which others perish.”⁷ This echoes Chip’s ubiquitous notion of survivorship, one meshed with the ideologies of population statistics.

The bell neither notices nor tolls for a statistic. The many that built the category of one’s survivorship in the language of population data lie dead, people we’ve never met nor could meet, for statistics contain homogenous units with only one variable: alive or dead. You build these Frankenstein numbers, and they become something else. They feed on your friends’, acquaintances’, and enemies’ deaths, and they will feed one day on each of our deaths, just as they feed now on our lives. Survivorship can only ever be temporary.

According to Michel Foucault (1977), who gave us the powerful notion of biopolitics, Donne’s version of survival predates the change in power necessitated by a political shift away from God and the sovereign toward the state and corporation. Foucault writes that our notions of death differ from contemporaries of Donne:

Death becomes, insofar as it is the end of life, the term, the limit, or the end of power too. Death is outside the power relationship. . . . Death now becomes, in contrast, the moment when the individual escapes all power, falls back on himself and retreats, so to speak, into his own privacy. Power no longer recognizes death. Power literally ignores death. (Foucault 1977:248)

Death no longer makes sense as life everlasting. Now, more than a comma separates life and death (Edson 1999).

The noted biologist Steven Jay Gould (1985) offers a way to understand this. When diagnosed with abdominal mesothelioma, Gould wrote an article titled “The Median Is Not the Message.” The article tours his prognosis, taking us through all of the reasons that this curve (fig. 1) does not predict his death within a median 8 months between diagnosis and death. He writes of the hope he finds in an inevitable “right skew” of the distribution curve. While a symmetrical distribution would have a mirrored bell curve, a right skew has a steeper slope up and a more gradual decline, meaning that while the first half the group diagnosed with abdominal mesothelioma will die before 8 months, the second half will drop off gradually over the coming years. As he points out, “there isn’t much room for the distribution’s lower (or left) half—it must be scrunched up between zero and eight months,” while the right half, where everyone hopes to be, can extend for years and years. Indeed, in his case it extended for 20 years (Gould 1985).

The collective, for Gould, serves as the measure of his own hope, rendering it an objective truth of a population into which he has been slotted and in which he seeks to both

5. It’s no coincidence that a scholar of Donne, Professor Vivian Bearing, would be the protagonist of a play contrasting versions of death and survival. In *Wit*, Bearing discusses the comma—the slight pause that separates life from death—between life and life everlasting in the Holy Sonnet X, “Death Be Not Proud.” As Bearing had learned from her professor: “Nothing but a breath—a comma—separates life from life everlasting. It is very simple really. With the original punctuation restored, death is no longer something to act out on a stage, with exclamation points. It’s a comma, a pause” (Edson 1999:14).

6. Different though they are, both Donne’s and Canetti’s versions of survival predate the rise in population statistics and the use of those numbers to manage questions of political and economic power. According to the philosopher Michel Foucault (1977), this shift toward numerical aggregation and explanation arose with a political shift away from God and the sovereign as the primary sources of governance and toward the state and corporation. Thus, Canetti (1984:232) could write that the “true subject” gives up his or her life for the ruler and that the ruler needs these deaths to maintain and demonstrate his or her power over death and life. In other words, in Canetti’s view, the sovereign could pick out individuals who might live or die. The ability to let live or make die distinguished sovereign power and marked his or her position as sovereign. Cancer makes one a subject through survival (not kicked out like the leper). Foucault (1977) considered subjects as populations. The individual is no longer of interest to political power. Foucault requires a different notion of death. He writes that notions of death for citizens familiar with population aggregates differ drastically from what Donne would have called death. According to Foucault, our notion of death could not be more different from Donne’s, in which death is necessarily a collective and political endeavor. In contrast, in the age of population statistics and aggregates, death is a limit on political power; death becomes “the moment when the individual escapes all power, falls back on himself and retreats, so to speak, into his own privacy. Power no longer recognizes death. Power literally ignores death” (Foucault 1977:248).

7. Oxford English Dictionary Online, s.v. “survivor,” <http://www.oed.com/view/Entry/195113?redirectedFrom=survivor#> (accessed June 21, 2010).

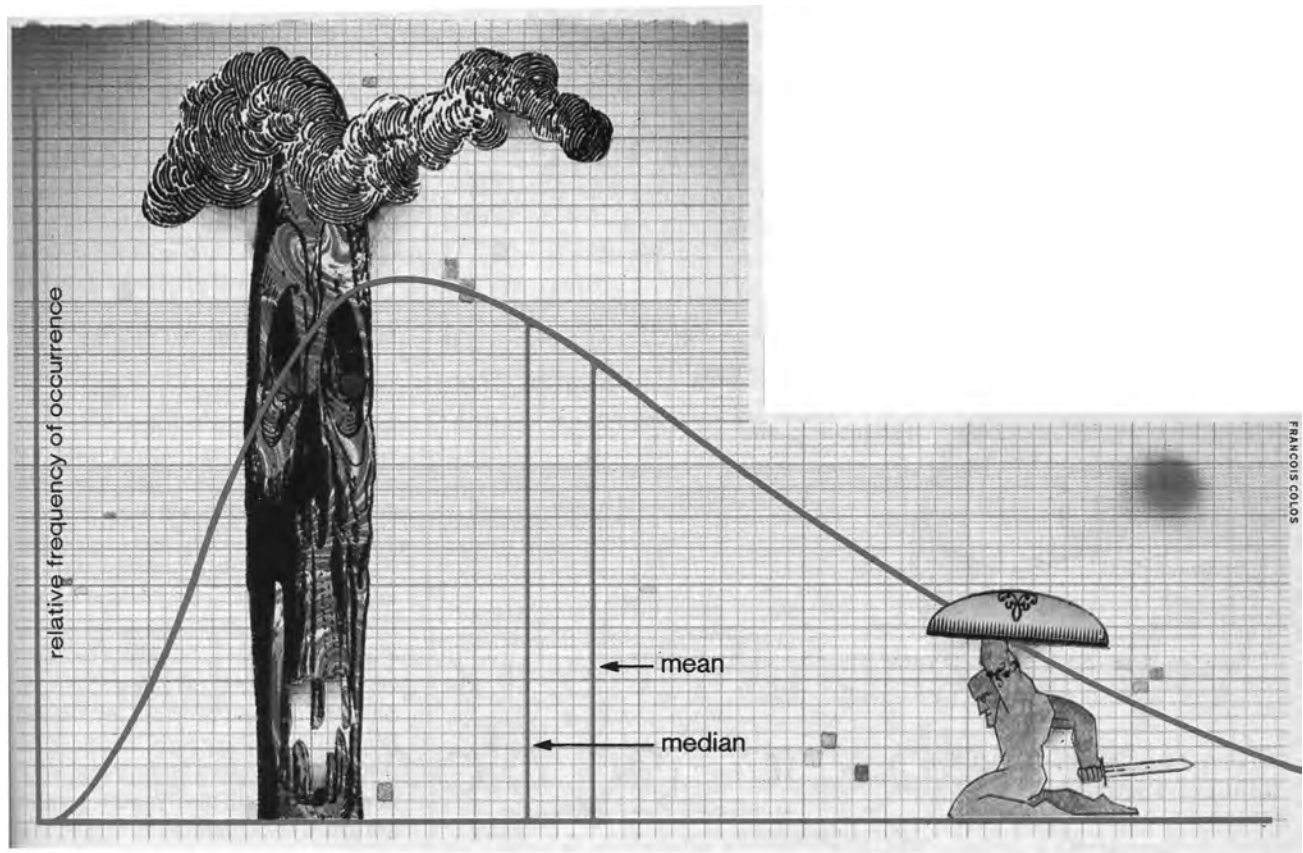


Figure 1. Battling the odds. A color version of this figure is available in the online edition of *Current Anthropology*.

locate and distinguish himself. Justifying one's own life in the face of the death of the collective makes a dangerous bedrock for hope. But in so doing, Gould translates for us Elias Canetti's (1984) observation about survivors: "It is as though the battle had been fought in order for him to survive it" (228). The continuity of one's self allows a kind of retroactive purpose to the statistics themselves. No one wants to be a statistic; no one can help relying on them. This mode of representation could not differ more from another version of survivorship.

The Holocaust comes with a unique visual culture depicting clear-cut brutalities that is circulated through museums, Web pages, documentaries, and Hollywood movies. The familiar images depict the barbed wire; the thin, bald bodies with their striped uniforms hanging off them; the piles of bodies; the bodies in midcrumple after a shooting. The distant black and white images stand as markers of what precisely we must remember. Amid various traumatic and judgmental debates about how these survivors survived and the ethics of that survival, the last few Jewish survivors have been ascribed the role of having borne witness to Nazi devastation, with their

tattoos and children being the fleshy carriers of that history, and holding the burden of ensuring that history "never again" repeats itself.

At the Holocaust museum in Washington, DC, the display strictly ushers observers through the entire exhibit, and you can't shy away from much. Arriving on the second floor, one finds a massive pile of thin black and brown midcentury shoes taken from people before they entered the gas chambers. Hundreds? Thousands? At once universal—anyone could have worn them—they are also specific, bearing the particular moldings of the feet that did wear them. Though tossed singly, not even in pairs, haphazard, unnamed, anonymous, stiffened through time and transit, the shoes reference the bodies and lives that inhabited them.

Statistics don't carry these fleshy references; statistical deaths are separated from bodies. The dead bodies counted as data in the randomized controlled trial, and of Gould's graph, all carry a nonreferential character that lives cannot. Holocaust survivors, because of the historically closed moment of the event and the efforts to ensure that the event

exceeds other war killings, have a particularity that survivors of endemic disease cannot.

People who come to that statistic may try to find themselves there, matching their prognosis to the height of the right skew, while the stories that were lent to that curve dissipate into a universal that will come to be inhabited by other people—others who will wear them in their own ways, leave their own imprints, soft spots, worn-out parts. But that search will always be disappointed, for numbers are not shoes. A number will not mold to your arches; it will not record the quality of your life. Fickle adulterers, numbers make love with the generations who move through them. This absorption of each death into an abstract category explains the “victory of sterility and death”—as Gould (1985:41) quotes Hilaire Belloc as saying—that statistics embody.

However, Gould’s logic requires this victory, for he writes not of death but of time, time underpinned by a logic that necessitates a comparison of his life chances against the graph. Yet the graph abstracts the lives that it purportedly represents to such a degree that his hope to emerge victorious does not place him atop a pile of dead bodies with both arms raised in victory but rather paints him as a victor against the odds.⁸

If Canetti’s theory of sovereignty needs actual dead bodies that can be counted and used to consolidate sovereign power, Foucault enables us to understand how the numbers can be gathered in the interests of more dispersed fields of power. For example, the objectified hope presented in cancer facts and figures elide other kinds of truths and politics that Gould does not consider. Gould had a disease virtually always caused by exposure to asbestos, a disease known since the nineteenth century to be caused by asbestos, that according to historians exists only because of a massive cover-up by the asbestos industry. The disease might easily have never existed, which would have led to a different curve entirely (Davis 2007).

Second, the left curve offers a seemingly objective view of the natural course of a cancer rather than a glimpse into the politics of diagnosis. Ovarian cancer, for example, is known as a particularly aggressive cancer in that people often die relatively soon after diagnosis. But like most cancers, life chances have everything to do with stage at diagnosis, and aggression has for too long stood in as a substitute for the fact that patients and doctors ignored subtle symptoms such as bloating or discomfort until the cancer had spread to a stage no longer treatable. In other words, skipping over the causes of cancer gives it an apolitical mystique. Personifying

8. One could turn to many places to find the uniqueness and historical specificity of this way of understanding time and death. Marcus Aurelius (1992), in *Meditations*, for example, wrote, “Always remember then these two things: one, that all things from everlasting are of the same kind, and are in rotation; and it matters nothing whether it be for a hundred years or for two hundred or for an infinite time that a man shall behold the same spectacle; the other, that the longest lived and the soonest to die have an equal loss; for it is the present alone of which either will be deprived, since (as we saw) this is all he has and a man does not lose what he has not got” (10). Thanks to Derek Simons for the quote.

cancer as aggressive makes its progression seem inevitable and unstoppable.

Statistical aggregations provide a logic through which bodies become interchangeable numbers—they become statistics for which nothing need be felt, neither guilt nor pleasure nor horror. The Holocaust Museum insists that the Holocaust stories will be preserved so that we remember, even so that we feel the horrors viscerally with concrete manifestations of experience. The injunction to remember, precisely so that it never happens again, centrally configures the exhibit and its justification. The message is that we are all vulnerable, that we must stand up against racial and other forms of violence so that the next time we are not rounded up and burned. This point in some ways runs parallel to the lesson that Gould has for his readers: by reading the graph correctly, we can all have hope; we might all find ourselves on the right end of the graph, even as this is logically impossible. Both modes of survivorship come together as problems of correct representation and interpretation.

It makes good sense that a nation committed to individual agency and bootstrap ideology encourages survivors to rationalize and explain each survival and death in relation to the strength of the individual rather than the social decisions about acceptable levels of carcinogens and statistical distribution. The faith in statistics versus the faith in one’s own outcome is perhaps impossible to reconcile, and Gould inadvertently demonstrates how this is so.⁹

One finds the social logic of the individual within cancer everywhere: in the Pharma ads, in the medical training sessions, and in cancer culture more generally, such as the American Cancer Society slogan “Hope starts with me.” It is also familiar from other campaigns, such as those offered by the army—“The Power of One”—or of TimeWarner—“The Power of You.” In this sense, the “battling the odds” trope so familiar in cancer culture echoes a broader American understanding of agency even as it paradoxically defines itself both within and necessarily outside of statistical culture.

One Less

Merck offers a potent form to understand the power of statistical ambivalence in the making of social and material culture in its recent advertising campaign for its human papillomavirus (HPV) vaccination, Gardasil. The “One Less”

9. Indeed, physicians bear these statistics in mind in vastly different ways. In San Francisco, California Pacific Medical Center’s Dr. Bertrand Tuan says that he does not do hands-on exams that involve feeling for swollen nodes, skin irregularities, or other abnormalities for his breast cancer patients because he believes that “if someone has metastatic disease, they will know it” (June 2008). On the other hand, Dr. Garrett Smith does a close manual exam because he thinks the 3 months potentially gained in early detection of recurrence can offer the opportunity to save a life, and “that’s the fun part” (August 2008). Both approaches and physical exams (one lasting about 2 minutes and the other about 30) fall under the current acceptable limits of standards of care both medically and legally.

campaign virtually parrots this statistical logic back to its hoped-for consumers by interpellating them to resist becoming “statistics.” It offers the tools to do this by harnessing their consumer power as agents to battle the odds by getting the vaccine. Thus, Merck conjures a market based in fear with the notion of agency central to survivorship.

Merck asks us to carry the passport of the ill even before diagnosis, to live in an anticipated illness, to beat the prognosis before hearing its words in a logic that parallels the counterfactuals of the randomized controlled trial, the missed diagnosis, and the cure. The campaign features quick visual references to young women participating in energetic activities as the voice-overs and textual cues repeat the campaign’s tagline: one less.

I could be one less—one less statistic . . . because now there’s Gardasil. . . . I want to be one less woman who will battle cervical cancer. . . . With Gardasil you could be one less.¹⁰

The ingenious rhetoric promises to establish the viewer as a survivor even before she has cancer—the consumer-patient is invited to “survive” not by battling cancer but by battling troubling cancer statistics (“one less”) and by battling cancer anxiety.

The teenage athletes seem successful in their energy and desire to participate. The vaccination promises to allow these girls to stay in the realm of sport as previvors—to opt out of cancer’s battles, to step out of that ring altogether, just as when you leave the hospital after a test, you put on your clothes again and walk away.

The “one less” phrase echoes a mantra familiar to those who belong to precisely the active and activist groups Merck is portraying. The ubiquitous “one less car” bike sticker asks its car-driving readers to notice that the cyclist is taking less space than a car rather than too much for a bicycle. But one less car offers an anticonsumptive stance, while Merck requires quite the opposite.

By confusing “less” with “fewer” in an apt grammatical error, the slogan plays on colloquialism that one becomes a statistic when one becomes a casualty of something. More than just denigrating the disease, the phrase ignores the fact that those outside a group also constitute the group. About the test that led to her initial diagnosis, one person with cancer I interviewed said, “They tried to comfort me by saying that there was an 80% chance it was nothing, but that meant a 20% chance that it was cancer, and it was.”¹¹ The statistic needs both the 80% and the 20%. “One less” aptly hints at that.

Still, an HPV vaccine may result in fewer women with the disease. Yet Merck leaves open the precise nature of the disease referred to: a few precancerous cells found on a Pap smear or all-out terminal cervical cancer? This necessary hedging

covers critical questions—such as how long the vaccination works and whether and when boosters will be required—that remain unknown. More critically, it confuses and takes advantage of population and individual logics through its fabricated images of young women’s collective self-empowerment.

The advertising similarly leaves untouched the fact that HPV is a sexually transmitted disease. One doctor I spoke to said, in disgust of the marketing practices, “Instead of educating women about the sexual transmission of the disease, they are treating women like swine assuming that they will eat swill and so we’ll just vaccinate them like pigs.” The HPV vaccine vaccinates for only two strains of the virus and not for others that account for 30% of the precancerous lesions that can be detected with the Pap smear; thus, even women who are vaccinated will need to undergo regular Pap smears. They neatly cover over this paradox by representing the vaccination as a cancer vaccine rather than as a sexually transmitted infection vaccine. Other ads also rely on this omission. The “I Choose” campaign (who would choose cancer?) and the Digene’s HPV test print ads refer to those who don’t get the vaccination as gambling by having only a Pap test.

Sociologist Steven Epstein has argued that this decision not to market the vaccination to boys was made purposely so that the product would not be associated with sexual practices. Even the name of the other HPV vaccination, Cerverex, is gendered. As he notes as well, this decision may leave certain groups—his interest is pre-gay boys who have higher risks of HPV-induced anal cancers—untreated, even as the vaccine is justified as a public good (Wailoo et al. 2010). Thus, the advertisement implies that it offers the opportunity to protect oneself from cervical cancer without giving any information about what the disease is, how it is spread, who is at risk, or other HPV-related diseases.

“One less” makes sense only in terms of a target number that the vaccine itself promises to shift: one less than what? To survive cancer here—or, rather, to prevent cancer—relies on the constitution of a vulnerable collective that one outlasts. The fulfillment of Gardasil’s deepest promise would be the elimination of the collective itself. Thus, the advertisement at once installs and collapses the temporal distance between the healthy present and the diseased future, positing and erasing the distinction between the individual consumer and the body (the singular “one less” rather than the collective “one fewer”) of unnamed women afflicted with cervical cancer. The vaccine itself, in the complex of biomedical agency and interests, stands out as that which will make the difference between life and death for each girl who follows the ad’s directive to ask her doctor. In these senses, the commercials fit a different logic than previous public health promotions of vaccinations in which each person’s vaccination was in the larger social interest of the collective good. For Gardasil, vaccination promises the purely individualized promise of self-care and agency.

While Merck’s marketing strategy required raising the spec-

10. “What Is Gardasil?” <http://www.gardasil.com/tv-commercial-for-gardasil.html> (accessed June 5, 2008).

11. Misdiagnosis project, interview with cancer survivor, June 10, 2008.

ter of cervical cancer by tapping into contemporary cancer panic, cervical cancer is one of the few cancers for which an early-detection protocol has been successful. The vast majority of the 3,870 annual deaths of cervical cancer in the United States are accounted for through the lack of access to Pap smears. One indication of the way in which class and access correlate to death rates is that the death rates of African American women in the United States due to cervical cancer are double those of white women.¹² The Gardasil trials, furthermore, did not demonstrate a correlation between the vaccination and death but between the vaccination and precancerous lesions. Gardasil may not shift the statistics.

According to one doctor involved in the Gardasil trials, “Merck lobbied every opinion leader, women’s group, medical society, politicians, and went directly to the people—it created a sense of panic that says you have to have this vaccine now.”¹³ Given the short period of the control trials, many critical questions remain open about its efficacy. For example, the durability of immunity is not clear and may be limited to only about 3 years. At least 20 deaths have been reported to the Centers for Disease Control, and 16 million doses have been distributed (Rosenthal 2008). Nevertheless, the campaign was economically successful, bringing in \$1.5 billion worldwide in 2007 (Hoffman 2008).¹⁴

Merck would have done well to mention the history of cervical cancer and its long, slow fall from preeminence as the leading cause of death for American women (CDC 2006). In 1917, George Papanicolaou discovered a cellular diagnostic test noting that precancerous cells appeared in the exfoliation of vaginal fluid, and by 1928 he found that the “Pap smears” could detect asymptomatic cervical precancer. He presented the results of his further research on 10,000 smears in 1943 in a publication explaining the technique and potential benefits of universal screening. In 1948, he claimed that “the possibility of detecting early asymptomatic or hidden carcinomas by the smear technique has been convincingly proved . . . by a rather impressive number of reports” (Gardner 2006: 123). It took the American Cancer Society another 15 years to begin promoting the test (Davis 2007:132).¹⁵

12. For patients who died in 2001–2005 in the United States, rates for white women were 2.3 per 100,000 women and for black women 4.7 per 100,000 women, based on November 2007 Surveillance Epidemiology and End Results (SEER) data submission posted to the SEER Web site, 2008. Median age at diagnosis was 47, and the average number of years of potential life lost from cervical cancer was 25.3 (Ries et al. 2007).

13. Dr. Diane Harper, a professor of medicine at Dartmouth Medical School; Dr. Harper was a principal investigator on the clinical trials of both Gardasil and Cervarix (Rosenthal 2008).

14. As Jan Hoffman writes, there is an individuated form of responsibility here: illness is not understood as a communal responsibility (girls’ sake), and the sexual transmission of disease is not underwritten by responsibility of both parties (Hoffman 2008).

15. “The American Cancer Society launched an effort to promote the Pap smear in 1957, fifteen years after the test had been shown to save lives, and nearly three decades after it was first developed” (Davis 2007: 132).

Historian Kirsten Gardner explains the long delay in adopting the test as the result of a lack of infrastructure for universal testing and a lack of financial and political clout for women’s cancers. Sociologists Adele Clarke and Monica Caspar (1998) have examined the classifications of precancerous cells and the politics of both cell classification and the women who were hired to read the cell cultures in terms of institutional practices that had to be reorganized before the Pap smear could be widely adopted. Epidemiologist Devra Davis (2007) suggests, rather, that the delay resulted from a professional interest of physicians in maintaining control over the very profitable surgical biopsies and cancer treatments and a resistance to “the notions that public health agencies and nurses could conduct tests, train experts to read them and screen large numbers of people for signs of illness . . . seen by many physicians as a plot to socialize medicine” (123). In the 1970s, when the test was widely adopted, death rates from cervical cancer dropped dramatically—in many cases to far less than a third of previous rates (Davis 2007:122–127). It would be virtually impossible to argue that the decades-long delay in adopting this inexpensive test didn’t come at the cost of hundreds of thousands of premature deaths. The Merck campaign invokes the justifiable suspicion, based in such histories, that the best treatments and detection get lost in the politics of medicine.

In this context, the necessity for self-advocacy makes perfect sense. It comes as no surprise that such a critical message comes in the form of medical direct-to-consumer advertising rather than as a public health campaign. The Gardasil ad underpins and asks its viewers to buy into a model of patient self-advocacy and the idea that from that advocacy (“Ask your doctor”) one can take responsibility for her own well-being.

In my ethnography of people diagnosed and misdiagnosed with cancer, several people credited their advocacy skills in their successful diagnoses. Here is a representative story.

When I was 33 (I am now 35) . . . I discovered my lump during my self breast exam. After my exam, [my doctor] sent me for a mammogram and advocated for me when the mammogram department was dragging their heels on getting me into their clinic that week (the mammo department initially scheduled me for an appointment [two weeks later]—completely unacceptable). My nature is to be proactive and advocate for myself—at the end of the day, I ultimately am responsible for my well-being. (Anonymous e-mail message, June 16, 2008)

Because cancer is usually asymptomatic and not obvious to the naked eye, successful early diagnosis usually requires a multifactorial approach that may include physical exam, biopsy, blood tests, and scans. In this case it involved an active primary care physician, a patient who did breast self-exams (and so was educated, trained, and motivated), a mammogram that picked up lesions even on a young patient, and a fine-needle aspiration (a test with a high false-negative rate) that turned out an accurate diagnosis. Against the stories of

many patients who have asked for tests or exams and not received them or received only quick breast or dermatological exams that missed critical details, this story suggests that proaction can make the difference.

Cashing in on the industry of cancer fear, Merck offers a firm plan on how to avoid cancer to a group that is bombarded with media fear reporting about the disease and that consists of those who often have parents and relatives with the disease. Offered very little information about the disease and virtually none on how to be “good patients,” they are told how to discuss concerns with doctors to make sure their concerns are taken seriously. The fear factor around cancer is now so high that one recent study, for example, found that “of 2,500 girls ages 8–18, nearly 30% believed they might currently have breast cancer.”¹⁶

Conclusion: Valuing a Year

Such stories of personal agency serve a critical role in the rhetoric of the cancer survivor and always teeter dangerously between self-congratulation and disgust or even blind fury at the fact that patients have to become such experts to negotiate a medical system so disparate and faceless. Even then, their efforts can fail. The Gardasil vaccination is the first vaccination whose expense vastly outstrips its immediate benefits, and in light of such a short period of data collection, no indication yet exists of such basic data points as the length of efficacy, whether the vaccination will increase the virulence of other strains of HPV, and the short- and long-term health consequences.

In light of the missing health data, much has been made of the cost-benefit calculations of the vaccination, which provide another valence to understand statistical thinking and the kinds of substitutability and fungibility it allows for and encourages. According to one study, the vaccination of all current 12-year-olds would fall within a standard acceptable cost of \$40,000 per year of life saved, whereas a “catch-up” vaccination of the age group of those aged 12–20 would result in a spending of \$120,000 per year of life saved. Regardless of how much a particular individual would be willing and able to spend for that year, the latter sum is considered beyond acceptable social spending for one abstracted year of life.

Epidemiologists who attempt to weigh the benefits of a drug or treatment contrast the years of life saved by the treatment with the cost of the treatment. They can do this only by putting everything into comparable terms, and numbers allow this flexibility. The study assigns each year of life a value

between 1 and 0, where 1 is perfect health and 0 means you are dead. How do they do that? They ask patients and each other, they guess, and they use charts. They factor out things that are critical to the measurement but seem harder to gauge, such as the quality of life of caregivers or things that affect quality of life outside of health, such as the weather, how comfy your bed is, or the impact of your physical health on your mental health. There is no such thing as a less-than-one value; if the drug causes you to have a disabling stroke with locked-in syndrome and you wish you were dead, even then the equation of your life will have a positive value.

That number is put into a formula that takes into account the cost of the drug. In the case of Gardasil, quality-adjusted life years (QALY) of giving the drug to American 12-year-olds was found to be \$40,000 (Kim and Goldie 2008).¹⁷ Critiquing the baseline assumption that money can be exchanged for a year of life on a social basis is not my particular interest here, but it is worth noting that the many necessary assumptions to such calculations may undercut the entire game. For example, in lieu of evidence that the vaccination works for longer than a few years, the assumption was made that it lasts for life. It was assumed that the vaccination would have no bearing on the development of more virulent strains of HPV, though no evidence exists either way.

Such calculations offer something of a philosophical logic game: if x , then y . And really, you can speculate anything for the x part of the equation, such as whether Gardasil works for 10, 20, or 60 years. But without any data, it is just a completely arbitrary speculation about risks and costs. In considering the study in an editorial, Dr. Charlotte Haug (2008) wrote that cost-effectiveness analyses offer “tools for decision making under conditions of uncertainty. These analyses do not in themselves provide evidence that medical interventions are effective” (862).¹⁸ Given the scientific form of data presentation, it can be incredibly easy to forget that and, further, to slide uneasily between medical and financial efficacy.

Why are medical profits literally always completely invisible in these equations? Why is it always the case that the cost per year of life is the variable and all other costs are acceptably fixed? What if we had a calculation that took the cost of life to be fixed and the variable to be something like how much profit Merck would be able to leverage or how much Merck’s president’s retirement package should be? As we can tell by the huge range in the cost of the vaccinations (anywhere between \$400 and \$1,000), that valuation could be as flexible as the value of a year of life. One recent article reported that the value of an American life in such calculations has been declining significantly over the past decade (Wedekind 2008).

Democratic logic slips into the debate precisely at the point

16. “Breastcancer.org Helps Young Girls Put Breast Cancer Fears into Perspective,” http://www.breastcancer.org/about_us/press_room/prevention.jsp (accessed June 21, 2010). Girls who had been through breastcancer.org’s educational lecture came out knowing that they should “drink less diet soda” and that the main risks for cancer are “just getting older.” Nothing on the breastcancer.org Web site indicated anything about rising cancer rates, links to common toxins, how to raise concerns with a physician, or the politics of treatments.

17. This study was widely reported in the press and on multiple blogs (Kim and Goldie 2008).

18. Their assumptions are optimistic, assuming lifelong protection, no replacement with other strains of HPV, continued screening, and natural immunity to HPV is unaffected (Haug 2008).

that health profits are being tallied. Kim and Goldie (2008), for example, write that “under these conditions, if we are willing to pay \$100,000 per QALY, a catch-up program for girls between 13 and 18 years of age appears to be reasonable” (827). But who are this elusive “we” willing to pay \$100,000? A cost-benefit study analysis with this sort of “conclusion” may make sense in a social system where everyone has access to the same care and costs are limited, but it simply makes no sense in a nation where costs and treatments vary so dramatically and in which the decisions are made by insurance companies who use an entirely different index of the cost benefit of the vaccine. A democratic-socialist logic has a strange way of creeping into these equations as if lives were exchangeable or had the same value. This, a side effect of living inside a framework of fungible odds, obscures the politics of such decisions.¹⁹

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Comment

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Jain’s essay offers a multifaceted analysis of how social notions of disease shape the ways in which Americans conceptualize and experience cancer. Reflecting on her own story of diagnosis and survival, Jain examines the intimate and macabre ways in which individualization is reinforced through statistical logics and heroic conceptions of human agency. In doing so, she draws attention to the anonymity of statistical representations of death and disease while also demonstrating how ideologies of “hope and exceptionalism” are pervasive in the rationalization and interpretation of cancer. Jain’s cri-

19. Additionally, though many people find it abhorrent to put a number on years of abstracted life, many people are worth much more than \$100,000 in terms of how much money they make themselves or their employers and in terms of how much they would be willing to spend or have someone spend on their behalf. A classless democratic calculation that drives oncological protocol and drug development leaves those people out of luck, because certain drugs will simply not be developed. The less value accrued to the “average” life, the less will be accorded to every life.

tique exposes not only the sensuality of objects (such as thin midcentury shoes) that continue to reference the bodies of the dead but also the implications of measuring hope in terms of statistical calculations—for one to live, others *must* die. She develops this visceral commentary on contemporary “cancer culture” in the United States by bringing Foucauldian insights on the individualization imposed by modern power structures to bear on the trope of “battling the odds.”

As the subtitle of Jain’s article suggests, the relationship between temporality and the corporate form presents a compelling vantage from which to examine not only corporate perpetuity but also the interplay between personhood, human mortality, and time. Jain gestures toward this early on, contrasting the “mortal time of a human life” with the “immortal time of the corporation,” and again in her discussion of the biopolitics of secularism. While she returns to a discussion of time in her conclusion, a deeper exposition of the role of temporality—and continuity—in defining both corporations and personhood might have enriched this article. Her study might have also benefited from further discussion of how she contextualizes this analysis within the United States. For example, Jain argues that battling the odds of survival “in some ways provides precisely the individuated battle that an American needs these days.” The “social logic of the individual” is central to both Jain’s definition of the United States as “a nation committed to individual agency and bootstrap ideology” and her reading of cancer culture. While this connection is insightful and significant, her framing of it errs toward a portrayal of American thought as homogeneously that of secular liberalism and works to foreclose the possibility that multiple social notions of disease might be operative in this context.

In the second half of her essay, Jain offers intriguing insights into the ways in which corporations shape the organization of and possibilities for daily life by analyzing an advertising campaign for the Gardasil vaccine produced by Merck. The “consumer-patient” to whom this marketing is directed provides a provocative dimension of Jain’s analysis. She argues that the Gardasil campaign promises women the means to resist becoming cancer statistics by harnessing their consumer power. This dual subjectivity—consumer and patient—complicates the narrative of agency and individualism that Jain has pursued elsewhere in this article. Both subjectivities involve a claim to potential agency. While the first may be grounded in a “quest for self-realization through consumerist desire,” the second, as Jain argues, is framed by the heroic figure of the survivor (Mazzarella 2003:34). The tension between these two constructs—the effort to realize one’s self as a “previvor”—opens up a new set of questions for analysis. How are the politics of cancer obscured by the narrative of agentive consumption? Is the agency of the individual displaced onto the commodity of the Gardasil vaccine? Is this a shift away from an ideology of self-reliance?

In my research, which examines the corporate history of the production and consumption of handloom and handcraft

textiles in postcolonial India, I explore aspects of commodification, consumer subjectivity, and valuation that resonate with Jain's material. Like Jain, I am interested in the multiple ways in which subjects and objects are defined in relation to corporations. Rather than treating corporations as monoliths, in my own work, I examine how corporations operate as institutions composed of a variety of actors and moral narratives. Taking such an institutional perspective also reveals the ways in which corporations can arise from the diverse challenges and circumstances of human experience. While I would have been interested to see Jain delve more deeply into the workings of Merck as a corporate institution or the range of corporate ventures (e.g., *Livestrong.com*)²⁰ active in the fashioning of popular cancer culture, she nevertheless provides an engaging and timely perspective on the ways in which ideas of individualism and agency—as they are mediated by statistical logics, popular framings, and corporate slogans—inform the representation and experience of cancer.

References Cited

- Aurelius, Marcus. 1992. *Meditations*. A. S. L. Farquharson, trans. and ed. New York: Knopf.
- Berlant, Lauren. 2006. Cruel optimism. *Differences* 17(3):20–36.
- Canetti, Elias. 1984. *Crowds and power*. Carol Stewart, trans. New York: Noonday.
- Centers for Disease Control and Prevention (CDC). 2006. Cervical cancer statistics. <http://www.cdc.gov/cancer/cervical/statistics/> (accessed July 7, 2008).
- Christakis, Nicholas A. 1999. *Death foretold*. Chicago: University of Chicago Press.
- Clarke, Adele, and Monica Casper. 1998. Making the Pap smear into the “right tool” for the job: cervical cancer screening in the USA. *Social Studies of Science* 28:255–290.
- Davis, Devra. 2007. *The secret history of the war on cancer*. New York: Basic.
- Donne, John, and Anthony Raspa, eds. 1975. *Devotions upon emergent occasions*. Montreal: McGill–Queen's University Press.
- Dumit, Joseph. 2002. Drugs for life. *Molecular Interventions* 2(3): 124–127.
- Edson, Margaret. 1999. *Wit*. New York: Dramatists Play Service.
- Foucault, Michel. 1977. *Society must be defended*. David Macey, trans. Mauro Bertani, Alessandro Fontana, and Francois Ewald, eds. New York: Picador.
- Gardner, Kirsten. 2006. *Early detection: women, cancer, and awareness campaigns in the twentieth-century United States*. Chapel Hill, NC: University of North Carolina Press.
- Goffman, Erving. 1963. *Stigma: notes on the management of spoiled identity*. Englewood Cliffs, NJ: Prentice-Hall.
- Gould, Steven Jay. 1985. The median isn't the message. *Discover* 6(June):40–42.
- Haug, Charlotte J. 2008. Human papillomavirus vaccination: reasons for caution. *New England Journal of Medicine* 359:861–862.
- Hoffman, Jan. 2008. Vaccinating boys for girls' sake? *New York Times*, February 24, fashion and style sec. <http://www.nytimes.com/2008/02/24/fashion/24virus.html> (accessed June 22, 2010).
- Jain, Sarah Lochlann. 2007. Living in prognosis: toward an elegiac politics. *Representations* 98(1):77–92.
- . 2010. The mortality effect: counting the dead in the cancer trial. *Public Culture* 22(1):89–117.
- Kim, Jane J., and Sue J. Goldie. 2008. Health and economic implications of HPV vaccination in the United States. *New England Journal of Medicine* 359:821–832.
- Lerner, Barron H. 2001. *The breast cancer wars: hope, fear, and the pursuit of a cure in twentieth century America*. Oxford: Oxford University Press.
- Mazzarella, William. 2003. Very Bombay: contending with the global in an Indian advertising agency. *Cultural Anthropology* 18(1):33–71. [JEL]
- Onion. 2006. Over-competitive Lance Armstrong challenges cancer to rematch. *Onion*, November 9, sports sec. <http://www.theonion.com/articles/overcompetitive-lance-armstrong-challenges-cancer,2084/> (accessed June 21, 2010).
- Parsons, T. 1981. Definitions of health and illness in light of American values and societal structure. Reprinted in *Concepts of health and disease*. A. L. Caplan, H. T. Engelhardt, and J. J. McCartney, eds. Pp. 57–81. Reading, MA: Addison-Wesley.
- Rettig, Richard A., Peter D. Jacobson, Cynthia M. Farquhar, and Wade M. Aubry. 2007. *False hope*. New York: Oxford University Press.
- Ries, L. A. G., D. Melbert, M. Krapcho, D. G. Stinchcomb, N. Howlader, M. J. Horner, A. Mariotto, et al., eds. 2007. SEER cancer statistics review, 1975–2005. Bethesda, MD: National Cancer Institute. http://seer.cancer.gov/csr/1975_2005/.
- Rosenberg, Charles E. 2002. The tyranny of diagnosis: specific entities and individual experience. *Milbank Quarterly* 80(2):237–260.
- Rosenthal, Elizabeth. 2008. The evidence gap: drug maker's push leads to cancer vaccines' rise. *New York Times*, August 19, health sec. <http://www.nytimes.com/2008/08/20/health/policy/20vaccine.html> (accessed June 21, 2010).
- Steinberg, Douglas. 2003. Combination therapy tames stage III. *CURE: Cancer Updates, Research, and Education* 2(3):34–41.
- Valier, Helen, and Carsten Timmermans. 2008. Clinical trials and the reorganization of medical research in post–Second World War Britain. *Medical History* 52(4):493–510.
- Wailoo, Keith, Julie Livingston, Steven Epstein, and Robert Aronowitz, eds. 2010. *Vaccinating against cancer: sex, science, and the politics of medicine's simple solutions*. Baltimore: Johns Hopkins University Press.
- Wedekind, Jennifer. 2008. The declining value of life. *Multinational Monitor*, September 1. <http://www.allbusiness.com/legal/environmental-law-us-environmental/11568666-1.html> (accessed June 21, 2010).

20. *Livestrong.com* is a for-profit created by Demand Media in alliance with the Lance Armstrong Foundation, which seems to epitomize the characteristics of cancer culture that I describe.