Getting out of the dirt: racialized modernity and environmental inequality in the cotton sector of Burkina Faso

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Scholarship on environmental inequality has long focused on racial inequalities in exposure to environmental pollution. In explaining this, previous scholarship has identified mechanisms such as intentional discrimination, structural and institutional racism, and dynamics of political power. Here, I demonstrate an additional mechanism: that racist cultural ideologies can influence marginalized people themselves to act in ways that produce and justify environmental inequalities. Using ethnographic data from Burkina Faso, I examine the environmental inequality of rising pesticide use, where poor Burkinabe farmers are disparately exposed to the toxic burden of capitalist cotton production. Drawing on Bourdieusian cultural sociology, I describe Burkina's racialized cultural field – a social arena with racially coded status positions – in which modernity, wealth, and scientific technology are coded as 'white' and high status, while poverty, backwardness, and physical labor are coded as 'black' and low status. I argue that many actors embrace technologies, including pesticides, in part to achieve status in this field, and that this paradoxically increases rural peoples' exposure to chemicals, creates barriers to sustainable agriculture, and devalues black African bodies. My findings demonstrate a hitherto unidentified mechanism through which structures of racism translate into environmental inequalities: through aspirations for status within a racialized culture.

Keywords: environmental inequality; race; pesticides; postcolonialism; modernity

Introduction

Despite the common impression that African farmers are 'too poor to pollute' (Kütting 2003), in the last few decades West African farmers have been rapidly adopting new agricultural technologies, including chemical pesticides. Burkina Faso – West Africa's leading cotton producer – provides an interesting case to examine why African farmers are increasingly adopting (and thus exposed to) toxic chemicals, despite their economic marginalization in the global economy. Hundreds of thousands of cotton farmers and their families face chronic

pesticide exposure and occasional acute pesticide poisoning (Ouedraogo et al. 2008; Toe et al. 2013), while their communities are exposed to pesticide drift and high levels of pesticide run-off in drinking water (Tapsoba and Bonzi-Coulibaly 2006). In addition to facing these health and environmental risks, Burkinabe cotton farmers occupy a position of global economic marginalization. They are frequently heavily indebted (Gray and Dowd-Uribe 2013), and although some larger farmers make money, the majority of farmers and their families struggle to simply get by. In contrast, actors employed higher up the cotton commodity chain benefit substantially from cotton production – including cotton company employees, state actors, agribusinesses, banks, textile manufacturers, and end consumers of cotton products. This disjuncture constitutes an environmental inequality: poor black Africans are disparately exposed to the toxic burden of capitalist production, while benefits disproportionately accrue to wealthier white people (Downey 2005). Why is this happening?

Research on environmental inequalities has animated environmental sociology for decades, examining how and why some groups of people – particularly people of color – are disproportionately exposed to environmental toxins (Bullard 2008; Downey 2005; Mohai, Pellow, and Roberts 2009; Pellow 2000). Within this field, scholars have examined race as a demographic variable, intentionally discriminatory behavior, institutional racism, or anti-racist counter-movements such as the environmental justice movement (Harrison 2017; Mascarenhas 2012; Pellow 2007; Pulido 1996). A smaller literature has explored the discursive and cultural dimensions of race in relation to environmental inequalities (Higgins 1994; Mele 2016; Mills 2001; Zimring 2016; Pulido 2000). This paper demonstrates an additional mechanism through which racism can produce inequalities, and one that has scarcely been addressed: that racist

cultural ideologies can influence marginalized people themselves to act in ways that produce and justify environmental inequalities.

Drawing on eight months of ethnographic fieldwork and 125 interviews in Burkina Faso, I demonstrate that many Burkinabe cotton farmers are eagerly embracing new agricultural technologies like fertilizer, herbicides, genetically modified seeds, and tractors. Their pesticide use in particular exposes themselves and their families to large quantities of (often unregulated) chemical products. To help explain why this happens, I employ Bourdieu's concept of a cultural field, which posits a social arena in which specific types of 'capital' signify status, and actors vie to improve their status by seeking capital and through (often unconscious) embodied performances (Bourdieu and Wacquant 1992). I show that Burkina's dominant cultural field is one in which modernity, wealth, and scientific technology are coded as 'white' and high-status, while poverty, backwardness, and physical labor are coded as 'black' and low-status. I argue that many actors embrace technologies in part to achieve status in this field, and that this paradoxically increases rural peoples' exposure to chemicals, creates barriers to sustainable agriculture, and devalues black African bodies. My findings demonstrate a hitherto unidentified mechanism through which structures of racism translate into environmental inequalities: through aspirations for status within a racialized culture.

Environmental Inequality

Early research on environmental inequality sought to document the existence of inequalities. Quantitative studies developed techniques for mapping exposure to pollution and toxins, and despite animated debates, there is now extensive evidence for uneven exposure to environmental harms along lines of race, class, and other axes of social difference (i.e. Brown 1995; Ringquist 2005; Crowder and Downey 2010). A second major strand of literature has focused more

explicitly on 'environmental justice' movements that contest unequal exposures and harm (Bullard 2008; Cole and Foster 2001; Harrison 2011; Mohai, Pellow, and Roberts 2009; Pellow 2004; Pellow 2007).

With environmental inequalities well documented, scholars began to call for a better understanding of the mechanisms behind environmental inequality (Pellow 2000; Pulido 2000). One explanation is simply economic: that both industry and poorer people gravitate towards cheaper rent. Crowder and Downey (2010) for example, find that some (though not all) of the racial disparities in exposure to neighborhood pollution can be attributed to socio-economic position. Other authors emphasize disparities in political power – when businesses locate facilities in communities less likely to protest (Saha and Mohai 2005; Cole and Foster 2001). Scholars examining international environmental inequalities emphasize the economic processes of capitalism (such as the quest for lower wages or avoiding environmental regulation) and the historical dynamics of the world-system (Clark and Foster 2009; Rice 2007).

One of the biggest questions, however, concerns the role of race and racism. Some scholars have defined racism as malicious intent – intentionally discriminatory behavior (Been 1994; Hamilton 1995). Others have focused on the dynamics of institutional and structural racism – focusing less on explicit intent than an outcome. Pulido (2000) and Taylor (2014) demonstrate how historical processes of city planning and housing decisions – such as zoning laws, state-sanctioned red-lining, and residential segregation – produce unequal racial outcomes. Kurtz (2009) also draws attention to state-produced racism by focusing on the "racial state" and its legal constructions of (and efforts to manage) racial categories and populations. Mascarenhas (2012) shows how political-economic structures that tend to be viewed as neutral and 'colorblind' – in his case, neoliberal reforms in Canada – can produce racialized effects for First

Nation peoples. Pellow (2000; 2004) also draws attention to how race operates through societal power structures, arguing that environmental inequalities are formed when groups vie for various resources or outcomes, and less powerful stakeholders lose out.

Many scholars have called for greater attention to how the cultural and ideological dimensions of racism shape environmental inequalities (Mele 2016; Pulido 1996). Pulido has distinguished between 'white privilege' (2000) and 'white supremacy' (2015). White privilege refers to how individual decisions by whites – seeking to create better lives for themselves and their families – reproduce racial inequality, despite a lack of explicit discriminatory intent. By contrast, white supremacy refers to the continued existence of more intentionally discriminatory behavior. Other scholars have focused on how notions of race have long been intertwined with notions of purity and pollution (Moore, Kosek, and Pandian 2003; Higgins 1994; Pellow 2004; Zimring 2016; Blay 2011; Mills 2001; Kosek 2004); ideas of racial 'purity' and fears of social pollution have facilitated the segregation of space and the production of environmental inequalities. In contrast to 'clean and white' bodies, bodies defined as darker colored have long been framed as dirty (Zimring 2016), 'appropriately polluted' (Higgins 1994), or simply out of place in 'pristine' environments (Hickcox 2017; Park and Pellow 2011). These cultural associations help explain how certain groups of people have come to be exposed to waste and toxic materials, and how this exposure has been framed as 'natural' (Moore et al. 2003).

Despite the diversity of mechanisms identified in the literature, most research specifies or implies that it is only racism from whites (whether intentional or institutionalized) that produces environmental inequalities. There is certainly some nuance here; Pellow's (2004) study of waste management in Chicago complicates the 'perpetrator-victim' framework and argues that community leaders and environmentalists also played a role in producing environmental

injustice. Yet I will show what few other scholars have addressed: that racist cultural beliefs may shape the beliefs and actions *of marginalized people themselves* to produce environmental inequalities. This paper demonstrates how Burkinabe cotton farmers operate within a racialized cultural field, and that by seeking status within this field, they can produce and justify their own exposure to chemical toxins. This parallels Pulido's (200) argument about white privilege, showing how racist culture shapes the behavior of both privileged and marginalized people. In this case, individual decisions by *black* Burkinabes – seeking to create better lives for themselves and their families within a racist culture – reproduce racial inequality despite a lack of intent to do so.

The color of African modernity and racialized cultural fields

In explaining how racist ideologies produce environmental inequalities in Burkina Faso, I draw on insights from wider literatures on race and modernity – what some scholars have termed 'racialized modernity' (Bobo 2015; Itzigsohn and Brown 2015). A vast literature has documented global racial hierarchies, wherein whiteness symbolizes economic domination, modernity, and status (Weinstein 2015; Glenn 2009; Bobo 2015; Telles 2014; Blay 2011; Winant 2001). Research on race in non-settler Africa has tended to focus on inter-ethnic differences. Recent scholarship, however, has turned attention to African desires for whiteness – as evidenced by the troubling growth of skin bleaching (Glenn 2008; Hunter 2011), rising rejection of African tradition, and a turn toward 'Western' material and cultural imports associated with modernity (Ferguson 2006; Mojola 2014; Piot 2010; Burke 1996).

Why these rising desires for modernity and whiteness? An adequate answer to this question – not attempted here – would draw on rich literatures on racial formation and internalized racism (Du Bois 1903; Fanon 1952; Gilroy 1993; Omi and Winant 2014; Winkler

2012). Some of this literature connects internalized racism with economic inequality. Fanon (1952, xv) argued that, 'The inferiority complex can be ascribed to a double process: First, economic. Then, internalization or rather epidermalization of this inferiority,' while Du Bois (1903:8) wrote that economically marginalized African Americans found themselves 'measuring one's soul by the tape of a world that looks on in amused contempt and pity.' Bobo (2015:225) argues that racialized modernity is characterized by 'the fusing of capitalism, colonialism, and ethnoracial distinction and hierarchy.' In looking at contemporary Africa, Ferguson (2006) points out that scholars have tended to ignore African desires for whiteness/Westernness, often in well-meaning efforts to avoid re-producing colonial tropes. He argues that many Africans desire Westernness and whiteness not as mimicry or as parody (a common theme of earlier anthropological work), but as a reaching across economic worlds: a claim to global membership, material wealth, and a higher rank and status. Similarly, studies of skin bleaching and Western cosmetics in Africa emphasize how these products enable (mostly women) to purchase the status and 'racial capital' of modernity, urbanity, and Westernness (Blay 2010; Glenn 2008; Hunter 2011; Mojola 2014). In these understandings, desires for whiteness and modernity reflect a practical response to the racialization of our global world-system (Winant 2001).

In this paper, I draw on Bourdieu's (1984; 1990) cultural sociology to situate racialized modernity within the Burkinabe context. Rather than simply framing these racial beliefs as narratives, discourses, or ideologies,[1] I want to emphasize that 'racialized modernity' characterizes a hierarchical system of social status and power. A Bourdieusian frame points our attention to how actors' practical actions are oriented within a cultural system of status. I use it here to examine how actors, who possess portfolios of different 'capitals' within a social arena,

[1] One could also usefully examine these racial beliefs as discourse – through a Foucauldian lens or in comparison to gendered discourse – where discourse shapes subject positions and the very realm of the 'possible.'

vie to maintain or improve their status through (often unconscious) embodied performances. However, I employ Bourdieu's concepts loosely, recognizing the limits of the field concept (which tends to connote autonomous or bounded arenas – which I do not imply here), and the blurriness of transnational influences on culture and discourse (Hilgers and Mangez 2015; Savage and Silva 2013). I thus refer to a loose 'Burkinabe cultural field,' a social arena with recognizable sets of dominant and dominated positions, and in which specific forms of capital are widely valued (though contested by some). Using this framing, I find that Burkinabe actors inhabit a field where higher-status positions are associated with modernity, whiteness, wealth, and certain forms of embodiment. Non-purchased, traditional agricultural methods and inputs (such as composting and hoeing) are widely viewed as 'black,' backward, dirty, and low-status, while new – scientific and purchased – technologies appear to offer the status of whiteness, wealth, and modernity. However, by adopting some of these technologies, particularly pesticides, farmers expose themselves and their families to large quantities of unregulated chemicals and ignore or justify their exposure to pollution.

Case, methods, and positionality

I examine environmental inequality in the context of agriculture in Burkina Faso. Cotton is the primary cash crop in Burkina, as in many West African countries, and tends to drive input-intensive agriculture as well as social and ecological change in the region (Gray and Dowd-Uribe 2013; Gray and Moseley 2008). Burkinabe cotton farmers – male 'household heads' and their families[2] – have been rapidly adopting 'Green Revolution' technologies including fertilizer, pesticides, and mechanization, and from 2008-2015, genetically modified crops (Bt cotton). In this context, pesticide exposure and pesticide poisoning is a persistent issue for cotton farmers

[2] Cotton farming in Burkina, as in most West African countries, is predominantly organized as a male activity (see Gray and Moseley 2008). Gender is an important dynamic in this space, but one I do not interrogate here. This paper is primarily focused on men's decisions.

(Ouedraogo et al. 2008; Toe et al. 2013). Many chemicals are illegally imported and unregulated; in Toe et al.'s (2013) survey of 650 farmers, 70% of pesticides they encountered were unapproved for use in Burkina Faso by the state. They also found – in line with my own and others' observations – that most farmers cannot read labels and take very few precautions while spraying. Furthermore, in 2006, studies showed high pesticide presence in water supplies in the cotton zone (Tapsoba and Bonzi-Coulibaly 2006). In 2016, most actors I spoke with, particularly pesticide salesmen, reported a significant rise in herbicide use in the last ten years. One extension agent told me that he found 'the level of herbicide use to be frightening.' I thus view this situation as a case of environmental inequality: farmers and their communities are disproportionately exposed to the risks of cotton production, while gleaning few of the benefits.

This research was conducted in Burkina Faso over the course of eight months in 2016. All research was conducted in French and Dioula, languages that I speak fluently (after Peace Corps work in the region). French is spoken by educated bureaucrats and scientists, while Dioula is a widely spoken lingua franca in Burkina's southwestern cotton-growing regions. With part-time accompaniment from research assistants (who helped me conduct interviews and interpret my observations), I conducted extensive participant observation and a total of 123 semi-structured interviews. This included 17 interviews with cotton company (Sofitex) employees, 9 interviews with leaders of anti-GMO and sustainable agriculture activist groups, 3 interviews with Monsanto employees, and 5 interviews with state-employed agricultural scientists. Through contacts with government-level cotton sector employees, I attended regional conferences dealing with cotton pest management and biosecurity. I also attended publicly advertised events related to sustainable agriculture or genetically modified cotton. My aim was to see how technologies were interpreted, promoted, and/or resisted by various groups that work with farmers.

My rural fieldwork sought to observe both adopters and resisters of new agricultural technologies. I found my field site through a group of "activist" farmers I met at a forum against genetically modified crops. These farmers invited me to visit their community of two bordering villages of Bwa farmers in the Houndé region (around 3,000 residents). In meetings with groups of farmers in each village, I discovered that most farmers were enthusiastically adopting new technologies. After introducing my research objectives and meeting with the cotton growers' groups and the village chiefs, I rented a house, and between June and December 2016, interviewed 43 male cotton farmers and 20 farming women (chosen for a wide range of economic and social attributes). I also conducted extended participant observation with dozens of men and women in their daily lives and on their farms, taking detailed field notes each day. Additionally, I spent a month following along cotton company employees in the region, and had informal encounters with hundreds of additional farmers during this time. Near the end of my fieldwork, I interviewed 15 organic cotton farmers in the Banfora region in the south.

The content of this paper emerged inductively from field research and iterative data analysis. Most of the data presented are from field notes, not interviews, since informal encounters were often more revealing of social dynamics than interviews. Further, race was not a topic I intended to study. It first emerged when I began discussing my positionality with my research assistants (Burkinabe masters students in sociology) – about how being 'the white lady' shaped peoples' behavior toward me. This is an intersectional identity; while being a woman helped me gain access to intimate conversations with women, being a *white* woman meant that women still held me slightly at a distance and expected that I was unable or unwilling to do physical labor. Men were also respectful toward me; my status as a white "researcher" meant they viewed me as knowledgeable, wealthy, and socially powerful. They often asked me for

farming advice (in this case, my race and education appeared to outweigh my gender – most Burkinabe men would be unlikely to ask for farming advice from a black Burkinabe woman). My white skin was the most salient aspect of my identity – and dramatically shaped all of my research encounters. It provoked countless conversations and reactions that helped me understand how people viewed whiteness – and blackness. It is often in encounters of difference that relational constructs (black/white, rich/poor) are made visible (Lamont and Fournier 1992; Moore, Kosek, and Pandian 2003). This paper thus treats peoples' encounters with my body as one source of ethnographic data. Of course, the centering of my own body as the prompt for racial analysis is not without problems: we are left to wonder about the salience and role of racial categories when a white body is not present. This is a shortcoming of my data, and one that I hope can be explored by future researchers with different positionalities than my own.

Burkina's cultural field: the status of whiteness and modernity

My argument unfolds in three sections. In this first section, I depict Burkina's broader cultural field, in which modernity, westernness, whiteness, and wealth are bundled together and operate as markers of status, in contrast to the lower status of tradition, backwardness, poverty, blackness, dirtiness, and physical labor. In the second section of my findings, I illustrate how agricultural technologies intersect with this cultural field – and demonstrate that farmers adopt new technologies *in part* as a way to obtain status within this cultural field. In the final section, I argue that not only does this process expose farmers and their communities to more toxins, but the racism of this cultural field also works to mute health and environmental concerns that might urge farmers and cotton company workers to reduce or mitigate exposure.

[INSERT FIGURE 1 HERE]

In Burkina, modernity and progress are deeply linked to whiteness and westernness – partially due to colonial legacy, and partially produced by contemporary Burkinabes' awareness (via television and social media) of their economic marginalization in the global economy. A telling indicator of this equation of whiteness with modernity comes from my Burkinabe research assistants, who transcribed my Dioula interviews directly into French. In several instances, they simply translated the Dioula word 'tubabu' (which means 'white/French person') as 'modern.'[3] For them, white people are *literally* synonymous with modernity. This interpretation is not restricted to elites or educated city folk. In rural towns as well as cities, I heard men and women refer to themselves or other Africans pejoratively, often using French words even in conversations in Dioula: 'we are not *civilisé*,' (civilized) 'we are not *evolué*' (evolved). Another common expression was the French term *eveillé* (awake), or the Dioula *nyeyelelen* (eyes open), to refer to people with a modern outlook – such as people who had completed French schooling or had rejected traditional religion.

My impression was that most people tend to see progress and modernity as an attribute of white/western people, and one that is generally desirable. This is not without nuance, however. In this and in the following sections, I do not wish to portray a totalizing cultural field without variation and resistance. Many people have mixed or negative feelings about the social changes they associate with modernity and capitalism, including: increased individualism, less respect for elders and tradition, and a belief that social solidarity, families, and communities are unraveling. Some male cotton farmers are critical of the legacy of white colonial exploitation – and see this exploitation continuing in forced currency devaluations and gold extraction by foreign companies. Further, a subset of cotton farmers who still practice traditional religion resist

[3] For example: The interviewee said in Dioula: '*Diante a machine soro, tubabu tu*,' which translates word-for-word as 'Diante got a machine, the white person kind.' My Burkinabe transcriptionist simply wrote in French: '*Diante a eu une machine moderne*': 'Diante got a modern machine.'

Western science; as one man told me, 'you white people, from your world of science, you just can't understand' the world of powerful African spirits and magic. I tended to find that older people and non-Christians were more likely to resist the cultural narratives I present in this paper. There are also gendered differences regarding whiteness and beauty, and many other differences along intersections of gender, class, location, and ethnicity that I do not discuss here, or that I have not discerned. My point here is that the status markers I describe in this paper are not universally recognized, but they are nonetheless dominant.

The status of 'Frenchness'

'The whole system of respect here is based on how close you are to being French.'

- Cotton company employee

In Dioula, the word '*tubabu*' generally refers to a white westerner, while '*tubabu-language*' means French, which makes sense given Burkina's colonial history. The government and schools are structured in the French system and televisions play French TV. However, Burkina's French literacy rate is low (around 30%), and many rural people do not speak French. In this setting, just as Fanon (1952) argued, 'Frenchness' is often leveraged in social interactions to display status. For example, on a more expensive bus company that assigns seats, I often witnessed educated passengers shaming other (often rural) passengers who could not read their tickets, speaking in French with widespread laughter and head shaking. The status of speaking French seems linked to urban status and wealth. Most rural people refer to employed or salaried positions (which they equate with wealth, and desire for their children) as '*tubabu* jobs.' People also view French and Western products as higher quality – 'original' products as opposed to locally produced or knock-off products.

The whiteness of wealth

Westernness and whiteness operate as status symbols to a large degree because they are associated with wealth and economic success. As a white American woman in Burkina Faso, people often called out to me, '*Waari tigi*!' – the money holder (rich person). A friend explained this behavior to me: 'It is like seeing a celebrity. They only see white people on television. And of course they think you are rich, I mean, aren't all white people rich?' This was a common conversation. Farmers frequently told me that, 'even the poorest white people are wealthier than the richest black people in Burkina.'

Many Burkinabe women desire lighter skin and Caucasian physical attributes, which seem linked to a desire for wealth, modernity, and urbanity. Women regularly asked me to cut off my hair (a light brown ponytail) to make a wig to have 'beautiful hair.' They said, 'We don't like our hair. We want hair like yours – *tubabu* hair.' Many urban women also use skin-lightening creams.[4] When I asked why, several women said lighter skin can attract a 'wealthy' husband. My interviews with male farmers also confirmed that many men desire light-skinned wives as a sign of wealth and status. As Blay (2011) has argued, getting closer to 'whiteness' may thus be a strategy for obtaining social and economic capital.

[INSERT FIGURE 2 HERE]

Getting out of the dirt: whiteness, cleanliness, and progress

In Burkina, the Dioula expression for development or progress – '*ka bo nogo la'* – translates literally as 'getting out of the dirt.' This expression makes palpable sense. Development means getting out of the fields, out of a world of dust and soil and limited access to water and modern sanitation. Yet this coding of development as 'cleanliness' is also subtly raced – and ties black skin and poverty to dirtiness.

[4] It is estimated that 25-75% of women in West Africa use skin lightening creams! Given reports of toxic ingredients, this is another arena in which internalized racial narratives produce environmental and health inequalities (Blay 2011).

The Dioula word for 'white' (*gwe*) is also the word for cleanliness and purity. However, this isn't just a case of linguistic homonyms. People often made statements associating white skin with cleanliness. For example, one woman told me that she thought 'white women didn't get periods. That only black women did. You are just so clean, I can't imagine such a dirty thing happening to a white woman.' Another example highlights the association of cleanliness and whiteness with urban living. I was sitting with Marianne, an un-married woman in her late twenties who has spent time in the city, and struggles to be a 'modern' woman in a rural village. She began discussing my female research assistant, 'Oh, Aissata has such beautiful skin!' Aissata was a lighter-skinned young woman from the capital, who had complained to me that the 'village water' was ruining her skin by making it 'dark and blotchy.'

'What was nice about Aissata's skin?' I asked Marianne.

'It wasn't like our skin. She had such beautiful skin. Some would ask what products she puts on it, but I know it's just from being in the city. It's city skin. Not like here in the village.'

I asked, 'What about it was beautiful? The color?'

'Yes, it's so light. Not like ours. Ours is so dark. But if she was here, her skin would change to be like ours.'

'Why is yours different?'

Marianne replied, 'It's dark because we work in the dirt. We are so close to the dirt all the time, and we don't shower as often.' She pointed to my arm, 'Don't you see how you've gotten darker here? Your skin is changing too because you go out to work in the fields. But if we were to go live in the city for awhile, we would become more like *tubabus*.' Intriguingly, my own *'tubabu'* status was apparently threatened by working in the dirt! When I discussed this later with my male research assistant, I told him that people in the cities are probably lighter-skinned

because they get less sun. He disagreed, saying no, it's also the clean water, food, and modern amenities. Light skin thus signifies the social status of the ability to 'get out of the dirt' – to escape the exhausting labor of farmwork and the difficulties of village life.

Blackness, physical labor, and status

Finally, Burkina's cultural field ties together blackness, poverty, and dirt with *physical labor.* The low status of physical labor has roots in Burkina's colonial history, and strongly shapes contemporary enthusiasm for labor-saving agricultural technologies. In the late 1800s, colonial France designated Burkina Faso (then Upper Volta) as West Africa's 'labor reservoir.' France then imposed various forms of forced labor: each village supplied laborers for infrastructure development; tens of thousands of people were conscripted for military service; and hundreds of thousands were forcibly sent across francophone West Africa for agricultural and infrastructural labor (Cordell, Gregory, and Piché 1996). Villages were also forced to pay hut and head taxes, and to provide a given quantity of crops such as cotton. This colonial model of exploitation seems to run just beneath the surface of contemporary Burkinabe attitudes towards physical labor. In a very tangible sense, the ability to avoid physical labor (and exploit the labor of others' bodies) signifies status and power.

Part of the current aversion to physical labor is also *physical*, and part of peoples' practical logics for getting by (Bourdieu and Wacquant 1992). Bodies are not simply 'social' canvasses; rural people experience genuine bodily fatigue – long days bent over in sweltering heat, carrying heavy loads on their heads or strapped to bicycles, and sometimes with hungry (or pregnant) bellies. Their workloads can feel interminable. My argument here is that attitudes towards bodily labor as low-status *layer onto* practical desires to reduce drudgery. This layering is highly visible in attitudes toward transportation. Many urban Burkinabe men explained to me

that they cannot ride bicycles even if they wanted to, or else their friends would ask: 'What happened? Are you poor? Did your motorcycle break down? Are you out of gas?' One man explained to me, 'Once you reach a certain status in life, there are things you just can't do.' Only poor people walk or bike.

Attitudes about physical labor are also raced. For example, many people were perplexed that I didn't ride a motorcycle or drive a car, and that I chose to come help them with their farmwork. To most farmers, wealthy/white people simply do not do physical labor. Many people expressed views of white bodies and skin as weaker and more fragile than black bodies and skin – either inherently, or because we sit inside all the time (a view that seems influenced by television programming – which rarely portrays white bodies working). In contrast, black bodies are often framed as dirty – and even black – *because of* physical labor. I once overheard a rural woman who used skin-bleaching creams say: 'If I lived in the city I would look like (the white lady), but we are out here bent over in the fields, and our skin is ruined.' Like Marianne in the example above, she was tying her skin color to working in the fields – and the physical labor it entailed. In another example, I was sitting with my lighter-skinned research assistant Aissata at a local hang-out/breakfast bar. A man said to her,

> You see your skin? It is you people in the capital who eat everything. You eat off of our backs. You see our skin? How dark and burned it is? We are the ones suffering. You have beautiful skin because you are eating well in the capital, you are resting.

This man views his darker skin as a sign of his physical suffering – the result of bodily labor, and a mark of poverty and exploitation. He ties physical labor to the low status of poverty and blackness. It is also worth noting, however, this man's 'double consciousness' – his insightful and scathing structural critique of a world-system that places black laboring bodies at the bottom of a chain of exploitation.

Status, whiteness, and agricultural technologies

Science, technology, and 'evolution'

This section shows how new agricultural technologies fit into this cultural field in which whiteness, westernness, and wealth are associated with each other and positively valued. I contend that science and agricultural technologies are, in part, embraced because of their associations with modernity, whiteness, Westernness, and wealth. These associations echo Williams' (2017, 13) argument that in the early 20th century United States, 'notions of "development" and "competition" in agriculture were tied to plantationist racial conceptions.' In Burkina, agricultural technologies are adopted for a wide range of reasons, but *one* reason – the one I explore here – is that they offer an avenue for achieving symbolic status in the cultural field I have depicted above. They can help reduce physical labor, display wealth, and demonstrate 'technical' know-how associated with Westernness.

Cotton company officials frequently use the French word '*technicité,*' which describes a person's technical knowledge or ability, in order to separate the good and 'modern' farmers from the backwards and 'traditional' farmers. For example, at one conference I attended in a fancy hotel, I chatted with a mid-level cotton company employee in his fifties:

> He told me education is the key to progress, and to going from poor to rich… He said the educated farmers had a 'Cartesian,' rational view of the world… If you bring innovation to these farmers, they will understand and adopt it. Traditional-minded farmers aren't able to understand.
>
> I asked him to clarify. He pointed out the window... He said, I used to live down there, when I was going to university… And now here I am, looking down on the city. 'Can you imagine the emotional impact for me? To be here now, in this beautiful hotel, on the 7th floor?'
>
> He said he had attained a high level of respect because of his education and his job as a technical expert. People looked up to him because of his technical knowledge…He added, 'This is because I am seen as closer to being French… the whole system of respect here is based on how close you are to being French.' He said this not critically, but in a matter-of-fact way.

This abridged excerpt illustrates his assessment of 'modern' farmers as those embracing Western thinking and Western technology. He comments on his rise up the hierarchy – quite literally to

the seventh floor of a fancy hotel – as based on technical knowledge and moving closer to Frenchness.

Back in the conference room, two white French women were presenting a new line of insecticides from a global agri-chemical company. The first slide had the title 'Evolution is in progress' typed across the well-known picture of evolution from a black ape to a white human. The spoken message: these chemical products are the height of modernity and technical prowess. The unspoken message: by purchasing these products, you will move closer to the right side of this picture – the modern, evolved, white man. These messages resonate with and re-produce the narrative of 'evolution' that I found in local discourses. Many scientists I interviewed (at the state research institute, the cotton company, and Monsanto) talked about the inevitable march of science and evolution. One told me, 'We have to find a path for biotechnology in Africa. If we don't, we are forever left behind. White people farm with satellites, and here we are farming with hoes.' Another said, 'We cannot stay at the rudimentary stage, we must evolve with science. We do not want to be behind the evolution of new technologies.' Technology is thus viewed as helping Africa 'catch up' with the West and improve its ranking in the world – both economically and symbolically. This attitude is also present among farmers. Many farmers talked about their desire for '*tubabu* technologies' they had seen on TV, and often asked me if I could give them things like tractors. They frequently called white people farming 'more evolved,' particularly in terms of our technology, and they wanted access to those technologies.

New agricultural technologies and status

There is an enormous range of economic, political, social, and physical reasons why farmers are adopting new agricultural technologies. Principal among these are labor shortages (resulting from putting children in school, families splitting, declining mutual aid, and widespread labor

migration - particularly of young men) combined with pressures and desires to increase acreage/production (resulting from debt, low commodity prices, declining soil fertility, local land tenure policies, and aspirations for the status and improved economic wealth that can come with a larger farm). My argument here focuses on how farmers adopt new agricultural technologies and justify or ignore their negative impacts *in part* because of Burkina's racialized cultural field. Modern agricultural technologies can help farmers reduce their physical labor and increase farm size, but they also provide a path to social status that is associated with whiteness, Westernness, wealth, and modernity. I documented this for farmers' adoptions of pesticides, fertilizers, tractors, and genetically modified seeds, but here I focus primarily on pesticides, given their clear role in producing environmental inequality.

Herbicide use is expanding rapidly in Burkina, replacing hand weeding with short-handled hoes. In the Houndé region, farmers use large quantities of herbicides.[5] They spray their crop fields before, during, and after planting (with broad-spectrum and then selective herbicides), and they spray around their houses. When I talked to people about herbicides, the conversation almost always centered on the fact that 'no one wants to hoe anymore.' Many people refer to 'traditional' farming, or hoeing, as 'farming with your back,' and they gleefully proclaim that they no longer 'farm with their backs like their parents did,' in large part thanks to herbicides. And herbicides do indeed reduce physical labor and hoeing for farmers, many of whom are facing labor shortages in increasingly individualized farming operations.

However, herbicide use also appears to be shaped by social pressures. Given that physical labor is associated with the low status of dirtiness, poverty, and blackness, it only makes sense

[5] This includes glyphosate, diuron, atrazine, nicosulfuron, 2,4-D, terbutryn, metolachlor, paraquat, and others. Most of the herbicides I found in the market and laying in farmers fields were manufactured in China, with some manufactured in the Ivory Coast and Ghana. Many were illegally present in the country, and according to regulators I spoke with, unregulated and undocumented.

that hand hoeing also carries these low status connotations. One young man told me that people would rather let their fields get taken over by weeds than hand hoe. He said he had gone into debt to buy herbicides for his corn field. 'You will get *made fun of*,' he said, 'you will be *insulted* if you hand weed.' Similarly, when I asked an older woman in an interview what would happen if a farmer didn't spray, she responded:

> You would be humiliating yourself if you didn't spray … people will think you are belittling yourself - they will wonder why you aren't able to spray… Everyone else is able to spray, why aren't you able to spray too? Aren't you a man?

This woman references the shame of hand hoeing, and further reveals how wealth and reduced physical labor are associated with manhood. Because of this, farmers go to great lengths to obtain herbicides – begging, borrowing, and selling off other inputs (obtained on credit) from the cotton company, including fertilizer and insecticides. In other words, herbicides are not just about reducing physical drudgery. They are also about achieving status and avoiding the social shaming (being seen as poor, traditional, and dirty) that comes with physical labor and hand weeding. This woman's reference to 'manhood' is also significant, but a point I cannot fully elaborate here. Modernity, wealth, and technology are also tied to performances of masculinity. Just as a racialized cultural field contributes to technology adoption and environmental inequality, gendered cultural fields and ideologies may operate in similar – and overlapping – ways.

Another agricultural technology that saves labor is synthetic fertilizer. Like herbicide, fertilizer is a prized input for Burkinabe farmers. Purchased synthetic fertilizers such as urea and NPK are called '*tubabu nogo'* in Dioula – literally 'white people dirt.' In contrast, compost (decomposed organic matter) is called '*farafin nogo,'* literally 'black skin dirt.' When I inquired about these terms, many people explained that *farafin nogo* is made by hand, whereas *tubabu nogo* is manufactured. Thus, manufacturing is coded white, while hand labor is yet again coded

black. Nearly every farmer I talked to viewed *tubabu nogo* as absolutely essential for farming, especially given degraded soil and the time and input intensity of compost. The organic farmers that I interviewed explained that making compost was one of the major difficulties of organic agriculture, while ex-organic farmers explained that avoiding this labor (and getting access to herbicides and fertilizers) was one of the main reasons they returned to conventional farming. Many farmers want 'white people' dirt, not the 'black skin' dirt that carries with it the connotations of physical labor and poverty.

Legitimizing inequality and unsustainable agriculture

New agricultural technologies often bring with them health and environmental impacts that are unequally absorbed by rural farming bodies (e.g. Harrison 2011). My argument in this paper is that increased exposure to environmental and health harm appears to be facilitated and legitimized by the status politics that associate 'white people technologies' with wealth, progress, and modernity. Farmers and cotton sector employees see poor, rural, black bodies/lives as less valuable and as inherently or already polluted (dirty). I argue in this section that these beliefs mute health and environmental concerns that might urge farmers and cotton company workers to reduce or mitigate exposure. This cultural field also works against sustainable agricultural practices, which many people associate with the low status of poor, backward, black Africans.

Health concerns are for white people

The cultural field I have depicted in this paper works to downplay health concerns about pesticides. Many, though not all, cotton company employees recognize health concerns, but portray farmers as backward, illiterate, and unable or unwilling to take the proper precautions. Because of this, they take few steps to reduce farmers' exposure. One cotton company employee told me,

> Pesticides are an enormous problem. If you ask a farmer, he can tell you everything (about properly applying pesticides), but he doesn't do it. Because for him, he doesn't believe what you are saying, because he doesn't see the direct effect of the pesticide… even though he is in the middle of killing himself over the long term… It's a question of *mentality.* Even those who've been to school are in this dynamic.

This common belief about farmers' backward 'mentalities' – rooted in the broader cultural field that assigns low status to rural peasants – dampens efforts by the cotton company to help farmers reduce their exposure to toxic chemicals.

However, many farmers do seem to ignore the consequences of pesticide use and input-intensive agriculture. Most men recognize short-term effects of insecticides ('cold-like symptoms'), but do not emphasize long-term effects, and many desire stronger products that would more efficiently kill pests. In my observations, few farmers wore protective clothing or followed proper precautions, and some families washed and reused pesticide bottles for other purposes (also see Toe et al. 2013). Most farmers seem to see herbicides as safe. When I asked people about the pros and cons of herbicides, people would quickly state the positives (namely: reduced labor). When I prodded about disadvantages, they would add, 'yes, the cost,' but rarely mentioned *any* health or ecological concerns. A small number of (often better-educated) rural men and women did express concerns to me about pesticides and their long-term health effects. They are a minority, however. This is partially due to a lack of education and misinformation by industry. In some cases it is willful ignorance – people know, but they ignore it because they don't have other options (one woman told me this explicitly).

For some people, though, 'technical' products are seen as good simply because they come from the West – and are therefore 'high quality' and designed by 'smarter' people. One young man who sprayed pesticides frequently for his dad told me that pesticides are carefully designed by smart *tubabu* (white) scientists to kill weeds or insects, not humans. Another farmer explained to me that pesticides come from white people, and if white people use them, he wants

to use them too. These farmers are unaware that *tubabu* farmers do not spray pesticides in flip-flops and shorts, with hand-pump backpacks and a wind blowing the pesticide across their bodies, nor do *tubabu* farmers drink agricultural run-off. But because these farmers associate pesticides with the rational, scientific technologies of 'smart white people,' they deem them to be safe, or at least safe enough.

Other farmers recognize the health risks of pesticides, but they think that their bodies – since they are black and dirty/polluted – are 'used to it' and not as affected as more fragile white bodies. During my fieldwork, I engaged in nearly every type of field labor, but no one offered to let me spray or handle pesticides.[6] Once, when I went to help an older woman and her daughter plant corn, they were planting blue fungicide-coated seed. The women stubbornly refused my help, saying, 'You don't want to get this stuff on your hands. You aren't used to it like we are.' Later, I saw the older woman cooking dinner outside her home with blue-stained hands. In a similar vein, in my discussions about organic agriculture (agriculture that uses no chemical inputs), many Burkinabes told me that white people want organic because white peoples' bodies are more sensitive to toxins than black people. As one man said, 'Even a conventional cotton t-shirt (grown with pesticides) could cause a white person's skin to break out in rash.' Again, this belief – related to broader cultural beliefs about 'clean white bodies' and 'dirty black bodies' – frames black bodies as uniquely capable of withstanding exposure to chemical pesticides.

This same logic applies to attitudes about water. People seemed to expect that 'since I was white,' I would not drink their water. However, my Burkinabe research assistants were often practically forced to drink unfiltered local water (including murky stream water next to a sprayed cotton field), often with a gesture and a statement along the lines of, 'Come on, you are black-

[6] I also didn't volunteer. In fact, I was worried about my exposure to pesticides during my fieldwork, which reflects my privileged position – my upper-middle class, white American education, my healthism, the luxury of being concerned about invisible, long term health impacts.

skinned like we are.' A few village residents who were concerned about pesticide exposure told me they felt judged if they refused to drink local stream water. Said one woman, 'If I refuse to drink, people will ask me, "What, you think you're a *tubabu* (white person)?"' Although this coding of black bodies as capable of withstanding dirt and pollution may be expressed with pride and strength, it also minimizes concern about rising levels of chemical contamination, and can prevent people from reducing their exposure.

Barriers to sustainable farming

In a context of rising health risks, ecological degradation, and farmer indebtedness, organic or agro-ecological farming[7] methods might seem like attractive alternatives. However, because of the association of manual labor with backwardness, blackness, and poverty, many forms of sustainable agriculture face significant cultural barriers. By "sustainable agriculture," I broadly mean agricultural methods and inputs that are ecologically and economically viable over the longer-run: they maintain soil fertility across a landscape, they maintain the health of humans and other species, and they don't put farmers into untenable debt (see Harwood 1990; Pretty 1995). However, these methods are frequently very labor-intensive, such as hand-hoeing weeds rather than using chemical herbicides or making compost – 'black people dirt' – rather than relying on synthetic fertilizers. Because of this labor intensity, many forms of sustainable agriculture are hard to do at a larger scale, which goes against the status and economic pressures to have a large farm.

Because of this, organic and agro-ecological farming are hard to do physically, but also *culturally*. One part-organic farmer told me he felt stigmatized:

[7] Organic agriculture in West Africa focuses on keeping out synthetic inputs; agro-ecology (as promoted in conferences that I attended) focuses more broadly on 'sustainability,' including methods like composting and inter-cropping.

> The other farmers just don't get it. They ask me what I'm doing and why I'm wasting my time… they sometimes pass my fields and say oh, I have so many weeds in my fields. I'm lazy, I can't keep up, I can't manage all my fields.

Like many other organic farmers, he felt that he was poorly viewed and lumped together with the low-status of poor farmers, women, and more generally with an image of backwardness and African tradition: 'the way our parents used to do things.' One woman told me that she had considered going organic, but was concerned that others would think she was lazy (if the weeds got out of hand) or poor for not using herbicides.

Organic and agro-ecological farming also experience cultural resistance in the United States, where farmer identities are (similarly) rooted in performances of rural, 'macho' manhood linked to the industrial ideal, machinery, large-scale farming, and chemically intensive agriculture (Bell 2004). However, African farmers are also dealing with structures of race and colonial history. Opting out of the industrial ideal carries additional baggage, just as the call to 'get your hands dirty' can resonate differently for white and black Americans (Guthman 2011). Organic and agro-ecological farming rely on '*farafin nogo'* (black skin dirt) for soil fertility, and they tend to be lower yielding, smaller-scale, and more labor-intensive than 'modern' farming. Yet, as one ex-organic farmer told me,

> You've come to Africa, you've seen it here. Where you come from you have tools for working, you have machines that plant and cultivate, that do everything. Here in Africa we don't have that, and we have to do everything by hand. That's the problem with the work of organic cotton.

This farmer explicitly framed his complaint in relation to his conception of white people farming, saying that he did not want to be a poor African farmer restricted to hand labor – which is not only tiring, logistically difficult, and increasingly expensive (to hire labor), but also, as I have argued, associated with the low status of poverty, black skin, and dirt. Like many farmers, he wants better material conditions and social status. In this context, agricultural technologies – even ones with negative health and environmental impacts – are a route to achieving that.

Conclusions

In this paper, I have argued that new agricultural technologies have been widely adopted in Burkina Faso in part because they offer Burkinabes a higher-status, modern, technical, *whiter* identity. I argued that the cultural field that contributes to technology adoption also helps produce and justify environmental inequalities. The dominant framing of black bodies as 'dirty,' poor, polluted, and associated with manual labor can legitimize the further pollution of rural black bodies with chemicals, and produce barriers to various types of sustainable agriculture. This paper thus contributes to environmental inequality research by specifying a form of racism to which other scholars have paid insufficient attention. This isn't a case of 'racist' companies moving factories into marginalized communities, nor is it a case of institutional or structural racism. This is a case where a racialized cultural field actually influences people of color to marginalize themselves – in environmental terms – because of their efforts to attain the economic and symbolic status of white modernity, and because of the way they see their own black bodies. Without discounting the continued significance of structural forces and implicit or explicit racism from whites, my findings augment our understanding of how racial ideologies can produce and justify environmental inequalities.

This paper also contributes to environmental sociology's expanding focus on inequalities across the production cycle and in postcolonial contexts. Environmental sociologists have been at the forefront of documenting and investigating global environmental inequalities (Ciplet, Roberts, and Khan 2015; Clark and Foster 2009; Faber 2008; Rice 2007). However, few have used a postcolonial cultural lens to examine how desires for 'racialized modernity' may also contribute to producing and justifying global environmental inequalities. I do not propose that desires for whiteness are merely cultural – or that they represent a simplified submission to

colonial domination. Like Fanon (1952), Du Bois (1903), Ferguson (2006), Blay (2011), Glenn (2008), and Kurtz (2009), I see these desires as responding to – and intertwined with – processes of capitalism that perpetuate and deepen global economic and political inequalities. Desires for whiteness and modernity are, in other words, legitimate desires for material advancement, a better quality of life, and respect. Many Burkinabes are astutely aware of global inequalities and global hierarchies – and they are doing their best to better their lives within this system.[8]

Nonetheless, my findings point to the troubling persistence – and power – of deeply rooted structures of culture and race. My research reveals that many, though certainly not all, Burkinabe men and women come to see their own bodies, knowledge, and practices as less valuable – as 'backward.' I am concerned that the desire for whiteness and modernity – however agentic it is for local actors seeking to improve their lives (Piot 2010) – still reproduces a hierarchical world divided by race and class, where those on top deserve greater access to wealth, health, and a clean environment. In contrast to racist decision-making by whites or discriminatory housing policies, working to end this form of racism will require different approaches that address deeper systems of cultural meaning and status, as well as the persistent structural inequalities of the world-system (Winant 2001).

Finally, as noted at the beginning of my findings, there are some actors in Burkina who are seeking to redefine and contest the cultural field that I described here, which I will explore in further work. Many of my Burkinabe friends and respondents recognize the racist elements of contemporary Burkinabe culture – they have what Du Bois termed the gift of 'second sight'— of being able to see, and criticize, the veil of their double consciousness (Itzigsohn and Brown

[8] This touches on much deeper debates about the nature of domination, resistance, coercion and consent. Bourdieu calls this the 'antinomy of domination' – the fact that dominated people sometimes face two bad choices: resist, and in doing so further their own marginalization and exclusion, or 'submit' to the system and seek to claw their way up, knowing they will not get very far (Bourdieu and Wacquant 1992).

2015). Despite the difficulties of this position, many different groups are seeking to challenge the legitimacy of current structures of symbolic capital and domination. In regard to chemical exposure, a small number of rural men and women are trying to reduce their use of pesticides (particularly on consumption crops), and many activist movements are promoting alternatives to chemically intensive, high-debt agriculture (including the *Syndicat National des Travailleurs de l'Agro-Pastoral* and the *Citizen's Collective for Agro-Ecology*). I do not want to suggest, however, that it is solely farmers' responsibility to reduce their exposure. Although farmers do purchase many chemical products in the market, the cotton company and the state bear responsibility for many of the products, and for the basic conditions of cotton production that farmers face (conditions which, although glanced over in this paper, also contribute to pesticide use). Some groups, like *the Organisation Démocratique de la Jeunesse en Burkina Faso (ODJ),* are indeed targeting the state to improve conditions for cotton farmers. They are also targeting ongoing imperial domination and international institutions such as the World Bank. Finally,harw there are individuals and groups pushing back against white beauty ideals, rejecting skin bleaching and wigs, and reaffirming the value of African bodies, tradition, and culture. These slivers of cultural resistance, despite their current marginality, help remind us that fields are always contested and in flux – and it is these struggles and the malleability of culture that leave us hopeful.

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