

### **REVIEW EXCHANGE**

## **Editorial Note**

The editors of the **Journal of Cultural Economy** are excited to announce a new review feature: the **Review Exchange**. From time to time, we will ask two authors to review one another's monographs; they will then have the opportunity to respond in an open-access forum on the **Journal of Cultural Economy** website. In our inaugural Review Exchange, Stuart Kirsch and Fabiana Li, authors of two important books on the politics of mining, reflect on the environmental damage wrought by extractive industries, the social movements mobilized in response, and the role of knowledge in navigating the resulting conflicts.

**Unearthing Conflict: Corporate Mining, Activism, and Expertise in Peru**, by Fabiana Li, Durham, NC, Duke University Press, 2015, x + 265 pp., US\$24.95 (paperback), ISBN 978-0-8223-5831-2

How do things come to matter? When is smoke from a smelter recognized as pollution? How does the identification of a mountain as a sacred being galvanize political opposition to mining? How are political debates shaped by documents like environmental impact assessments? These are some of the important questions raised by Fabiana Li in her novel and provocative account of nonhuman agency in the mining conflicts that have troubled Peru during the last two decades.

Li begins with the example of a controversial smelter in La Oroya that has been in operation for nearly a century. The people working there and living nearby have become accustomed to the smoke it produces, which burns their throats and irritates their eyes. They regard the plumes from the smelter as an acceptable trade-off for the economic opportunities provided by the company. After all, Li recalls an informant asking rhetorically, what place is not polluted? (39). Only in recent years has the smoke from the smelter become identified as a pollutant and the accompanying health risks made visible. Li examines how 'the language of environmental science and transnational activism turned "pollution" into a new object of national and global concern' (4). She also argues that we need to take seriously the roles played by 'environmental actors themselves', including plumes of smoke, nearby mountains, and the atmosphere, in shaping these interactions (56).

The town of La Oroya has an interesting history. Initially, the mining company found it difficult to recruit local peasants as wage laborers. Li describes what Heraclio Bonilla refers to as a 'curious mechanism of proletarianization': acid rain caused by emissions from the smelter scorched the surrounding hills and fields, making it impossible to farm, and the deposition of heavy metals, including arsenic and antimony, poisoned their livestock, leaving the people living nearby with little choice but to move to town and seek employment with the mining company (42). Like the historical enclosure of the commons, the operation of the smelter resulted in the removal of peasants from the land, forcing them to sell their labor under circumstances not of their own choosing. Problems caused by pollution also led to the establishment of a buffer zone around the site when the company was forced to purchase degraded land from hacienda owners.

However, the people who settled in La Oroya came to appreciate the higher standard of living and amenities of urban life. They objected when disclosure of the environmental and health problems

caused by the smelter threatened to shut down the project. They preferred the interventions of the company, which offers local women instructions on how to keep their houses clean and their children safe from the lead dust that settles on the pavement where they play. The company even transports children with elevated levels of lead in their blood to a special school in the mountains, where they are able to breathe fresh air for eight hours a day. The people living in La Oroya were offended by its characterization as a 'sick town' (65) and the stigma associated with lead poisoning, and they consequently supported the company's campaign against the environmental NGOs critical of the project.

Through these examples, Li explains how and why pollution came to matter, for whom, and when it did not. I am not entirely persuaded, however, that because smoke from the smelter did not receive public attention for decades, it did not matter. The effects of pollution on the people living in La Oroya and the surrounding area were materialized in embodied forms even if its consequences for human health and disease went unrecognized. These impacts are examples of what Nixon (2011) refers to as 'slow violence', which disproportionately affects the poor. Li convincingly accounts for how pollution in La Oroya went from being taken for granted to the identification of the town as one of the world's 10 most polluted places. But it is equally important to recognize the work that previously went into normalizing these conditions, including the acts of disavowal leading to their acceptance.<sup>1</sup>

Li also writes about disputes over water at the Yanacocha gold mine near Cajamarca, protests against the expansion of that project into Cerro Quilish (Mount Quilish), and the conflict over the proposed \$5 billion Conga mine 75 km to the north. She describes how these projects bring humans and nonhumans into new relationships with each other. For example, identification of Cerro Quilish as an *apu*, or sacred being, enrolled thousands of protestors against the proposed expansion of the mine. However, Li tells us that the people living nearby refer to Cerro Quilish using the Quechua *orqo*, which simply means mountain, rather than *apu*. The image of the mountain as a sacred being also differs from local folktales and beliefs about malevolent beings said to inhabit nearby springs, which have the capacity to bring misfortune to the unwary. Li explains that people familiar with these tales generally learned about them from their grandparents and that the stories no longer play a significant role in their daily lives.

The claim that the mountain was an *apu* was promoted by a dynamic Catholic priest from the area, whose political commitments fueled his romantic vision of the Quechua 'cosmovision'. Although the religious dimensions of this perspective were explicitly rejected by the evangelical minority and largely ignored by the Catholic majority, it nonetheless captivated the imagination of thousands of Peruvians who protested against the proposed mine. Li refrains from questioning the authenticity of the movement, much like her earlier refusal to critique local supporters of the smelter in La Oroya. Here she draws on both Tsing's (2005) work on forest movements in Indonesia and de la Cadena's (2010) account of 'pluriversal' politics in Peru, which takes the rights of nature into account. Like de la Cadena, Li focuses on the public invocation of these narratives rather than the backstage conversations in which people negotiate competing perspectives on development and conservation.

The chapter on the Yanacocha mine addresses the notion of equivalence, by which Li refers to the technologies and expertise required to quantify difference and thus render things comparable, as well as negotiation over what counts as authoritative knowledge. The specific example she discusses is the way corporate science renders unlike things commensurable, notably water from a spring that feeds an irrigation canal in contrast to water extracted by the mine for industrial use, which is released into the same canal after being chemically treated. When the mining company asserted their equivalence, its findings were challenged by the people using water from the canal for agriculture, who invoked evidence from visual inspections of the canals that revealed changes in water quality and flows, resulting in the payment of compensation by the mine. Li notes how the process of comparison can result in the proliferation of disputes rather than their resolution. In this case, compensation

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payments attracted other claimants, increasing the number of people who now make use of the limited water supply.

The chapter on the proposed expansion of the Yanacocha mine focuses on the agency of documents, and in particular the role of environmental impact assessments, which are generally required for new mining projects. Li examines how these documents shape perceptions. For example, they convey confidence in the ability of the mining company to mitigate potential environmental impacts, despite studies showing how environmental impact assessments systematically overestimate their capacity to do so (see Kuipers et al. 2006). Another dynamic is the equivalence purportedly established between participation in the review process and consent, which led protestors to boycott the meeting at which the results of the assessment were presented. They concluded that the only way to avoid being coopted by the review process was to remain external to it. I found Li's approach to environmental impact assessments to be especially valuable and perceptive, although I wondered what is excluded when agency is attributed to documents themselves rather than the other actors in these interactions - multilateral funders, states enforcing or waiving requirements, local supporters or opponents of the project, and corporations interested in minimizing expenditures by downplaying potential risks.

In conducting her research, Li travelled across Peru to report on various mining conflicts. The multi-sited nature of her project allows for valuable comparisons. Several of the chapters are also organized as travel narratives: in one, she follows a corporate tour of the Yanacocha mine; in another, she participates in a two-day inspection of an irrigation canal downstream from the same project. The result is less an ethnography of place than ethnography on the go. It covers a lot of ground, but relative to more conventional ethnographic work, it feels socially thin, a quality that is only partially offset by the presentation of well-rendered vignettes of the people she meets and interviews along the way, such as the peasant couple Wilmer and Herlinda living downstream from the Yanacocha mine. The lack of embeddedness in any single fieldwork context, in contrast to the kinds of political commitments associated with long-term social relationships, also seems commensurate with the author's neutral and even-handed approach to these conflicts.

An important question raised by this engaging project is whether a focus on distributed forms of agency necessarily limits recognition of power differences. Of all of the things to which Li attributes the capacity to make a difference, the corporation is perhaps the least agentive actor in this account. It is as though attention to these other forms of agency had a levelling or flattening effect on her consideration of power differences. This may be understandable given the author's primary objective, which is to enhance our understanding of how nonhuman agents and environmental actors influence events. However, it also limits attention to the role corporations play in these mining conflicts.

Like other scholars working in the tradition of actor-network theory, the author favors the use of passive verbs, which may conceal human agency. For example, the author describes the 'emergence of activism' (3) and discusses how 'pollution comes to matter' (30, 70). Her preference for passive sentence construction also seems to downplay capabilities like intentionality and strategic planning that nonhuman actors do not necessarily share with their human counterparts. When Li discusses the agency of artifacts created by humans - such as irrigation canals and documents - the focus on material things may distract our attention from the ways these objects are manipulated by others. There also seems to be a form of purification at work, leading the ethnographer to sidestep some of the most important political questions she raises, i.e. whether or not the defenders of La Oroya are laboring under false consciousness, whether people believe Cerro Quilish is an apu and therefore should not be mined, or whether the scientific assessments of the mining industry adequately account for environmental risks.

These observations are neither minor quibbles nor criticisms of the project's shortcomings. Rather, they point to the significance of the author's innovative application of ideas about the agency of things to mining conflicts in Peru. In doing so, Fabiana Li sheds new light on resource conflicts more generally, raising questions that merit further discussion and debate.

#### Note

The history of La Oroya reminds me of the stories people tell about living in Pittsburgh during the 1960s, thinking nothing of having to sweep the black dust from the steel foundries off their cars in the morning, like cleaning
the snow from their cars in the winter, or carrying white shirts in dry cleaner bags to change into at work, so
they would not get smudged by air pollution during their commute.

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© 2015 Stuart Kirsch http://dx.doi.org/10.1080/17530350.2015.1070737

Mining Capitalism: The Relationship Between Corporations and Their Critics, by Stuart Kirsch, Oakland, University of California Press, 2014, 328 pp., \$29.95, £19.95 (paperback), ISBN 978-0-520-28171-4

Papua New Guinea's Ok Tedi mine is known for producing one of the world's worst environmental disasters: since it began operating in the 1980s, it has released more than two billion metric tons of waste products directly into the Fly River system. Communities near the mine responded with international campaigns and lawsuits, putting mining pollution (and the corporations responsible) in the global spotlight. In *Mining Capitalism: The Relationship Between Corporations and Their Critics*, Stuart Kirsch argues that the environmental damage caused by Ok Tedi and other mining operations, the response of local communities and their allies, and corporate strategies designed to delegitimize activists' claims expose the workings of contemporary capitalism. The tensions generated by mining conflicts can never be completely resolved; instead, corporations must respond to and manage their relationships with the public, while social movements must in turn develop novel tactics to confront them and address the problems of extractive activity.

Drawing on a wealth of documents, observations, and experiences, the book describes the actions and strategies of various actors, including community leaders, non-governmental organizations (NGOs), environmentalists, and the anthropologist himself. Over two decades of research, Kirsch took on various roles as he carried out ethnographic research, conducted a social impact study commissioned by the mining company, acted as an expert witness, and supported the struggles of people living near the mine. The book benefits from Kirsch's long-term and sustained involvement with communities affected by mining activity, and it makes a strong case for a politically engaged anthropology that acknowledges the researcher's role as a political actor rather than a distant, neutral observer.

Kirsch's concern for communities in the vicinity of the mine leads him to focus on the microeconomic dimensions of the 'resource curse'. In Chapter 1, he introduces the concept of 'colliding ecologies' to describe the interaction of competing systems of exploiting natural resources (in this case, large-scale mining projects and indigenous subsistence production). Communities bear a disproportionate share of the costs of mining activity, but these costs (the loss of clean water, for example, or the threat to livelihoods) are not always visible and cannot be adequately compensated. The Ok Tedi mine's devastating effects were exacerbated by the project's longer-than-anticipated lifespan, an increase in production, and the company's failure to construct a tailings dam. But here, we also see the complicity of the state, which allowed the mine to operate without the tailings dam and continue discharging mining waste into the river.

Given the country's dependence on revenues from the mining sector, the plight of local communities needed to reach an international audience in order to amplify calls for corporate accountability. In Chapters 2 and 3, Kirsch addresses the internationalization of protest (what he calls the Politics of Space), and considers the strengths, limitations, and mixed success of international lawsuits and campaigns. In some cases, prolonged legal battles and out-of-court settlements do not succeed in stopping polluting activities. However, Kirsch notes that lawsuits and other actions (such as an International Water Tribunal where decisions are not legally binding) can help legitimate community demands, enroll supporters, increase public awareness, and eventually create changes in corporate practices.

As I observed in my own research in Peru, corporations commonly accuse NGOs of instigating conflict and influencing local actors. It is therefore worth noting Kirsch's point that local opposition to Ok Tedi was a catalyst for the formation of NGOs, and not the other way around (64). Kirsch's analysis focuses on the importance of global networks, but what is the relationship between international campaigns and local politics? For example, I wondered about the role of political parties and community-based organizations, and whether they intersected in any way with emergent mining movements or helped shape the experiences and commitments of key leaders. What was the interplay between mining activism and other political movements at the regional and national levels?

In Chapters 4 and 5, Kirsch turns to the mining industry and corporate social technologies used to counter protest and opposition from grassroots actors and NGOs. He seeks to show how corporations 'manipulate science in order to limit critique' (127), and 'co-opt the discourse of their critics' (160). The language of manipulation and cooptation implies that there are two distinct camps, yet the alliances and antagonisms in these conflicts are not always so clearly defined. Kirsch's examples suggest a deliberate attempt to deceive, which may be the case, but seems to simplify the diversity of interests and motivations of people on all sides of a conflict. However, this framing of the problem is central to Kirsch's main argument, which is that examples of corporate irresponsibility - such as the failure to predict the environmental disaster at Ok Tedi and corporate attempts to downplay the damage caused by their operations - are not exceptional, and are not even particular to the mining industry. In Chapter 4, Kirsch draws parallels between the tobacco, pharmaceutical, and mining industries, arguing that their (mis)use of corporate science (characterized by bias in study design, the selective publication of results, or the concealment of information, for example) is not restricted to a few unscrupulous companies, but is intrinsic to the way capitalism operates.

While this characterization of the corporation highlights the greed and disregard for human welfare that often accompanies the drive for profits, it risks glossing over the particularities of the modern mining industry, the country-specific politics of extractivism that enable it, and the particular ways in which science emerges as a point of contention in conflicts over resource extraction. These generalizations might frustrate some readers, including academics and practitioners working to improve mining standards, and those who might argue that mining can coexist with other economic activities. Kirsch's book seems to suggest that it is not necessary (or possible) to differentiate between good and bad companies, or to evaluate their performance based on standards of best practice. This raises some important questions: Are there gains to be made from demanding changes within the industry and more accountability from corporations, or do these small victories ultimately detract from a more serious critique of extraction-led development? Are these changes

mostly superficial, reassuring the public while concealing the deleterious effects that inevitably accompany extractive projects? In Chapter 5, Kirsch describes how corporations appropriate the tactics of their opponents by adopting the discourse of sustainability. Whereas Corporate Social Responsibility (CSR) has become a catch phrase for the industry, Kirsch sees corporate funding for conservation efforts, public health campaigns, and universities as a way for companies to acquire symbolic capital and improve their public image.

Kirsch writes that 'studying the mining industry requires a healthy dose of skepticism and perhaps even a measure of cynicism' (232). I share his view that CSR and corporate science should not be accepted uncritically, but I would also suggest that there is more at play than (or perhaps more happening alongside) deliberate manipulation and cooptation. Some of these complexities can be seen in Kirsch's discussion of audit culture, which comprises regimes of accountability that allow for self-regulation while validating the scientific studies that companies fund and carry out. These mechanisms of accountability often involve the consent and collaboration of NGOs, state institutions, and the public. Although we can find cases of blatant contamination and manipulation of scientific data, there are also instances where the indeterminacy of science contributes to controversy and conflict. For example, communities need scientific evidence to back up their claims about the effects of pollution, but it is often difficult to definitively prove the long-term effects of mining pollution or show a causal link between extractive activity and illnesses in neighboring communities. These uncertainties make science into a powerful, but also sometimes malleable and potentially risky, political tool for corporations and other actors, including NGOs, government agencies, and activists. In recent conflicts, mining critics have turned to the language and methods of science to call for independent studies and conduct their own environmental monitoring, but ultimately, science may be unable to address the multi-faceted concerns of local communities.

Mining Capitalism concludes on a hopeful note, but hope does not come from changes within the industry. It comes from the exchange of information among activists and opportunities for mutual learning that have inspired actions such as community referenda in Latin America and the recognition of the indigenous right of free, prior, and informed consent. Kirsch does not provide easy answers, since he ultimately argues that the 'fundamental dilemmas of contemporary capitalism cannot be resolved; they are part of the dialectical relationship between corporations and their critics that inevitably leads to new forms of contestation on both sides' (234). On a more optimistic note, however, documenting the struggles of communities shows how increased public awareness and international solidarity can act as an antidote to the politics of resignation so prevalent around us. There is no doubt that Kirsch's politically committed ethnography has produced a rich analysis, and he accepts the risks and 'potential blind spots' that may result from taking a political stance (12). One of these risks is reinforcing a conception of 'politics' that assumes a clear delineation of groups, unambiguous interests, and clearly defined agendas. An engaged anthropology that also allows for a nuanced reconceptualization of politics may help counter the polarization that characterizes current debates over resource extraction and the resignation that often results from this impasse.

# Response to Fabiana Li's review of Mining Capitalism

I would like to thank the book review editor, Taylor Nelms, and my counterpart in this exchange, Fabiana Li, for the opportunity to continue this discussion. Let me paraphrase and respond to the questions she raises in her thoughtful review of my book.

Does comparison and generalization about the mining industry risk glossing over the countryspecific politics of extractivism? As social scientists, shouldn't anthropologists try to produce generalizable knowledge when possible? Most accounts of the mining industry are already focused on particular countries or regions, like Li's book on mining in Peru or the literature I cite about mining in Melanesia. But when I started working with NGOs that represent communities affected by mining in different countries around the world, I learned that there were more similarities than differences in their experiences. The parallels were quite robust. There is ample reason for this, too. Not only do mining projects have similar environmental impacts, but these resource conflicts bear a family resemblance to each other in part because the mining industry is international in scope. The markets that influence their decisions are also global, including metal prices. The major corporate players are active in most regions of the world. Junior miners pursue similar strategies regardless of where they are based and operate. Skilled labor in the mining industry circulates between operations on different continents. When these interactions involve indigenous peoples, there are additional similarities, because indigenous politics is increasingly international in scope (Niezen 2003). The NGO community figured out most of this during the early 2000s with the emergence of the international networks I describe in the book, although the academy is somewhat late to the party. Yes, we should study resource extraction in context, as I have done, but we also need to look beyond the state (see Trouillot 2001) to understand the forces that influence corporate decision-making, including pressure from global markets; multilateral policies regarding resource extraction, environmental impacts and indigenous rights; and the need for corporations to respond to their critics, many of whom are operating in the same global space. It is also necessary to recognize that the lifespan of most large-scale mining projects - from exploration through construction, production, and closure - is likely to exceed current economic cycles or political trends. In other words, corporations are making decisions about markets that are global in scope over timespans that extend well into the future. Our analyses have to operate at multiple scales.

Can science resolve conflicts over resource extraction or does it inevitably lead to their propagation? The examples presented by Li raise important questions about the limits of scientific information. They also suggest the difficulty of trying to separate science from society. As an alternative to corporate science, we might consider another set of truth claims in which people can place their trust: history, and specifically whether the mining company in question, or even the mining industry as a whole, has been able to operate a comparable project without substantial social and environmental impacts. If one discounts the overly optimistic narratives of corporate social responsibility and rejects claims predicated on the flawed assumptions of ecological modernization theory (the view that new technologies will resolve existing environmental problems), the obvious conclusion is that the track record of the mining industry is a valuable predictor of future outcomes and may be a more reliable indicator than corporate science. Science still has an important role to play in these debates, but history may be a more accurate guide to the future.

Aren't there more than two sides to every mining conflict? Of course. And some people change their views over time. In the Ok Tedi case, the fundamental ambivalence of the people living downstream from the mine has allowed the project to continue operating for more than three decades, with recent talk about extending the life of the mine. People initially supported the project and were reluctant to see it close down even after it began to take its toll on the environment, at least until they receive benefits commensurate with its negative impacts on their land and livelihoods. But I doubt anyone would agree to do it over again without making substantial changes to protect the environment. Are people likely to support the proposed expansion of the mine? Quite possibly, because the mining company is discussing new technology it says will finally permit construction of a tailings dam (Pascoe 2015) and because the river system has already been damaged beyond any meaningful recovery in the foreseeable future. The social movement against the Ok Tedi mine was never an anti-mining campaign; it has always focused on increasing economic benefits and reducing environmental impacts. There are certainly places in the world where people are opposed to mining under any terms or conditions, but distrust of the mining industry tends to be accompanied by doubts about the ability and/or commitment of the state to protect the environmental and economic interests of the people who are most likely to be affected by the project.

Are there gains to be made from demanding change, even if they are incremental? Yes, I think this is what one can ask for and expect in the short run. Will that satisfy critics or solve the larger problem? No, especially given how clever corporations have become at avoiding additional costs or restrictions, which often cancels out anticipated benefits from the changes.

Is the difference between perspectives in these mining conflicts more than just deliberate manipulation and cooptation? I agree with Li that there are differences in perspective that lead the opposing sides in these debates to see something different even when they are looking at the same thing. Take the example of a river downstream from a mining project. The water may have a different pH than before and the river may carry a higher sediment load, but to mining engineers, these may be differences that do not make a difference. The people living downstream may draw a different conclusion: not only do these changes alter their resources, they also diminish their value. The two sides see something different when they look at the water in the river. The mining company may say that the water was never fit for drinking, even though the people living downstream recall drinking from the river and know that they will probably have to drink from it in the future; they do not always have alternatives. Paradoxically, mining companies may invoke standards for copper levels established to protect municipal water systems, even though the same levels of copper may be harmful to riverine life or have a deleterious effect on algae levels. These differences might be seen as analogous to current debates in anthropology about ontology and perspectivism: what the mining company sees as a resource for its own use may be seen as something very different by others, like the way some people in Peru may only see a mountain, whereas others see the mountain as an apu, or living being (see de la Cadena 2015). But when a mining company transforms a resource for its own purposes, it may preclude others from continuing to use it as they have in the past.<sup>2</sup> The mining company has the power to impose its interpretation and use natural resources as it sees fit, ensuring that its economic needs are met, even if this comes at the expense of the people already living there, but not vice versa. As long as this remains the case, conflict over resource extraction is likely to continue.

Does polarization lead to resignation? Are resource conflicts the problem? Here the work of Bebbington and Bury (2009) on resource conflicts in Peru is instructive. They argue that civil society can serve as a feedback loop that provides the state with information it needs to reform a flawed system. In their view, resolving these conflicts requires persuading the state to recognize the value of this information and reform its policies accordingly, instead of criminalizing protest. In other words, mining conflicts are essential to the solution rather than part of the problem. Corporations are not going to change on their own despite their narratives of spontaneous self-enlightenment or the economic rationalization of the business case for social responsibility (Kirsch 2015). They are far more likely to devote their time and resources to domesticating their opposition than reducing their environmental impacts. States rarely stand up for their citizens on these issues. Consequently, change or improvement is highly unlikely without continued pressure. As I argue in *Mining Capitalism*, the interactions between corporations and their critics have become a fundamental dynamic of the contemporary global economy. The only hope for better outcomes is to continue fighting for them.

Returning to Li's initial question about comparison, the paired format of these reviews makes me think not only about the relationship between cases, but also the differences between ethnographic projects. One of the insights from *Unearthing Conflict* is that the invocation of science may lead to the proliferation of disputes rather than their resolution. Another way of saying this is that science multiplies perspectives. This seems to apply to both the scientific practices described by Li as well as

our ethnographies. Writing about interdisciplinarity, Strathern (2006) makes an important observation about anthropology: that it does not try to identify the best way to learn about social relations, but rather promotes multiple ways of doing so. Her point is that we benefit from the diversity of perspectives. The same might be said of the two ethnographies reviewed here. What Fabiana Li sees when she is studying and writing about mining conflicts is not always the same as what I see. We are not necessarily asking or trying to answer the same questions. Although we may encourage each other to expand or contract our respective frames of reference, whether her commitment to studying the national context of mining conflicts or my interest in understanding the role corporations play in the contemporary global economy, this is tension that need not be resolved in favor of one position or the other. It is precisely because of our differences that reading her ethnography offers me new perspectives on otherwise familiar dynamics. The purpose of articulating these differences in our reviews is not, in my opinion, to choose sides, but rather to benefit from their juxtaposition. Similarly, in contrast to my history of political engagement, the goal of Mining Capitalism is not to end discussion of these conflicts, but rather to offer new perspectives that may have analytical value as well as political utility, while also contributing to our understanding of corporations and contemporary capitalism.

### Notes

- 1. Even long-term critics of the NGO community have recently begun to acknowledge that the NGOs may have been right all along: 'Environmental destruction, social discord, widespread corruption, and new inequalities have been the legacies of every mining project in Papua New Guinea to date' (Macintyre 2015, 143; emphasis added).
- What I call 'colliding ecologies' in Mining Capitalism (Kirsch 2014).
- 3. Ironically, the only two countries to ban open-pit mining have both been sued under provisions of the Central American Free Trade Act, with mining companies demanding compensation from the state for investment in proposed projects that were halted on environmental grounds (Broad 2015; Broad and Cavanaugh 2015).

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# Response to Stuart Kirsch's review of Unearthing Conflict

I would like to thank Stuart Kirsch for his thoughtful review, which addresses many of the questions that come up when doing ethnographic research in places affected by the extractive industries. The extensive reach of mining operations demands new ways of doing fieldwork and requires that we expand our geographic focus while remaining attentive to local dynamics. Striking the right balance is one of the key challenges of doing fieldwork and writing about the reverberations of mining conflicts beyond specific communities.

For example, I debated whether or not to include the case of La Oroya (which could have taken up another book) and did so because it captures how corporations, mining politics, and activism have changed over the years (and what has remained the same). Pollution came to matter in ways that mobilized new forms of politics and influenced public debates on mining, but of course, the problems were felt as soon as the smelter started spewing its toxic emissions in the early 1920s. As I point out in the book, corporate managers recognized lead's effects on the health of its workers, but the focus was on measuring, studying, and controlling pollutants in the workplace, not as part of a larger public health and environmental issue affecting the population at large. Contributing to the normalization of La Oroya's toxic environment was the paternalism of the company and its various programs designed to show that it was looking out for workers and their families. This was a constant as the metallurgical complex went from private to public ownership, and it took the form of 'Corporate Social Responsibility' once it was again privatized in the 1990s. As Kirsch points out, the 'slow violence' of the contamination has been part of life in La Oroya from the time of the smelter's construction until today, embedded in the soil and in people's bodies, even if the smelter has taken a break from its usual operations. The metallurgical complex has been paralyzed since 2009 and is currently up for sale. In August 2015, workers and town residents engaged in protests and roadblocks to pressure the government to find a buyer for the smelter and to be more flexible about the environmental standards mandated in the terms of sale. They feared that if the property went into liquidation, more than two thousand jobs would be definitively lost.

Whether in La Oroya or other sites of conflict, some people accept the risks of pollution due to a variety of reasons - dubious corporate science among them, but also the lack of employment opportunities and absence of a long-term government plan that envisions alternative economic activities. In such cases, the idea of false consciousness is problematic, since it does not take seriously people's own analysis of the risks they face nor the priorities they set out for themselves, leaving it up to the anthropologist to define what is 'true' for them. I am not advocating a kind of moral relativism, but a deeper analysis that questions why workers sometimes side with corporations (but also oscillate in their support), how an Apu becomes a mobilizing force in some places (but not others), or why corporate science sometimes succeeds in obscuring environmental risks (and sometimes fails). I have tried to show the threats of modern mining and its effects on people's everyday lives, without ignoring the diversity of views and experiences or the contradictions and inconsistencies of people's positions.

Another challenge of doing research on conflicts over extractive activity is paying adequate attention to all of the participants involved, including consulting companies, international assessors, financial institutions, and the many parts that make up the state and the corporation. Even as we recognize the agency of corporate actors, we must also be careful not to treat the corporation as internally homogenous and cohesive, or as a single actor that operates with a single goal or intention. A closer look inside the corporation would have been desirable, but was not always possible given the tensions and polarization that characterize mining conflicts in Peru. This itself is a problem with both political and ethical ramifications.

Focusing on human or nonhuman actors need not be mutually exclusive, especially if we think about how they are co-constituted and the ways extractive activity is remaking the relationships among them. Nor does thinking about the central role of aquifers or Environmental Impact Assessments in recent conflicts preclude a consideration of power relations. Rather, paying attention to things that are not usually taken into account in conventional discussions of 'politics' can help us to see power dynamics that cannot be reduced to an antagonistic relationship between the corporation and communities. The potential problems and limitations of actor network theory have been extensively discussed elsewhere in the literature, and we must consider these limitations when dealing with the potentially infinite number of 'actors' that can be implicated in the topics we study.

Determining which actors to include in our analyses is a pragmatic decision, and also a political one. From the earliest stages of research, it was clear that water, irrigation canals, and other entities needed to be analyzed differently than they had been in both popular and academic accounts. Many will argue that these 'things' do not have agency; people do. Indeed, mining company representatives and their allies often make a similar argument in politically advantageous ways: they claim that protestors simply bring up pollution at the urging of environmentalists, or that water users complain about damages to irrigation canals to get more money from the company. In such cases, the corporation's strategies to manipulate public discourse are part of the story, but do not explain how water came to play a central role in the conflicts or how people's connections to the landscape mobilize them to act in defense of place and livelihoods.

The conflict over the Conga mining project currently playing out in the Cajamarca highlands is a case in point. In this conflict, Conga's lagoons are not simply being incorporated into anti-mining discourse and public narratives. They are also part of people's relationship to the land, irrigation canals, subsistence agriculture, and farming; at the same time, new associations emerge as people interact with scientists, environmentalists, NGOs, and the mining company. It is only once we take a closer look at these relationships that we can understand the actions that local people are taking to defend the lagoons and the profound challenge that their novel forms of activism pose to a hegemonic model of development based on extractive activity. The nonhuman is important for thinking about extractive economies generally, allowing us to see, for example, how the material properties of gold, lead, water, or waste products facilitate or obstruct the privatization of resources, the making of markets, and efforts to contest extractive activity and its deleterious effects. What I hope my book shows is that how we address the role of water and other nonhuman elements of the environment has profound political consequences for how we understand mining conflicts, including whose knowledge counts and what experiences and ways of life matter.

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