The Emperor's New Clothes: Cancer and Its Metaphors

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Intergrams 12.1(2011):
http://benz.nchu.edu.tw/~intergrams/intergrams/112/121-lundblad.pdf
ISSN: 1683-4186

Among the honors bestowed upon Siddhartha Mukherjee's *The Emperor of All Maladies: A Biography of Cancer*, the 2011 Pulitzer Prize in General Nonfiction certainly tops the list. But the book has received a number of other awards indicating its popular appeal, including the top ten list of books in 2010 for *The Oprah Magazine*, *Time*, and *The New York Times*. It was a finalist for the 2010 National Book Critics Circle Award and the winner of the first PEN/ E. O. Wilson Literary Science Writing Award. Weighing in at over five hundred pages, the book seems to have beat out all other recent contenders taking on the history of cancer. Devra Davis's *The Secret History of the War on Cancer* (2007), for example, or the second edition of Sandra Steingraber's *Living Downstream: An Ecologist's Personal Investigation of Cancer and the Environment* (2010) might seem quaintly specialized in relation to the grand ambitions of Mukherjee's "biography." Personified as the singular "emperor of all maladies," cancer, for Mukherjee, is an ancient insidious adversary, the enemy we have been trying to defeat for thousands of years. The reductiveness of this metaphor might point toward its appeal in contemporary U.S. culture, particularly for those readers who might also embrace the logic and rhetoric of the War on Terror, the War on Drugs, and, of course, the War on Cancer. But the prospect of a "biography" of cancer might seem as illogical to others as a biography of terrorism, or perhaps even a biography of illness in general, as if all behaviors that could be constructed as terrorism, on the one hand, or all forms of illness, on the other hand, could be reduced to a singular personified enemy cutting across fundamentally different historical and cultural circumstances. This is not a Foucauldian genealogy of the discourse of cancer, in other words, but an attempt to write the "life" of cancer, "to enter the *mind* of this immortal illness, to understand its personality, to demystify its behavior" (xiii). Certain aspects of Mukherjee's approach are appealing in ways that deserve recognition, but my aim in this essay is to explore how Mukherjee's construction of

this "emperor" is problematic in ways that might also help to explain the broader appeal of the book.

The claim on the book's jacket cover that the "book reads like a literary thriller with cancer as the protagonist" is a stretch at best, but the readability of Mukherjee's work stems from his ability to frame the research questions of individual doctors and researchers as urgent, crucial, and fundamentally engaged in the broader "war" against cancer. Sidney Farber, for example, becomes a major hero in the book for his progression from researching treatments for childhood leukemia in the 1940s to lobbying for Nixon's War on Cancer by 1971. Farber is described in 1948 as immersed in "the tumultuous life of the Boston clinic, its patients hanging on for life as Farber and his assistants scrambled to find new drugs for a dreadful disease that kept flickering away and returning" (36). In his pursuit of a cure, we are told, Farber "dreamed of malignant cells being killed by specific anticancer drugs. . . of curing leukemia with chemicals, then applying his experience with chemicals and leukemia to more common cancers. He was throwing down a gauntlet for cancer medicine. It was then up to an entire generation of doctors and scientists to pick it up" (36). This kind of drama becomes the frame for the entire book, including the insertion of Mukherjee himself as one of those doctors picking up the "gauntlet" thrown down by Farber. The book is driven by a focus on individuals, in other words, representing both triumphs and setbacks in a "war" that has supposedly been going on for thousands of years.

Mukherjee does provide good overviews, though, of the developments that have historically changed not only cancer treatments but also modern medicine. He walks through the discovery and implementation of antiseptics and anesthesia in Part One, for example, which open up new possibilities for surgery, radiation and chemotherapy for treating cancer, as opposed to ancient ways of treating—and conceptualizing—malignant tumors. While Farber is the hero of Part One, Mary Lasker, a wealthy New York philanthropist and socialite, becomes the hero of Part Two, joining forces with Farber to push toward the need for a national assault on cancer, culminating in the National Cancer Act signed by Nixon in 1971. In Part Three, the optimism of the 1960s in relation to a potential universal cure is replaced by aggressive attempts to push farther in "radical" directions against a wide array of cancers that function very differently. "Radical" mastectomies, for example, are first intensified and then discredited as a means for eradicating all kinds of breast cancer, while the National Cancer Institute focuses on a blitz of more and more aggressive chemotherapy drugs, including adjuvant chemotherapy after surgical removal of tumors of various kinds. Part Four begins to explore environmental causes of cancer, focusing on the example of tobacco use and lung cancer, even though the account is

too simplistic and ultimately dismissive of the need to focus on environmental carcinogens, which is an issue I explore further below. The "transplant era" of the 1990s, in which a patient's own bone marrow could be saved and then transplanted back, after an all-out chemotherapy blitz that destroys the existing marrow, is revealed to be both cruel and, ultimately, based upon sham medical evidence of its success. Mukherjee's own decision to focus on cancer biology, as opposed to clinical practice, frames Part Five, which tracks the discoveries of genes and DNA into research on oncogenes and the biological mechanisms that lead to various kinds of cancer, suggesting that the "enemy" can ultimately be seen as latent within all human beings. The final part of the book, "The Fruits of Long Endeavors," focuses predictably on symbolic victories stemming from genetic and hormonal therapies, leading to optimism, supposedly, for the future of cancer research. But cancer's "quest for immortality," we are told, might well become "the new normal—an inevitability" (459). An epilogue to the book attempts a convoluted "thought experiment" that tracks the breast cancer of Atossa, the Persian Queen in 500 BCE, through thousands of years of different ways of responding to cancer, giving Mukherjee the opportunity, supposedly, to "recapitulate past advances in cancer therapy and to consider its future" (463).

There is history here, in other words, that will be useful to anyone wanting to know more about cancer, particularly in the twentieth century. But the kind of history we are given has significant problems associated with it, from my perspective. In an "Author's Note" that prefaces the text, Mukherjee gives us the primary framework:

> In a sense, this is a military history—one in which the adversary is formless, timeless, and pervasive. Here, too, there are victories and losses, campaigns upon campaigns, heroes and hubris, survival and resilience—and inevitably, the wounded, the condemned, the forgotten, the dead. In the end, cancer truly emerges, as a nineteenth-century surgeon once wrote in a book's frontispiece, as "the emperor of all maladies, the king of terrors." (xiv)

Don't worry about which surgeon is cited here, or which book, or any other historical or cultural contexts that might be relevant. Just allow yourself to be swept up—or perhaps recruited—into the chronicles of this valiant crusade. Immediately following this rallying cry, Mukherjee tells us that "in science and medicine, where the primacy of a discovery carries supreme weight, the mantle of inventor or discoverer is assigned by a community of scientists and researchers" (xiv). Is it any surprise, then,

that our "military" historian emphasizes the inventors and discoverers who can be constructed as heroes and generals in a righteous war?

While this kind of approach might seem to be a good way to make the history of cancer dramatic and inspiring, it can also be seen as contributing to a logic in which extreme approaches are justified and encouraged, even if there is no fundamental understanding of why various kinds of treatments might or might not work. Shouldn't we be worried about perpetuating this kind of logic at present and into the future? The history of the "radical" mastectomy is a particularly good example, beginning with William Halsted's invention of the procedure in the 1890s in the United States. Described as "[b]old, inventive, and daring" (62), as well addicted to cocaine, Halsted is glorified for his work at Johns Hopkins Hospital, for his "awe-inspiring training program for young surgical residents that would build them in his own image—a superhuman initiation into a superhuman profession that emphasized heroism, self-denial, diligence, and tirelessness" (63). This "heroism" leads to a logic for Halsted that deeper and deeper surgical interventions must be the only way to finally root out breast cancer, eventually including the removal not only of the breast but also the underlying pectoralis minor and major muscles, the collarbone, the lymph nodes beneath it, and, in an extreme case with one of Halsted's disciples in Europe, the "evacuation" of "three ribs and other parts of the rib cage and. . . [the amputation] of a shoulder and a collarbone from a woman with breast cancer" (65). As Mukherjee reveals, this kind of "radical" mastectomy is extreme overkill for a woman with an early stage of localized breast cancer, while it cannot cure a woman with metastatic breast cancer, in which the cancer has already spread to other parts of the body. It was not until the 1970s, though, that women activists began refusing the radical mastectomy and demanding proof that it was, in fact, a treatment that was superior to other less invasive treatments, since it had "never been put to a test" (200). A definitive study in 1981 finally proved that breast cancer patients receiving a radical mastectomy, as opposed to a simple mastectomy or surgery followed by radiation, "accrued no benefits in survival, recurrence, or mortality" (201). Between 1891 and 1981, though, "an estimated five hundred thousand women underwent the procedure to 'extirpate' cancer" (201). For Mukherjee, Halsted thus represents a case of hubris gone wild, while there is only the very briefest of gestures toward analyzing why the rejection of a patriarchal medical view—in which women could of course be subjected to the most horrific disfiguring surgical procedures—would not occur until the 1970s.

Gender and sexuality questions do not fit easily into Mukherjee's heroic narrative, even when some of the predominately male heroes are subsequently revealed to be fundamentally misguided. Mukherjee's interest in the development of

AIDS in the 1980s, to take another example, is primarily related to patients and activist groups demanding new experimental drugs, thus influencing the kinds of demands made by cancer patients and activists as well. Framed within an attempt to be open about and sympathetic to the plight of homosexuals, Mukherjee's description of the discovery of AIDS actually drips with the kind of stigmatization he claims to reject. Mukherjee describes the outbreak as "outlandish," as a "deeper and darker aberration" that was "raising eyebrows" (315). This disease, unlike cancer, is described as "hostile" and "mysterious," "plaguing a community that [doctors] didn't quite understand," resulting in "bizarre, spectral fevers" and AIDS wards "that came to resemble the unorthodox lives of the men who inhabited it," with "burning, hallucinatory nights" and even "elaborate brunches featuring tap dancing, feather boas, and marijuana-laced brownies" (317). If you are a reader who doesn't "quite understand" lifestyles—or stereotypes—like these, don't worry. Mukherjee's biography of cancer neatly brackets off these "unorthodox lives" and reassures readers, by implication, that cancer is not a "gay" disease, that fighting it represents a noble war against an enemy threatening all of us, and most of us, some readers might like to think, are not gay.

This kind of bracketing off of "unorthodox" lifestyles might help to explain why Mukherjee's book—and indeed the history of cancer more broadly—seems less threatening for certain readers. The heteronormativity of Mukherjee's narrative is not limited to its construction of AIDS, though. It can be seen in the personal stories used to frame the book as a whole, including the dedication of the book to Robert Sandler, a three-year-old leukemia patient of Farber's who died in 1948. Mukherjee begins his own personal narrative with the story of a patient named Carla Reed, "a thirty-year-old kindergarten teacher from Ipswich, Massachusetts, a mother of three young children" (1), with a husband, we are reassured, and a diagnosis of acute lymphoblastic leukemia. Weaving the story of Carla's treatment into the rest of the book, Mukherjee displaces a heteronormative culture's anxiety about homosexuality onto a crusade against an enemy who dares to attack heterosexual mothers and their children.

If readers of this "biography" can thus be reassured that the bodies being attacked are heterosexual, they might also be reassured to learn, according to Mukherjee, that they don't need to worry so much about environmental carcinogens. Rather than seeing the rise of cancer as an effect of industrialization, everyday exposure to various toxic chemicals, and, indeed, modern life—as Sandra Steingraber in *Living Downstream* and Devra Davis in *The Secret History of the War on Cancer* illustrate—Mukherjee constructs what might seem to be a more palatable argument: cancer has been around forever; people tend to get it when they are much older; it

wasn't as common thousands of years ago because people generally didn't live as long as they do today. But this logic doesn't necessarily hold up. The first known case, according to Mukherjee, comes from an Egyptian physician named Imhotep around 2625 BCE, who describes "bulging masses on [the] breast" of a man (40). But "cancer [then] virtually disappeared from ancient medical history" (41) until around 440 BCE when Herodotus recorded what appears now to be breast cancer in Atossa, the Queen of Persia, who asked a Greek slave named Democedes to cut out the tumor (41). Even though Mukherjee admits that cancer was "fleetingly rare" in the ancient world, he declares that "cancer, far from being a 'modern' disease, is one of the oldest diseases ever seen in a human specimen—quite possibly *the* oldest" (43).His assumption is that it was rare primarily because people did not live long enough to get it. But couldn't there be other explanations as well?

Reluctantly considering "changes in the structure of modern life" (44), Mukherjee also tries to highlight the fact that the incidence of some kinds of cancers—such as stomach cancer—have decreased, while other kinds—such as lung cancer—have increased. But to mention only the rise of lung cancer as a result of increased cigarette smoking in the 1950s is to ignore the wide range of toxic and carcinogenic chemicals in the environment that are uniquely tied to twentieth-century industries, as Steingraber so powerfully illustrates. It is also a move that makes Mukherjee's book far more palatable to industry lobbyists or apologists who wouldn't want readers to think about the connections between their industries and the explosive growth of cancer as a result of industrialization; it's far easier to assume that contemporary Americans, unlike their ancient counterparts, are more likely to get cancer simply because they will usually live long enough for this "oldest" disease to track them down. Mukherjee does admit that "we have begun to spin a new chemical universe around ourselves," now that we, as "chemical apes," have the "capacity to extract, purify, and react molecules to produce new and wondrous molecules..." (446). While "[s]ome of these, inevitably, will be carcinogenic," according to Mukherjee, we "cannot wish this world away; our task, then, is to sift through it vigilantly to discriminate bona fide carcinogens from innocent and useful bystanders" (446). But, supposedly, "This is easier said than done" (446). Mukherjee then launches into the controversy over possible connections between cell phone use and brain cancer, concluding that the "cell phone case is a sobering reminder of the methodological rigor needed to evaluate new carcinogens" (447). We shouldn't jump to conclusions, in other words. But this kind of move to focus only on a case in which there has been some controversy illustrates how Mukherjee attempts to dismiss, implicitly, the work of other historians of cancer such as Steingraber and Davis, who has written more recently about the cell phone case as well.

Neither Steingraber nor Davis is cited even once in Mukherjee's book. But readers of Mukherjee would be well served by looking at the alternatives these writers represent. Davis in particular is effective at revealing how campaigns to create doubt about carcinogens have historically been generated by industries with financial stakes in the products being questioned. The connection between cigarette smoking and lung cancer is a particularly good example in which Davis's account is very different from Mukherjee's. This is not to say that Mukherjee ignores the history of the campaign to deny or create doubt about tobacco as a carcinogen. But he reads that history simplistically, with scientists as the crusaders, industry lobbyists in bed with corrupt politicians, and a slow but sure progression toward "victory" against the forces of obfuscation and doubt. Despite the fact that articles in leading medical journals all the way back in 1948 argued that tobacco was a carcinogen, and the fact that the connection had been made even earlier, Mukherjee legitimizes some of the doubts about the methodology of these and other studies. He also seems relatively complacent about how long it took for tobacco smoke to be officially classified as carcinogenic. For Mukherjee, the "slow avalanche of forces unleashed to regulate cigarettes in the 1980s" can be "rightfully counted as one of cancer prevention's seminal victories" (276). Aside from his celebration of this oxymoronic "slow avalanche," though, Mukherjee also sees this history as important for revealing a "lacuna in cancer epidemiology": the difficulty of using "statistical methods to identify risk factors for cancer..." (276), which is an argument that has also been used to discredit attempts to study environmental carcinogens more generally. Mukherjee does lament the increasing use of tobacco worldwide today, calling for greater public awareness campaigns. But there is no further analysis of how and why tobacco companies continue to be successful selling their products.

One of Mukherjee's chapters on tobacco is titled "The Emperor's Nylon Stockings," which is a reference to a comment made in the 1920s by Evarts Graham, a surgeon who later worked on proving the link between tobacco smoke and lung cancer. Prior to those studies, though, Graham could be seen as representative of a medical establishment that didn't believe—or wouldn't confirm—the connection, arguing that the use of nylon stockings could just as easily be seen as the cause of an increased incidence of lung cancer (242). Mukherjee presumably wants his chapters on tobacco to be a version of calling out the "emperor's new clothes," as opposed to all those who continued to say that there is no causal connection between tobacco and cancer. But the allusion to Hans Christian Andersen's tale deserves more attention here. What kind of emperor does Mukherjee ultimately construct in this "biography"? What other "clothes" need to be called out here?

Early in the book, this "emperor" is described in imperialist terms that would presumably make many readers uncomfortable: "Cancer is an expansionist disease; it invades tissues, sets up colonies in hostile landscapes, seeking 'sanctuary' in one organ and then immigrating to another. It lives desperately, inventively, fiercely, territorially, cannily, and defensively..." (38). What other cultural anxieties, though, are reinforced or produced by this kind of rhetoric? Who might want a "biography" of Al-Qaeda, in order to justify further U.S. military interventions abroad and invasions of free speech and fundamental rights at home? An analogy with Al-Qaeda might actually work here, on the one hand, if we think about constructing an illogically singular "emperor" in either case. On the other hand, anarchic "cells" of terrorists, operating without a supreme leader, could be seen as analogous with millions of cancer cells "invading" various human bodies. But do we really want to reinforce and perpetuate this discourse of war? At the very least, it's difficult to see all of those cancer cells, and all of the very different kinds of cancer, as a singular entity with a "mind" plotting to kill us.

By the end of Mukherjee's book, the central metaphor appears to shift, from an "emperor" to an "empire," with the suggestion that cancer cells are already latent within all of us. Mukherjee is generally optimistic, though, focusing on the "victories" of targeted therapies such as Herceptin and Gleevec, and highlighting statistics such as the fact that "between 1990 and 2005, the cancer-specific death rate had dropped nearly 15 percent, a decline unprecedented in the history of the disease. The empire of cancer was still indubitably vast—more than half a million American men and women died of cancer in 2005—but it was losing power, fraying at its borders" (401). At other times, Mukherjee seems to back away from the rhetoric of achieving ultimate victory, arguing instead that cancer should be seen as the "new normal" (459) of human life, and that the goal should be "prolonging life rather than eliminating death. This War on Cancer may best be 'won' by redefining victory" (465). But even if this "empire" cannot ultimately be defeated, Mukherjee's book in general sets up a logic calling out for the defeat of this "emperor," the "most elemental and magisterial disease known to our species" (466). Looking ahead, Mukherjee assumes that "much about this battle will remain the same: the relentlessness, the inventiveness, the resilience, the queasy pivoting between defeatism and hope, the hypnotic drive for universal solutions, the disappointment of defeat, the arrogance and the hubris" (466). As much as I want the development of better ways to treat cancer, I also have deep concerns about Mukherjee's metaphors. Perhaps Hans Christian Andersen can help us to see that this "emperor of all maladies" has bigger problems than just being naked.

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