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Unnatural Resources: The Colonial Logic of the Holmesburg Prison Experiments

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Abstract
This article focuses on medical trials performed by Dr. Albert Kligman on the inmates of Philadelphia's Holmesburg Prison between 1951 and 1974, which have been widely criticized as exploitative. I seek to investigate the mechanics behind the "ethical blind spot" that enabled the American medical community to laud Kligman for his efforts while simultaneously condemning the medical atrocities of the Holocaust and supporting the development of the Nuremberg Code. I argue that this nonrecognition hinges on a colonial logic by which certain populations are produced as waste, both rhetorically and materially. Drawing on the incarcerated men's accounts included in Allen Hornblum's books on the subject, I trace the process by which human beings come to be reclassified as natural resources and their exploitation recast as industrious cultivation.

Keywords Human medical trials · Incarcerated populations · Bioethics · Colonialism · Dermatology

In 1951, a dermatologist named Albert Kligman arrived at Holmesburg Prison in Pennsylvania to treat an outbreak of athlete's foot. Over the subsequent twenty-three years, he completed dozens of experiments on the inmates, developing his knowledge of dermatological medicine and making large amounts of money from thirty-three different pharmaceutical companies. According to inmates, however, he also caused hundreds of men acute pain and chronic illnesses, using their bodies without their full understanding or informed consent. Kligman was unapologetic in characterizing the incarcerated men as the natural resources of scientific advancement. In a 1966 newspaper interview, Kligman described his thoughts upon entering Holmesburg Prison: "All I saw before me were acres of skin. It was like a farmer seeing a fertile field for the first time" (Hornblum 1998, 37). Despite an FDA investigation into his experimental practices in 1966, Kligman was able to continue to conduct experiments on inmates at Holmesburg and other Pennsylvania prisons until January of 1974 when the

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Philadelphia prison system's Board of Trustees shut down the medical experimentation program in response to a confluence of factors: increased scrutiny following assistant District Attorney Alan Davis's investigation of epidemic sexual assault at Holmesburg; damning testimony from former Holmesburg inmates, Allan Lawson and Leodus Jones, during a 1973 Congressional Hearing on Human Experimentation; mounting pressure from local politicians, activists, and religious groups; and legal challenges from incarcerated men themselves (Hornblum 1998, 57–66, 187-209). Kligman continued to deny any wrongdoing until his death in 2010.

The Holmesburg experiments gained notoriety after Allen Hornblum published *Acres of Skin: Human Experiments at Holmesburg Prison*. Hornblum first learned of the experiments while directing an adult literacy program at the prison in 1971. Over two decades later, he left a career in criminal justice to research and write about the history of medical experimentation at Holmesburg, publishing *Acres of Skin* in 1998 and *Sentenced to Science* in 2007. In the latter, Hornblum traces the life of Edward "Butch" (later Yusef) Anthony, one of the survivors of Kligman's Holmesburg Prison experiments. Alternating between narrating a deeply personal account of Anthony's life and providing historical context, Hornblum attempts to show the social forces at work in the events leading up to Anthony's imprisonment. Hornblum also wrote and produced a documentary about the experiments in which several survivors provide firsthand accounts of the long-term physical and psychological effects of Kligman's experiments.

It is not my objective here to establish that these experiments were unethical; Hornblum's work and, more importantly, the survivors' own testimonies have already done so. Moreover, decades of sociological, medical, and bioethical scholarship have highlighted the ethical problems involved in conducting medical research on incarcerated populations. In this paper, I am concerned with a question raised by Temple University law professor Frank McClellan in the *Acres of Skin* documentary: how did American doctors in the mid-twentieth century, who witnessed the atrocities of Nazi medicine and supported the subsequent establishment of the Nuremburg Code, fail to see the similarities between their actions and those of the Nazi doctors? McClellan calls this a "blind spot" (Hornblum and Holmes 2005; James Jones (1981) calls it a "moral astigmatism" (14). The survivor memoirs and accounts included in *Acres of Skin* and *Sentenced to Science* help us to understand the mechanics behind that ethical blind spot. Drawing on close reading of these accounts, I trace the process by which groups of human beings come to be reclassified as natural resources. Through a logic that is born of colonialism, groups of people are rhetorically transformed into caches of wasted biomatter; thus, the exploitation of those people for profit is recast as the industrious cultivation of unused raw material.

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The combination of massive pharmaceutical company growth and the lack of government regulation and oversight made the post-war and Cold War era United States a hotbed for medical experimentation among institutionalized populations. Hundreds of medical researchers used prison inmates (as well as other institutionalized people such as the physically and mentally disabled) as test subjects for experimentation—particularly for Phase I trials, which have the highest risk of harmful side effects. Jessica Mitford claimed in 1974 that prisons "furnish virtually the entire pool of subjects for Phase I testing" (170). Several reasons were given for the use of prison inmates in dangerous medical experiments: that with a captive population of inmates, it was easier to ensure that test subjects followed protocols exactly, thus yielding more reliable results; that prison experimentation is mutually beneficial, allowing prisoners their only opportunity to earn substantial money in prison; that submitting to experiments for the public good gave prisoners a chance to expiate their crimes (Washington

2006, 246-62).[1] Doctors cut and irradiated incarcerated men's testicles in Washington State Prison, injected inmates with live cancer cells at Ohio State Prison, and dosed prisoners with the catatonia-inducing drug bulbocapnine at Louisiana State Penitentiary, all in the name of scientific advancement (252-54).

That is to say, Kligman was by no means alone in viewing incarcerated populations as "fertile fields." Kligman's word choice here is revealing in more ways than one. In comparing the prisoner population to a fertile field, he implies that they are an unused natural resource whose potential productivity is currently going to waste. By doing research on their bodies (his logic goes), he will cultivate the wasted resource, tapping into its potential to produce both useful goods and financial profit. As prisoners, they are untamed wasteland; as experimental subjects, they are bountiful farmland. Kligman is not the only one to use this kind of naturalizing language. In fact, we see the language of natural landscape applied to incarcerated men throughout Hornblum's reporting by experimenters as well as by those raising the alarm about experimental abuse. What this language conceals is the decidedly non-natural sociopolitical and economic process by which certain populations are *produced as waste*—that is, the constellation of discriminatory policies, institutions, and economic systems that both generate and prey upon groups of people who are seen as surplus, as parasitic, as waste product. Only when a group of people is framed as a problem to be solved can the abuse of those people come to be seen as cultivation rather than exploitation.

Hornblum's works—especially *Sentenced to Science*—aid our understanding of this process because, rather than beginning with the medical abuse, he tells the story of the process by which these men came to be imprisoned. Holmesburg Prison, part of the City of Philadelphia Prison System, housed inmates primarily from areas in inner city Philadelphia with very high crime and recidivism rates. Chris Watler, the director of the Harlem Justice Center, describes these areas as "million dollar blocks," denoting the millions of dollars that the city spends on the "cyclical incarceration of their residents" (Lee 2012). This surplus spending on incarceration corresponds with a deficit of spending on beneficial programs like youth services, schools and higher education, job training, and preventative healthcare. Welfare and support programs are replaced by what Loic Wacquant (2009) calls "prisonfare": "the extended policy that responds to intensifying urban ills and assorted socio-moral turbulences by boosting and deploying the police, the courts, custodial institutions (juvenile detention halls, jails, prisons, retention centers), and their extensions" (17). In short, the system is designed to produce and house criminals. Rather than working to *eradicate* poverty, the neoliberal policies Wacquant describes serve to *incarcerate* poverty. Social mobility is reduced to a single path—from the "million dollar block" to the prison block—and the urban poor neighborhood is made into a sort of criminal farm, producing incarcerated men who will come to be seen and used as a "natural resource" by medical researchers.

As Hornblum describes the Holmesburg inmates' backstories in similar poor neighborhoods, he reveals a problematic process of naturalization by which systemically underserved areas and their residents are characterized as natural, wild, and uncivilized. In consequence, the disproportionate incarceration of these populations is also naturalized—that is, depicted as a problem of nature rather than a problem of social policy and economic inequality. His description of Anthony's childhood in North Philadelphia highlights the naturalizing of criminality in these neighborhoods. Hornblum (2007) writes about how Police Commissioner Thomas J. Gibbon described a large area of North Philadelphia as "the jungle" (9). Gibbon's ill-advised remark gained popularity when a 1957 article by Charles Shaw, published in the *Sunday Bulletin*, reiterated and expanded on it. The article, entitled "The Jungle: Seven Square

Miles that Shame—and Menace—Our City," describes the area from "Poplar Street north to Lehigh Avenue and from the Delaware River west to the Schuylkill" as "Philadelphia's shame and sorrow" (9). The article follows up its racially charged title with similarly charged descriptions of these North Philadelphia neighborhoods: their "squalor" is described as "dark and dense and dreary" (9). By describing the poor, primarily Black neighborhoods of Philadelphia as "the jungle," Shaw, like Police Commissioner Gibbons, naturalizes a man-made social problem.

The language used here clearly participates in a long-standing Western tradition of identifying underserved areas within developed countries as quasi-colonial spaces. As Anne McClintock (1995) explains in *Imperial Leather*, nineteenth-century journalists and auto-ethnographers characterized London's East End as "inhabiting an anachronistic space, representing a temporal regression within industrial modernity" (121). As in 1950s Philadelphia, the East End's "tangled slums were equated with jungles" and its inhabitants were figured in terms of "racial atavism" (121).[2] This rhetorical move, by which certain spaces of Western urban modernity are recast as premodern colonial spaces, reinforces a problematic premise of colonialism: the idea that any space outside of Western agriculture or industrial production is both anachronistic and wasted. By this logic, spaces that do not conform to Western standards of capitalist use (and the people who inhabit those spaces) are figured as both primitive remnants of a premodern past and opportunities for capitalist cultivation and expansion. This ideology reimagines colonial appropriation of spaces and exploitation of people as a virtuous act of industry—one that makes wasted resources productive and brings an atavistic throwback into the light of modernity. This rhetorical strategy is, of course, already a logical fallacy and an ethical dodge when applied to non-Western, non-industrialized spaces. But this logic becomes fallacious and problematic in new ways when applied to industrialized urban spaces in Western countries—spaces that are quite literally produced by the Western modernity and industrial capitalism that they are figured as being outside of. By implying that urban slums are the antithesis of modern industrial capitalism, a misplaced remnant of a primitive world rather than a product of that system, people who use this logic naturalize and obfuscate a variety of political and socioeconomic issues. In addition to reinforcing racist stereotypes about the people of color who live in these neighborhoods, this line of reasoning presents the "problem" not as the need to eradicate a compounding set of social inequalities but rather as the need to tame the wild space within the civilized city.

This naturalization leads to a fundamental misreading of the connection between underserved neighborhoods and high rates of incarceration. As the neighborhood from which many of the Holmesburg prisoners come is described as a wasteland—a natural but dangerous, dirty, useless, "criminal" space—its inhabitants are subsequently collapsed into that space and similarly described as inherently dirty or polluted. Throughout the article and the many responses that it provoked, the "squalor" of the "the jungle" is linked with criminality; city official Foster Dunlap claimed that this area was "breeding the criminals of tomorrow in these cesspools of shame" (Hornblum 2007, 11). In Dunlap's description, the dirtiness of "the jungle" (the "cesspool") seems necessarily to lead to criminal behavior. While Dunlap recognizes that the situation in North Philadelphia is a problem, he mischaracterizes it as a natural one rather than a manmade one. He thus implies that the disproportionately high rate of criminality in ghettoized areas is a natural problem which requires social intervention, instead of recognizing how those high crime rates are *produced by* discriminatory social intervention.

Hornblum (2007) describes Anthony's experiences while growing up in "the jungle" in similar terms. The anxiety of living in "the jungle"—the lack of privacy, the

constant danger, the pressure to act in certain ways—weighed on Anthony: “I was always in turmoil and I was constantly looking for a way out” (20). That way out “came in the form of alcohol and drugs” (20). Anthony’s use of and subsequent addiction to alcohol, cough syrup, marijuana, and eventually heroin are presented as part of the natural progression of things in “the jungle.” Growing up in the figuratively polluted space of “the jungle” leads to the literal pollution of Anthony’s body—which will also be the cause of his arrest. The “cesspool” environment of “the jungle,” as Hornblum presents it, leads directly to criminality. Distinctions between figurative and literal get lost as criminality comes to be seen as a natural product of wild space; neighborhoods that are physically dirty because of failing social services and poverty are seen as morally tainted spaces, and men whose bodies have been physically contaminated with illegal drugs are seen as morally tainted bodies. With the same “biodeterminism” that Dorothy Roberts (1997) highlights in the media hubbub surrounding so-called “crack babies,” residents of underserved neighborhoods are characterized as “hopelessly defective” and “destined to become criminals” (19-20). In both cases, this biodeterminism writes deviance into the individual bodies of the poor, occluding the role of massive wealth inequality and inadequate social services in creating these social problems.

This equation allows the prison environment to be presented as the fitting destination for men like Butch Anthony. Criminals, morally polluted by life in various “jungles,” end up in another sort of jungle—Holmesburg Prison. Hornblum (2007) describes the prison in terms similar to those used by Shaw to describe “the jungle.” He writes of the “primitive atmosphere” of Holmesburg: “Penal institutions have an atavistic air about them that naturally fosters violent, menacing images” (41). According to Shaw, North Philadelphia was dark, naturally violent, and menacing. Now, according to Hornblum, the “dark cells” of Holmesburg Prison, adult home of many children from North Philadelphia, is the same (Hornblum 1998, 30). Anthony himself describes Holmesburg in these terms. He states that prison “would really bring out the animal in people,” describing young boys in the prison as “easy targets for the wolves,” or sexual predators (Hornblum 2007, 59). The Black Muslims, who eventually earn a convert in Anthony, describe Holmesburg as “a wilderness of lies and deceit” (83). Upon visiting the prison, a journalist wrote about the smell: “It is the scent of hundreds of men mingled with the smell of disinfectants. Keepers do not notice it, but it is heavy and ominous, and is probably the same that gives warning to startled wild animals that pick up the scent of a hunter down the wind” (Hornblum 1998, 30). The prisoners, then, are wild animals, living in a primitive, atavistic wilderness, where their “pollution” is artificially and insufficiently covered up by “disinfectants.” This metaphor directs attention away from the prisoners’ captivity; despite the cells, handcuffs, and guards, the prison is described as an untamed wilderness rather than a highly structured and heavily policed zoo. The language of natural wildness characterizes Holmesburg Prison as a stateless place, instead of what it actually is—an institution that enacts state power.

This naturalizing of the prison population, however, has a double thrust, as it is this very “pollution” that makes the prisoners such “pure” subjects for Kligman’s experiments. It is only once these men are stigmatized as “dirty” and “polluted” by being convicted of crimes[3] that they become the “fertile field” that Kligman saw upon entered Holmesburg. Hornblum (2007) evokes the same agricultural language when he describes the “unfettered research landscape” (50) that prisons afforded. As he writes, “institutions holding large numbers of vulnerable

people—orphans, the mentally challenged, the destitute, the imprisoned—became valuable commodities. The raw material inside—cut off from family and friends as well as the general public—could be used as desired" (50–51). It is the very criminality of the inmates that makes them so pristine in the eyes of Kligman. They are pristine because they are polluted; they are "fertile" because they are "wasteland"; they are useful because they are useless. That is to say that they are deliberately produced as waste—both materially, by discriminatory "prisonfare" policies, and rhetorically, through the lines of logic I have described above. It seems paradoxical to deliberately produce waste; waste is supposed to be an unintentional, useless, valueless byproduct. But it turns out that so-called waste populations are supremely useful for many groups—researchers, capitalists, and especially profit-motivated researchers like Kligman.

This double thrust of the naturalizing of prisoner bodies reinforces the colonial logic that serves to justify the scientific use and abuse of these incarcerated men. There are important similarities between the way the prisoners' bodies are both described and treated and the way indigenous peoples in the Americas were described and treated by European colonizers. The American frontier was simultaneously characterized as wasteland and as Promised Land—dark, dreary jungle and pristine, fertile field (Seed 2001). Indigenous people were characterized as "uncivilized," as lacking culture, and were collapsed into the natural landscape that colonizers sought to appropriate. The implication that indigenous people lacked the economic and agricultural practices that constituted "culture" in the eyes of Europeans reinforced the characterization of their land as empty "wasteland" (Seed 2001, 35). The naturalization of indigenous Americans parallels the naturalization of the mostly Black inmates in Holmesburg Prison. Although there are obviously crucial differences between the violent displacement and genocidal extermination of Native Americans and the medical exploitation of poor Black prison inmates, these two different forms of violence operate on some shared premises. In both cases, non-white bodies are collapsed into the spaces they occupy, which are described as polluted, dangerous wasteland. This classification as part of a wasteland, through the logic of colonialism, is then used to justify the confinement and use for profit of those bodies by white power structures—and this use recasts those bodies as pristine, fertile, and productive. Based on this logic, non-white bodies are irrevocably naturalized—cast as land, as matter, as biomaterial. Through the intervention of the white scientist, however, that "mass of idle humanity" can be transformed from wasteland to fertile land, from jungle to farm (Hornblum 1998, 236).[4]

Hornblum and those he quotes note similarities between the treatment of poor, urban people of color and indigenous Americans, but Hornblum (an imperfect narrator, who at times relies upon the same stereotypes that he seeks to criticize) highlights these similarities without fully acknowledging the intersectional racism they reveal. In a section about the youth gangs of "the jungle," Hornblum describes their sense of community as "tribal and warlike" (2007, 11). Moreover, Shaw's *Sunday Bulletin* article about "the jungle" was not without detractors, and some of them pointed to this connection between its descriptions of "the jungle" and stereotypical descriptions of Native Americans as a flaw in the article. One responder denounced the article on the grounds that it perpetuated a "myth that the African culture, devastated by four hundred years of slave trade, was a late Stone Age culture no better than that of the American Indian" (10). This commenter recognizes the similarity between the primitivism ascribed to a poor Black neighborhood by describing it as "the jungle" and the primitivism stereotypically ascribed to Native American cultures. In an odd moment of selective racism, however, he sees the problem as one of mistaken identity: Black Americans

(who are not actually primitive) have been mistaken for American Indians (who are actually primitive). But of course, the problem is not the conflation of Black Americans and Native Americans; rather, the problem is a pervasive colonial logic that characterizes certain groups as "primitive," identifying them with nature instead of culture, and thus enables a conflation of their human bodies with natural resources such as coal, timber, or fertile soil and a rejection of their status as human beings.

The naturalization of the prisoners' bodies illuminates the extent to which Kligman's and other similar scientists' experimentation was a form of colonization.[5] The prisoners are simultaneously *naturalized*—conflated with nature—and *denaturalized*—deprived of their status as citizens. This logic echoes that which was used to justify the enslavement of African people as well as the forced removal and genocide of Native Americans. In both cases, colonizers refused to recognize the civil structures of native peoples, collapsing human societies into the landscape in service of the claim that these peoples "had no state formation to which recognition was due" and thus no basis from which to claim rights to liberty or property ownership (Kerber 2007). Under this logic, the prison becomes like an American colony, composed of people who are supposed to be citizens but have been figuratively and literally disenfranchised by their inclusion in a so-called criminal class. The always frank Kligman makes this explicit, describing the prisoners, in a scientific report, as "an anthropoid colony, mainly healthy under perfect control conditions" (Hornblum 2007, 52). The prisoners, disenfranchised and dehumanized, become like a colony within the colonizing country. They are not removed in space from their scientific colonizers, but they are characterized as being removed in time; they are atavistic, primitive. They are also characterized as being removed in kind: unlike the intellectual, enlightened citizen-scientists, they are natural, material, sensuous, uncivilized—and thus excludable from the rights of citizenship. The same arguments that were used to justify European colonization and conquest are used to justify the "colonization within" of prisoners' bodies.

This colonial logic is further highlighted by the response of researchers to new restrictions on medical experimentation in prisons. Prison experiments came under public scrutiny in the 1970s, leading to new regulations that limited the types of research that could take place in prisons. The newly formed National Commission for the Protection of Biomedical and Behavioral Research (CPBBR) considered banning medical experimentation on prisoners outright but ultimately decided against doing so in 1976 under pressure from pharmaceutical companies and from prisoners themselves who did not want to lose their sole means of making real money and, sometimes, obtaining real health care in prison (Washington 2006, 265–66). Instead, strict regulations were put in place in 1979, allowing only four types of research to be carried out in prisons: "that on the cause and effect of incarceration and crime; the study of prisons or incarcerated persons; investigations of conditions that affect prisoners en masse; and therapeutic studies" (266). Medical experimentation still takes place regularly in prisons (particularly on diseases that disproportionately affect prisoners, like HIV and Hepatitis C), and while there are surely some abuses of power, researchers can no longer operate with the impunity they exercised in Kligman's time.[6]

These restrictions have led some researchers to export their research—particularly the more risky Phase I trials—to sub-Saharan Africa and other underdeveloped areas overseas. Harriet Washington (2006) writes that the "Third World has become the laboratory of the West, and Africans have becomes the subjects of novel dangerous therapeutics" (390). When researchers were restricted from experimenting on prisoners from "the jungle," they turned to experimenting on people in the "jungles" of Africa. This displacement enables several abuses.

First, researchers are able to save money by providing a lower standard of care for their control groups. According to American Institutional Review Boards, researchers conducting randomized clinical trials are required both to prove that the tested drug meets or exceeds the previous standard of care for the illness in question and to provide the previous standard of care to the study's control group. However, the previous standard of care is determined according to the country in which the study takes place. As Washington observes, in "impoverished, medically underserved sub-Saharan African countries, that standard of care has historically tended to be nothing" (394–5). Researchers can therefore have their studies characterized as "therapeutic" even if they are offering a therapy that is too dangerous or ineffective to be accepted in the United States.[7] Second, some researchers think of African people as also displaced in time and use this colonial logic to avoid gaining meaningful consent from their subjects. Although researchers are technically required to gain informed consent as they would in the United States, some have flouted this requirement as impossible in Africa. Dr. Francis D. Moore, a renowned Harvard surgeon, bemoaned the difficulty of explaining to African parents the very small risk that how the measles vaccine could trigger autoimmune reactions in some children; he writes, "Can you imagine trying to explain that to a jungle mother?" (395). Rather than hiring translators or trying to learn the language and culture of his subjects in order to facilitate communication, Moore casts those subjects as primitive and therefore unable to understand scientific details.

Dr. Moore's above remark provides insight into why it matters that North Philadelphia was called "the jungle." The word "jungle," to refer to spaces in Africa as in Philadelphia, functions as shorthand for non-Western, for atavistic, for primitive, for lacking in culture, for useless, for valueless-as-is. It is much more than a racially insensitive insult; rather, it does essential ideological work. To call a space a "jungle" is to imply that it lacks recognizable culture, government, and economic development—that it is untouched by modernity. It conjures up a wild, uncivilized place, free of the state formation that would confer upon its inhabitants the status of "citizen" and the attendant "right to have rights" (Kerber 2007). Crucially, though, it is also to suggest that the space contains a rich cache of potentially productive biomaterial. A jungle, by this logic, is a particularly egregious example of waste. It is a space that is rich in the natural resources that fuel modernity and capitalist accumulation but that has not been put to use in ways that would extract that potential value. Figuring both non-Western spaces and American inner city spaces as jungles in this way thus includes a built-in justification for their exploitative use by outsiders such as Kligman. The description itself endorses the values of colonialism, accepting the premise that any space or population that fails to produce profit for Western capitalism is a space of wasted opportunity and that it is thus ethically acceptable and even laudable to appropriate or "cultivate" that space for use. Someone who subscribes to this logic might take exception to Kligman's sloppiest experimental methods or most unnecessary risks, but they would not fault him for seeing the inmate population as a "fertile field" from which he could and should extract value.

Ultimately, the use of incarcerated populations in risky medical trials is about displacing risk and toxicity onto people seen as distant (in space, in time, or in kind). Recategorizing United States citizens living in the heart of American cities as distant requires some rhetorical gymnastics which, as I have shown above, draws upon the logic of colonialism in order to recast individuals as natural resources. And although this characterization of human beings as fertile biomatter is problematic and spurious, I would argue that the rhetorical strategies of environmental justice have something to offer to the prisoner justice movements. Environmental justice advocates often seek to show that displaced risk is not eradicated risk—to put back in mind toxic byproducts that have been transported out of sight.[8] Proponents of justice

for victims of abusive medical experimentation face a similar task: showing that experimental risk and toxicity have not been eradicated but merely displaced. The rhetoric of researchers like Kligman casts inmates as sentient but not cognitive biomatter—primitive, animalistic creatures from inner city "jungles" that can be transformed into "fertile fields" when their bodies are put to use for science—in much the same way that colonial discourse characterizes "uncivilized, empty" land and the people who live on it. That naturalizing rhetoric, in turn, justifies the "exportation" of medical risk to the criminalized poor, which parallels the way that contemporary neoliberalism justifies the exportation of environmental risk to the global poor. Illuminating the similar logic between these seemingly disparate kinds of injustice could form the basis for coalitionary activism that seeks not simply to rectify a particular injustice but rather to work against the exploitative paradigm that produces and legitimates such injustices.

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After the publication of Hornblum's *Acres of Skin*, several dozen participants in the Holmesburg Prison experiments formed a group called the Experimentation Survivors to raise awareness about abuses of medical experimentation and to seek legal redress. The Experimentation Survivors filed an unsuccessful lawsuit to gain financial remuneration and access to medical care to treat the lingering maladies that they believe resulted from Kligman's experiments. The case was thrown out because the experiments had taken place too long before to fall under legal protection; according to Pennsylvania law, the suit had to be filed within a "two-year window of opportunity from the date when the plaintiffs knew or should have known they had been injured" (Hornblum 2007, 192). For many of the victims of the experiments, this statute would have required them to file suit while they were still in prison. Moreover, it was difficult for the former prisoners to prove that their illnesses (ranging from migraines and paranoid schizophrenia to rheumatoid arthritis and cancer) were caused by the experiments. Most prisoner research subjects could not identify the chemicals that had been rubbed on their skin or injected into their veins, and therefore could not scientifically prove that those chemicals had caused harm. And perhaps more importantly, most of the research subjects were convicted criminals, and virtually all of them were poor. Many had used or were addicted to alcohol and drugs; many had histories of violence and gang involvement; most, if not all, had lived with poor nutrition and inadequate access to health care. All too easily, researchers could point to these factors, and not the Holmesburg experiments, as the causes of their health problems. Kligman, who received a lifetime achievement award for his contributions to skincare in 2003, continued to defend the experiments up to his death in 2010.

The characteristics that presented challenges in these men's quest for remuneration were, of course, the same characteristics that made them "fertile fields" in the first place. It is by being deprived of value in the eyes of the public and the law—due to their criminal backgrounds, their drug use, their lack of education, their poverty—that they acquire value in the eyes (and in the bank accounts) of the researchers. As a "waste population," they are a material source of profit for researchers like Kligman and for pharmaceutical companies. When we seek to understand why these experiments were allowed to happen for so long and why Kligman never faced repercussions, we must attend to the operation of this colonial logic by which certain groups of people are both materially and rhetorically produced as waste. Keeping the lessons of colonialism in mind can help us understand the rhetorical mechanics that justify exploitative medical experimentation on incarcerated populations. Studies of colonialism remind us that there are enormous material incentives behind the rhetorical production of certain spaces as "wasteland" or "jungle." But perhaps more importantly, colonial studies shows us that this ideological framing runs deep. People such as Kligman who abuse the bodies of incarcerated people for material gain can be

imagined as (and may even believe themselves to be) resourceful and industrious cultivators of unused materials, shepherding spaces of wilderness into productive modernity. This logic produces an ethical blind spot—the kind of "moral astigmatism" that James Jones described in his analysis of the Tuskegee syphilis experiments. As long as incarcerated populations are framed as natural resources, extracting value from them will not read as abuse. Thus, breaking down this logic is a crucial step in achieving a more clear-eyed ethical understanding of medical experimentation on incarcerated and otherwise marginalized populations.

Endnotes

[1] Indeed, submitting to medical experimentation could increase an inmate's chance of gaining parole, and refusing to submit to experimentation could hinder his chances.
[2] For a more in-depth analysis of the comparison between British slums and colonial jungles, see Mariana Valverde's (1996) "The Dialectic of the Familiar and the Unfamiliar."
[3] If they had even been convicted. Many of the prisoners Kligman experimented on were awaiting trial and were only in prison because they did not have the money to post bail—money that they could earn by volunteering for Kligman's experiments.
[4] Jill Casid (2005) richly explores how European imperialism was reimagined "not as conquest but as cultivation" (95) in the eighteenth century in *Sowing Empire: Landscape and Colonization*.
[5] Because I am focusing on the U.S. prison system, I do not address the many global historical moments in which colonialism and medical practice have overlapped more literally, as colonizing powers have controlled the medical care of their colonial subjects. David Braude Hillel (2009) discusses just one of these moments in "Colonialism, Biko and AIDS: Reflections on the Principle of Beneficence in South African Medical Ethics."
[6] In fact, many researchers, like Andrew M. Cislo and Robert Trestman (2013), feel that these restrictions have deterred even potentially beneficial medical research in prisons and that, as a result, conditions that affect incarcerated people, particularly mental health issues, are often woefully understudied. While acknowledging that prisoners are a vulnerable population and that extra care should be taken to ensure that consent is freely given and informed, David J. Moser agrees that prisoners have become an "overprotected population" and that clinicians are subsequently underinformed about their specific needs. For more on this, see Andrew Cislo and Robert Trestman, "Challenges and Solutions for Conducting Research in Correctional Settings: The U.S. Experience" and David J. Moser et al. (2004), "Coercion and Informed Consent in Research Involving Prisoners."
[7] Tim Holt and Tony Adams (1987) decried a similar practice in Great Britain when they noticed that medical students were travelling to developing countries and practicing skills "in ways which would be illegal in Britain," treating people in these countries as "a population of second-class citizens, who, because of their economic predicament, have no choice but to accept the second-rate skills of unqualified students, and who deserve to be taken advantage of in this way" (102).
[8] For more on this aspect of environmental justice, see Rob Nixon, 2011, *Slow Violence and the Environmentalism of the Poor. Boston*: Harvard University Press.

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