Extractivist epistemologies

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ABSTRACT
This paper develops an account and critique of extractivist epistemologies, which are generated by extractivist projects. I argue that certain metaphysical and epistemological ideas and practices emerge from extractivist projects, and these ideas and practices have influenced the development of Western epistemologies. After presenting a critique, I develop four correct epistemic norms to counteract the effect of extractivist epistemologies: these all center on the question of relationships among knowers and the contextual embeddedness of knowledges.

Epistemologias extrativistas

RESUMO
Este artigo desenvolve um relato e uma crítica das epistemologias extrativistas, que são geradas por projetos extrativistas. Argumento que certas ideias e práticas metafísicas e epistemológicas emergem de projetos extrativistas, e essas ideias e práticas influenciaram o desenvolvimento das epistemologias ocidentais. Depois de desenvolver uma crítica, desenvolvi quatro normas epistêmicas corretas para neutralizar o efeito das epistemologias extrativistas: todas elas se concentram na questão das relações entre os conhecedores e na inserção contextual do conhecimento.

Epistemologías extractivistas

RESUMEN
Este artículo desarrolla un relato y una crítica de las epistemologías extractivistas, las cuales son generadas por proyectos extractivistas. Argumento que ciertas ideas y prácticas metafísicas y epistemológicas surgen de proyectos extractivistas, y estas ideas y prácticas han influido en el desarrollo de las epistemologías occidentales. Después de presentar una crítica, desarrollo cuatro normas epistémicas correctas para contrarrestar el efecto de las epistemologías extractivistas: todas ellas se centran en la cuestión de las relaciones entre los conocedores y el arraigo contextual del conocimiento.

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This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.
This paper will develop the concept of *extractivist epistemology* as a way to reveal and reflect upon the effect of colonialism and imperialism on practices of knowing. Projects that aim to extract resources of various types, whether material or intellectual, always involve a knowledge component. This knowledge can be pursued by different sorts of practices, but I will argue here that the colonial context of extractivism, in all its permutations, has generated certain types of practices and related ideas about epistemic justification that need to be rethought. The epistemic approaches this paper will be concerned with are those which are mainly pursued by agents from the global North but they have influenced normative epistemic ideals and epistemic presuppositions more widely.

This paper is organized into four sections. First, I give a brief overview of extractivism as both practice and idea. Second, I give an initial explanation of the knowledge practices and ideas that grew out of extractivism. Third, I discuss two case studies that reveal the concrete and specific ways in which extractivism negatively impacts knowledge practices. And fourth, I conclude with four corrective norms to counteract extractivist epistemologies. Situated as we still are within a world formed by colonialism, both in terms of ideas as well as material relations, reforming epistemic practices needs to follow a non-ideal approach. This means that alternative norms are understood as corrective and ameliorative in relation to current injustices rather than timeless and universal (Khader 2019; Mills 2005).

1. Extractivism

Capitalism continues to pursue projects that extract material resources from the formerly colonized areas of the world. These include mineral and plant resources as well as timber, fossil fuels, and animal products that are then monetized and exchanged. This form of capital accumulation was driven by the needs of colonial and imperial powers since the beginning of the Conquest. Then, as now, it was cloaked by terms like “progress,” “development,” and benevolent “stewardship.”

Extractivist projects of resource accumulation transform not only economies but also political and legal institutions and the organization of labor, resulting in a transformation of social identities and communal relations (Bebbington 2010; Escobar and Pardo 2007; Harvey 2003, 2004; Petras 2012; World Bank 2005; Veltmeyer and Petras 2014). As Robinson explains, the result of integrating local economies into global capitalism is that “existing social relations are disarticulated and replaced by new sets of relations shaped by the commercial, productive and cultural processes of global society” (Robinson 2008, 57). Extraction often results in territorial dispossession but also a degradation of the environment, including at the subsoil level, that leads to loss of livelihoods (Veltmeyer and Petras). Because of the dangers posed to the climate by these practices, “extractivist capitalism” is now engendering widespread critical analysis and collective resistance beyond the immediately affected communities.

To be sure, extractivism is a broad concept applicable to many sorts of projects, including those generated by formerly colonized nations (Riofrancos 2020). Even in regard to transnational and neo-colonial economic activity the term can be misleading: the era of primitive accumulation, as it was practiced in the early days of the Conquest, is no longer the main form extraction takes. Forms of “biopiracy” and “bioprospecting,” for example, aim not only to extract but to patent plant material and control its production
and distribution, as will be discussed in one of the case studies below. What is taken is not simply a product but a process of production. Also there are new expansions of extractivism in the arenas of debt, real estate, and social media.

Another new aspect of extractivism involves the fact that it is not generally part of a political take-over of a nation-state (though coups continue to be perpetrated in covert operations), but that it nonetheless leads to a reorganization of entire regional economies. As Robinson notes, “Each cycle of integration into world capitalism is also associated with an extension of capitalist institutions and production relations in the region” (Robinson 2008, 51). New forms of economic colonialism work to integrate both regions and local communities into transnational capital markets in ways that benefit and enrich the global north but are also administered by local elites to their advantage.

After achieving independence from colonial powers, many societies developed agro-export based economies in which local goods of various sorts were monetized and traded. But in the twentieth century transnational markets began to determine what types of agricultural products were grown. Import substitution industrialization largely replaced subsistence and variegated farming with mono-crops such as palm oil and soy. Today import substitution has itself been overtaken by a more general export-led development which “favors new circuits of production and circulation linked to the global economy,” displacing peasant agricultural communities, and causing social unrest (Robinson 2008, 54).

Despite variation, what links most types of extractivist projects today is an orientation that treats both land and peoples primarily as resources. Seen primarily as resources, land, timber, bio-rich plants, labor, and communities are subject to external reorganization, without participatory decision making, guided only by the desire for more profit.

It is important to emphasize that transnational corporate entities enrich not only foreign nationals but also domestic elites. Mining projects can also bring significant employment as well as large payments which may be used by progressive governments for public goods. Poorer nations that have rich mineral deposits, such as Ecuador, Colombia, and Bolivia, are thus caught up in a competition to attract transnational corporations (Sankey 2014; Riofrancos 2020). However, the principal leverage governments can offer in this competition for foreign investment is control: “allowing for unilateral expropriation of private property,” with minimal restrictions or state participation (Sankey 2014, 123). State-run mining and coal companies, along with their associated unions, have largely been liquidated, as Sankey reports, “under pressure from the IMF.”

Extractivist projects embedded in a neo-colonial global economy are continuing many of the ideas and practices that began with the Conquest of the Americas. Still today, there is little egalitarian collaboration or shared decision making, and few states mandate cooperation between interested parties or give voice to those dispossessed by extraction. Thus, the knowledge projects associated with the real world of extractivism today ignore not only the degradation of land but the deterioration of relationships as well.

From these practices, we can tease out the metaphysical assumptions about value as well as the epistemic assumptions about knowledge. The sphere of value is circumscribed to only that which can be monetized and exchanged for profit. Profit is defined by what the extractor gains, without factoring in what others have lost. When profit is assumed to exhaust the sphere of value, prior ideas about value that a community may have are left unattended.
For the purposes of this paper, then, I will use the term “extractivism” to mean common practices of extracting monetized value that are linked to colonial histories and that are embedded still today in vastly unequal global economic and political power.

To name that which is extracted a “resource” and a potentially profit-making “value” is itself a substantive shift affecting our sense of ourselves and our relationality to the world. As Akeel Bilgrami notes, Gandhi raised these very questions about the language of European modernity (Bilgrami 2016). How did “nature” become “natural resources,” Gandhi asked. How did our habitat become the focal point of projects of control and mastery? These were shifts in how we ontologize the world, but Gandhi also asked how the concept of knowledges to live by became transformed into a concept of expertise to rule by. This suggests the focal point of the next section: the epistemological orientation typical of extractivist projects.

2. Extractivism as an epistemology

Extractivism as a practice conceptualizes the object of its pursuit, just as epistemologies conceptualize epistemic goals in varied ways.1 When extractivism is motivated by the pursuit of commodifiable value, it tends to have certain metaphysical ideas about the nature of the value that it is pursuing.

First, as we’ll see in the case-studies, extractivist projects tend to assume that values can be identified in an objective and universal way.2 Plural and competing conceptualizations of the value of an artifact or of a river or mountain challenge extractivist projects; thus it becomes necessary to dismiss alternative views from other parties. When museum curators are seen as stewards who protect universal values, it becomes easier to accept the claim that they are the final arbiters of the value of Native American artifacts. Archaeologists likewise are often presented as working with superior epistemic methods, such as objectivity, traditionally defined, so that their assessments outrank others. Tribal group claims are often labeled particularistic and subjective, neither objective nor universal, and thus defeasible (Wylie 2002). They may also be defined as “resistance to science” (Fine-Dare 2002, 167). The important point to understand is that the process by which a value is defined is an interpretive practice for all parties. Allowing plural approaches to the definition of value disrupts the hegemony of academically trained experts. Thus accepting pluralist approaches to value determination will involve accepting not only a pluralism of metaphysical commitments but also pluralist approaches to the knowledge processes that identify values subject to extraction.

Second, extractivist projects have an interest in defining the value that is extracted in a non-relational way. This is a way of externalizing costs, as capitalists put it. The cost of cleaning up what has been made toxic in the process of extraction, the cost of the

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1 The term epistemology is sometimes used very loosely these days. For the purposes of this paper, I will define epistemology more narrowly to focus on theoretical analyses of knowledge, such as what counts as knowledge and knowing practices. But I will take a broader approach than the usual Western focus on overcoming skepticism or the search for universal justificatory norms. See Alcoff (1996, 4). Especially within decolonial work, “epistemology” should remain a broad umbrella but it can continue to be a term that signals a focus on the ideas about why certain practices have better epistemic outcomes than others, however those outcomes may be variously defined. I will discuss this choice of terms further in Section 4.

2 Just to be clear, here I am referring to “values” only in the Marxist sense as something that has either use-value or exchange-value or both. This is not the same sense of the word as is used in the idea that epistemic justification is guided by normative value commitments.
effects of extraction on infrastructure, the cost of regenerating raw materials when that is possible, none of these need to be addressed when the value of what is extracted can be portrayed as distinct and non-relational (see, e.g. Wallerstein 2006, 57). Thus the assumption that values can be transported to a new domain without being diminished assumes a non-relational, decontextualized conceptualization of values as discrete and independent of their relations to adjacent entities. Resources that are separated from their original context are not assumed to lose value in the process of removal unless they deteriorate in some material way. Further, those values that may be destroyed (such as arable land or animal habitats) in the process of extracting other values (such as mineral resources) are not co-determining or co-constitutive but merely adjacent and do not need to be factored into the quantification of the value achieved in the extraction. The belief that the values that have been destroyed in the process of extraction can be fairly paid for in a one-time payment also makes assumptions that values can be measured quantitatively and transformed into monetized elements that can then be calculated as a fair exchange.

In some cases, a value may not diminish in the process of extraction. But values can be diminished when, for example, artifacts are removed from their surroundings in ways that compromise the interpretation of their meaning, or plants with medicinal properties are separated from local communal practices that may impact their efficacy. The problem is when we assume without analysis that a non-relational approach is adequate to assessing value. Rather, the relevance of context and relationality should be our initial assumption about the nature of value.

Thus far I have been discussing the metaphysical approach to the value of objects, but extractivists also assume that epistemic resources can be identified, extracted, and given a fair market value. The key feature of an extractivist epistemology, I argue, is the way in which it treats this epistemic resource as separable from its origin, without subsequent loss, rendering it into a commodity with exchange value over which exclusive rights can be contractually defined, protected, and enforced. To be commodified in this way, knowledge must be reduced to information or data without involving interpretation or analysis, thus ensuring an inevitable epistemic injustice (Fricker 2007). When we understand knowledge as always involving interpretation, it becomes more obvious that dialogic processes are necessary for good epistemic outcomes.

Extractivist epistemologies thus involve certain epistemic assumptions about justification procedures that follow from their assumptions about the nature of the epistemic resources they are pursuing. Like extractivist capitalism, extractivist epistemologies attempt to extract epistemic elements from their original surroundings and in this way from their political, ethical, and institutional context of articulation. This makes it possible for knowledge-seeking institutions or individuals to avoid being held accountable to the ethical, political, and economic demands of indigenous groups or other local communities whose resources are being extracted; a one-time payment is sufficient to cover all obligations.

3Of course, all of this terminology is subject to contestation: not everyone views mountains or rivers as "objects" separable from human beings, and the concepts of "metaphysics" and 'epistemology' carry much Western baggage. This reveals the difficulty of overcoming cognitive imperialism and achieving the 'inter-epistemology' that Santos calls for. I will discuss this further in the last section, but I follow the approach of Vivieros de Castro in rejecting the dream of a perfect translation or of a meta-level language that can adjudicate all semantic differences.
It may be the case that “knowledge extraction” is a mislabeling, since what is extracted is not identical to what existed before extraction. In general, extractivism denies its “making” relation to its object of pursuit, a relation avowed today by most trends in contemporary social epistemology and philosophy of science. The preferred language of “discovery” (rather than “making”) has ideological effects: “making” connotes craft, processes, and decisions, whereas the non-relational characterization of “discoveries” may make dialogic approaches to knowing seem unnecessary, a political luxury without epistemic necessity. Extractors can perform identification, interpretation, hypothesis generation, analysis, judgment, and application on their own.

One of the epistemic questions we need to consider is whether all knowledge is extractable. To get at this question it is useful to look at the claims of indigenous groups who have argued that some of the knowledge that extractors pursue is “inaccessible … untranslatable … unknowable” (Townsend-Gault, quoted in Valaskakis 2005, 84). As Valaskakis (Chippewa) points out, this is a “challenge to the power and privilege of outsiders …” She cites Jimmie Durham who, when asked about the meaning of a Cherokee text, replies that “I don’t want them to know … What I want them to know is that they can’t know that.”

There is an ambiguity in Durham’s claim about the impossibility of knowing: is it beyond the outsider’s ability to know because he and others will not allow them access to the knowledge, or is it beyond their ability because the nature of the knowledge is such that it is lost in the process of extraction? We might imagine that extraction under conditions of colonialism renders outsiders truly bereft of the hermeneutic resources, and motivations, necessary to understand certain concepts and meanings. This is surely because epistemic collaborations require trust as well as a capacity to communicate effectively. As Vrinda Dalmiya has argued, successful knowing often requires attending to the qualitative relations between communities of knowers (Dalmiya 2016).

The failure to extract knowledge, then, may occur because those with “insider” knowledge refuse to cooperate, or because the differences in hermeneutic resources are such that outsiders cannot truly grasp the meanings even if they had cooperation. It follows that non-dialogic and decontextualized conceptions of knowledge may compromise the quality of the extracted epistemic resource, affecting whether extraction can succeed to any extent, even partially.

As Dalmiya argues in Caring to Know, knowing is best achieved when one attends to the conditions and quality of the relations involved among knowers, and when all parties work to achieve trust. Given various forms of structural power imbalances, she argues that such trust is best achieved when dominant parties start from a position of relational humility. Western philosophy has long honored epistemic humility and yet this humility is formulated in a non-relational way as a feature simply about self-knowledge. I may know that I do not know, as Socrates put it, but I believe that since I am aware of my ignorance, while others remain unaware of theirs, my humility motivates me to feel no need to seek others’ counsel. Dalmiya’s formulation of the epistemic norm of relational humility is quite different, as she explains:

what makes the humility relational is a connection between these two orientations where I am disposed to saying “I do not know but you tell me where I have gone wrong.” Without the latter, we would merely have fallibilism and even scepticism: without the former we
get a postmodern tendency toward epistemological pluralism [that is, relativism]. But with both in play, we end up with a healthy realism … we foreground the epistemic authority of others while and in the act of acknowledging our own epistemic lacks. (Dalmiya 2016, 119)

Relational humility, then, unlike simple self-directed and non-relational humility, motivates epistemic collaboration. Effective collaborations require taking an interest in the quality of the relations involved in specific projects of inquiry. Where Socratic humility is compatible with elitism, relational humility counsels a more egalitarian approach to knowing.

The critique of extractivist epistemologies provides a non-ideal approach to the formulation of corrective epistemic norms. By taking into account existing non-ideal conditions of knowing we can develop norms of practice that might provide effective interventions with better outcomes. Relational humility as Dalmiya formulates it can provide us with our first corrective epistemic norm by avoiding the elitist implications of Socratic humility (what some might call false humility) with a socially aware relational humility. I discuss in the final section some issues about how to operationalize these norms across varying communities of knowers.

A second corrective epistemic norm would be to incorporate assessments of epistemic relations as a regular feature of the justificatory procedure. Truth claims are always relative to the evidence, and part of assessing the necessary evidence is an accounting of evidence gathering, interpretation, and assessment. Did knowers seek out and consider evidence that may dispute their favored hypothesis? Did knowers invite objections and consider the strongest objections? These standard norms of good scientific practice assume communities of knowers, but they need to address the power differentials that exist both within and between communities of knowers before they can determine whether the gathering and assessment of evidence was meaningfully rigorous. Thus incorporating an assessment of relations directs knowers to consider how relations between knowers – both as individuals and as groups – affect the identification and assessment of evidence.

In the next section, I turn to two case studies of extractivist epistemological practices. The goal here is to address in particular the epistemic weaknesses of epistemological extractivism.

3. Case studies

Delving into the real world of contested knowledge claims relating to extractivist projects reveals contrasting ideas about knowledge and knowers as well as methods of justification. Many of these contestations are local but have global significance. For example, the arguments over patenting food production processes affect how expertise is defined, and whether the expertise of small farmers can compete with food engineers who work for multinational corporations.

The arguments over patents operate within the highly constrained discursive domain of courts, both local and international. Yet these domains make use of common ideas and concepts that reveal a variety of epistemic issues at play in the legal debates. By viewing the implicit epistemic norms operating in real-world struggles, we can begin to formulate corrective epistemic norms to address the operations of coloniality still at play. Some of
these norms may need to be local, yet others may have larger applicability, such as the
need to review and assess the relationships between knowers.

Our first case study will consider biopiracy and the contemporary legal arguments over
patenting plant material.

Transnational biotech companies have lately recognized the immense botanical
knowledge of Amazonian peoples, among others, who have established continuous
and thriving communities in rainforests where critical but rare plants grow with important
medicinal qualities. Yet capitalist approaches to this knowledge have largely been extrac-
tive rather than collaboratively relational (Escobar and Pardo 2007; Shiva 2020). Transna-
tional pharmaceutical companies want to extract the knowledge from indigenous
communities, even while the tribal populations are forcibly displaced so that agro-devel-
opers can gain access to their land, in some cases then becoming available labor for the
companies engaged in extraction.

Conferring patents on natural organisms is useful for expanding the profitability of
extractive procedures, but over the last several decades, patents have been opposed as
a form of “biopiracy.” Vandana Shiva calls patents the heart of the new colonialism
because they provide the means to establish unilateral control. She reminds us that the
original patents were rights granted by sovereigns (Shiva 2007).

A certain amount of scientific knowledge is today accorded to indigenous groups, alter-
ing the “barbarian” projections of the past (see Castro-Gómez 2021, chap. 4). Yet there
remain dramatic differences between indigenous groups and extractors about nature
and land. Pardo and Escobar explore these differences under the rubrics of “constructions
of nature,” the “interpretive frame of biodiversity,” and the requirements as well as the
goals of “resource management.” Many current battles over land and autonomy are
now waged through claims over who controls the interpretive frames. To thwart “biopi-
rracy” and “bio-imperialism,” progressive NGOs call for “biodemocracy” which requires
“local control of natural resources, the suspension of development mega-projects and
subsidies for capitalist activities that destroy biodiversity, … a redefinition of productivity
and efficiency...” and more (Escobar and Pardo 2007).

What is at stake here is not just the interpretive frameworks of diverse groups, but the
epistemologies of diverse groups, or how they conceptualize knowledge and formulate
justificatory processes. Inkeri Koskinen and Kristina Rolin describe “Scientific/Intellectual
Movements,” or SIMS, as collective efforts to devise and implement structural remedies
that can address a series of epistemic injustices, both hermeneutic and testimonial. SIMS
are distinct from other social movements in having “knowledge-producing aims
and not merely social and political aims” (Koskinen and Rolin 2019, 1057). In other
words, SIMS contest existing normative epistemic practices in scientific projects. This
requires putting epistemic concepts and norms of practice on the table for critique and
reconstruction. Extractive capitalism encourages an unreflective epistemic practice that
foreshortens the potential knowledge benefits that could accrue from more democratic,
collaborative approaches that remain open to different epistemic practices.

The case of what has come to be called “biopiracy” will provide some examples of
these points. Biopiracy is a concept meant to describe the assortment of activities by
major transnational corporations to acquire exclusive rights over various resources and
processes involving food and health. Something like twelve such corporations (constant
mergers render the numbers unreliable, but it is small), mostly from the global north,
control the world’s food and agriculture industries, which are often integrated with health industries that require the mass production of certain plants with pharmacological properties. These corporations use international and national laws to secure access to and power over what the world’s population needs to survive. Along the way, entities of global capital affect how knowledge is defined and which epistemic resources come into view.

The colonization of regional economies requires controlling as much as possible every step in the production of necessary goods and extracting profits from every transaction. One way this has occurred is through the radical transformation and replacement of traditional seed production with a synthetic chemical process that does not regenerate and requires annual expenditures.

Corporate arguments for patent rights require characterizing how a given knowledge came into being as well as the ontological characterizations of certain kinds of entities. Living beings are transformed into raw material, and a forest becomes a field for extraction rather than a habitation to watch, nurture, and preserve from year to year (Garcia dos Santos 2007, 160–163; Code 2006). As Lorraine Code shows, farmers and indigenous communities often have distinct knowledge projects quite different than the knowledge projects of extractivists. When the goal is not extraction but habitation and annual farming, other sorts of knowledge become germane, requiring other sorts of epistemic activities. Observation and a limited experimentation that works with and maintains existing processes and rhythms of natural forest reproduction are quite different knowledge practices than the radical transformations involved in most extraction. Values are also redefined by extractivists as discrete and separable from their immersion in the holistic systems that are necessary for regeneration, so the extraction of values that diminish regeneration are not factored into the assessment of the overall value achieved.

When corporations claim to know better how to understand and make use of forest resources, to develop them efficiently and effectively to achieve the largest positive impact, they are covering over the fact that they are seeking different kinds of knowledge and may be redefining key terms. Part of the problem is that patent arguments do not allow for epistemic pluralism or multiple ways to define terms. Patent claimants must assert that the corporation has achieved an exclusive process and engaged in “invention,” and that the profitability of this “invention” should be protected to encourage further innovation in these critical markets.

To be able to claim “invention,” claimants must pass two tests: a novelty test and an “obviousness” test. They must be able to claim that what they are patenting is new in some important respect and that it involves a procedure that is not obvious, such as simply scattering seeds of plants with known pesticidal properties around arable land. There are prior assumptions involved in how to discern what is “new” or “obvious” and enormous profits at stake which may skew reasoning and inhibit transparency.

Those opposed to patent claims have argued that so-called new methods of extracting chemical properties are simply “straightforward applications of conventional organic chemistry and an extension of the traditional processes used for millenia…” (Shiva 2020, 150). Claims about an application being “straightforward” or an “extension of traditional processes” are subject to numerous questions. Should an industrial reformulation of a traditional process be classified as new or as an extension? What counts as a “straightforward application” as opposed to an innovative application? And, who gets to
determine the relevant prior assumptions involved in defining these terms, and on what basis? All sides to the patent debates are interested parties but considering the legitimacy of claims to either newness or obviousness requires the input of the parties with detailed knowledge of prior practices (cf. Whyte 2021). The criterion involving obviousness is perhaps even more problematic than newness. Traditional processes are sometimes characterized as “obvious” although they are the product of extensive experimentation across generations. As Shiva argues, claims about the obviousness of certain agricultural practices may betray “a racist dismissal of indigenous knowledge … that evolved through extended and systematic knowledge development in non-western cultures” (2020, 150). Traditional approaches to farming are highly complex, involving methods of cultivating hybrids, a capacity for soil assessment, the ability to assess how various crops affect the maintenance of soil health, as well as pest control and seed regeneration, among other things, all of which involve multiple communities and generations who share their experiences and knowledge. So questions of obviousness need to consider how what may seem to be an obvious process has been historically produced through collaborative empirical efforts.

Another term associated with biopiracy is “bio-prospecting,” which, as Cori Hayden points out, is simply a new name for an old process of extracting usable knowledges. (Greene 2002; Hayden 2003). When such prospecting can yield patentable results with large profits, this can motivate some to engage in manipulations of the truth about the knowledges involved. The struggle over Neem is one of the most well-known examples.

Neem is the name of a tree that flourishes in many parts of the global south and has long been known about in South Asia: it was described in ancient Indian medicinal and religious texts which gave detailed information about both its preparation and the ailments it could address. Its botanical name, Azadirachtaindica, actually means “the free tree” (Shiva 2020, 145ff).

Neem was not only made use of in the ancient world: in the twentieth century there was a significant amount of research done on the Neem tree by the Indian Agriculture Research Institute as well as the Khadi and Village Industries Commission (Shiva 2020, 146). The central feature that began to draw attention in the developed world was Neem’s ability to provide pest control. In the 1970s, Western and Japanese companies became interested in the tree when growing opposition to chemical-based pesticides and other chemical products led to a search for natural, plant-based alternatives. This initiated the patent wars over Neem. Starting in 1985 multiple patents for the production of synthetic forms were filed, and claimants had to devise ways to meet both the “new” and the “not obvious” criteria.

Those opposed to the patents argued that synthetic production was an extension of traditional processes, without sufficient innovation to be classified as new. For example, Eugene Schultz, chair of the National Research Council, held that “The biologically active polar chemicals could be extracted using technology already available to villages in developing countries” (quoted in Shiva 2020, 148). Opponents also argued that the newness claim was relative to location, and that patent offices in the West took up the Neem claimant’s cases because they were unfamiliar with the common knowledge of this plant in many non-Western areas of the world.

The effort to resist patenting Neem involved a large coalition of research and policy groups as well as farming collectives and NGOs around the world, including the West.
It took years of organizing with expensive legal teams to establish the fact that Western corporations had neither discovered the properties of Neem nor invented the method of isolating the key causative elements of the tree.

We might say this is a species of the epistemology of ignorance in which the desire not to know about groups of knowers with competing or superior knowledge in certain domains is advanced through measures that enshrine a set of prior and questionable assumptions about how to operationalize terms such as invention, discovery, new, obvious, and advanced. Of course, it is not at all clear that patent defenders truly did not know about the prior knowledge in regard to Neem or whether they were simply making strategic claims in the courts that the litigants did not necessarily believe. Yet, the larger social effect of the language that patent claimants use can spread disinformation among wider publics.

To refer to my previous characterization of how extraction alters the ontology of the known, we can see in the example of the Neem tree a recharacterization of knowledge, so that corporate claims of knowledge could be presented as if they were separable from their original context. In other words, it is likely that Western and Japanese interests studied the research and the uses of Neem prior to their efforts to develop new processes, but this history of knowledge had to be downplayed to establish the criteria international courts used to legitimate patents. However, setting the history aside helps to support the idea that dialogic models of knowing are unnecessary: that extractors can perform interpretation, analysis, judgment, and application unilaterally, that in collaborative processes the judgment of Western experts is final and determinative, and that their unilateral assessments can reach a threshold of epistemic justification fully adequate for a claim.

Neem is just one example, but the pattern it reveals of prospecting indigenous practices for possible patents and then using epistemic disauthorization as a means to secure the rights of extraction gives us some direction in developing a decolonial epistemology. More recently, different and more promising forms of collaborations around ethnobotany are developing across differently positioned groups. As Greene (2002) reports, these collaborations explode the idea of “discovery,” as if Westerners were working in virgin territory. They also challenge some prevalent ideas about “traditional knowledge” as unchanging and bounded to specific communities. Relational and dialogic approaches to knowing, then, will have an impact not only on the knowledge gained but on the concepts and assumptions that inform knowing practices and that motivate the effort to reform epistemic orientations that are imperialistic.

A second case study useful to explore here concerns the struggle over museum collections of artifacts and human remains.

Museums across the world have been collecting various objects from North American tribes for over a century, and millions of items are now housed in major institutions. In the United States alone, there are over 1500 museums that house several million such artifacts (Colwell 2017). Not surprisingly, the story of how these collections came into museum hands is troubling: sometimes items were purchased from their owners, but there was also outright theft, looting, and the plundering of graves on tribal lands.

Even those who purchased items legally from their owners did not always concern themselves with how these owners obtained their objects. In fact, early collectors often bragged about their predatory exploits. One of the most successful collectors was R. Stewart Culin, who prepared exhibitions for World Fairs in 1892 and 1893 and provided
over 4000 objects to the Brooklyn Museum still in its possession today. Culin specialized in Zuni artifacts, and paid cash, explaining that “many of the Indians had nothing to eat” and that the money he gave them was used to purchase food (Colwell 2017, 17). One doubts that, under such circumstances, the Indians were able to bargain over prices.

Philip Deloria explains the epistemological outcomes of such extractions:

a collection created a vast web of possibilities for recontextualization, for moving objects out of one location … and into another … The most important recontextualization may have centered on the authority of the collectors themselves, for the objects constituted them as unique figures of authority. (Deloria 2018, 108)

The artifacts obtained include hundreds of thousands of human remains, including both adults and children, and the funereal objects that had been placed in gravesites alongside them. Museums either put these remains on display for the public or held them in back storerooms for the exclusive access of researchers. This attitude toward human remains follows the practice of the British Museum, among others, who continue to display the bodies of ancient Egyptians, yet the display of indigenous people’s remains concerns the recent victims of colonialist genocidal policies. Only some are identifiable as belonging to a particular tribe, and those not identifiable are classified as “unaffiliated,” creating special challenges to claims of rightful return.

For many decades now these practices of displaying human remains as well as the possessions of colonized peoples have been the subject of political and legal demands for return. As Valaskakis notes, “Along with land and treaty rights, Native people are laying claim to Indian objects and images, to museums and to history … Across Indian Country, this move to transform the present and negotiate the future by recovering the past has contributed to new debates reclaiming memory, experience, and imagination” (2005, 81). She quotes an editor of the Edmonton Journal who ruefully noted that “It has long been clear that we actually prefer our native culture in museums. We certainly do not prefer it running the Department of Indian Affairs. Nor do we prefer it announcing the news on national television or determining its own political destiny” (2005, 79). This makes it clear that museum displays concern group relations in the present and not merely the treatment of peoples from the past. Thus we need to consider what specific kind of knowledge museums impart, and how they may impact the relations involved in the knowledge projects necessary for building new futures and improving group relations.

James Clifford referred to “salvage” forms of knowledge projects, particularly in anthropology and archaeology, where the science communities associated with the victors in a colonial struggle seek to salvage what is left of the “authentic” cultural remains of their victims (Clifford 1988). What is the purpose of such salvage? In some cases, individual collectors are motivated as trophy hunters, to display the fruit of conquest and give visible testament to settler victories. Museums in contrast offer more epistemic and universalist reasons: to protect significant sources of knowledge for the future of the global community. Material objects have long been considered more epistemically reliable than mere textual descriptions, and part of what motivated the creation of the field of archaeology was the belief that oral histories require some sort of material evidence. Ciriaco de’ Pizzicoli, credited as the founder of archaeology, was an Italian merchant from the fourteenth century who fought in the Crusades. He argued that “ancient things” were more faithful
sources of knowledge about classical antiquity than mere textual reports, even those written at the time (Fine-Dare 2002, 15). Given this view that material objects are essential for epistemic reliability, it can appear that Native groups who demand the return of objects and threaten lawsuits against institutions such as the Smithsonian National Museum of American History are simply anti-science.

In the 1960s, a coalition of tribes initiated a far-reaching demand for what came to be called “repatriation”: the return of the physical remains of the dead to their tribes for proper burial or other treatments deemed by their group to be appropriate and respectful (Mihesuah 2000). Museums resisted this with claims about scientific inquiry, historical interest, and larger public values, such as the ability to protect the remains more securely than the tribes could themselves (Jenkins 2016; Wylie 2002). The larger public values invoked included scientific, historical, and ethnographic research. If museums were forced to repatriate all of these remains, it was argued that significant sources of knowledge could be lost or compromised. By contrast, advocates for repatriation often made claims about the moral duty to respect those human beings whose bones were being bartered, monetized, and displayed. Some groups also made arguments on the grounds of the powers of the dead over the living, that these remains could enact vengeance on those who mistreated them if they were not handled very carefully, and that proper burial rituals were required to assuage the anger of the dead. Adjudicating these conflicts required a choice about what kinds of reasons would be given priority or even acknowledged as valid.

In 1990, under increasing pressure from Native activists, the United States government passed the Native American Graves Protection and Repatriation Act, known as NAGPRA. This law mandated that native groups had the right to claim the remains of their tribal members. It was only museum officials, however, who were accorded the task of assessing whether there was sufficient evidence to identify the tribal association of specific remains, so the law did not instantiate real epistemic collaboration or evince a relational epistemic humility concerning the assessment of validity. As Deloria says, “NAGPRA … does not empower Indian people all that much” (Deloria 2018, 112). In one consultative exchange process he witnessed, he concluded that “the museum, which recorded the discussions, gained far more from the exchange than it ended up giving to the tribe.” Still, NAGPRA has had a major impact, leading to the return of tens of thousands of human remains. However, more than 100,000 continue to be housed in museums, along with millions of ceremonial objects used in funerals and burials such as beads, pipes, feathers, special clothing, ceramics and other artistic products.

This is an ongoing struggle. European museums have no national laws requiring repatriations of this sort and have almost entirely refused to accede to demands from either nations or ethnic groups. In the United States, there are now efforts to strengthen the terms of NAGPRA, improve elements of the process to make it more collaborative, and extend its reach. Native groups are now demanding the return of “unaffiliated” remains that cannot be identified as having a relation to a specific tribe, asking that these still be removed from museum display cases even though they are not covered under NAGPRA. There is also contestation over what counts as the remains of living beings: who determines the meaning of “living”? Some groups argue that artisanal or produced objects such as Ahayu:da, which are wooden objects taken to be war gods or “keepers of the sky,” and that have long been traded as commodities among non-Native peoples,
have spiritual elements and deserve to be included in repatriation laws despite the fact that tribal practices will then place these objects outside and allow them to deteriorate over time (Deloria 2018). Thus, the struggle is over ontological assumptions about how to conceptualize objects as well as how to prioritize diverse conceptions of value.

These debates continue to be represented as a conflict between the forces of reason, science, and modernity on the one hand, and on the other hand, pre-modern myth, superstition, and religion. This is a stacked deck in mainstream western public discourses. Certainly, it is widely understood that the display of bodily remains, including scalps, is disrespectful, but this can be accorded without challenging existing ideas about knowledge.

Marisol de la Cadena recounts an interesting collaborative event between highly knowledgeable parties that still demonstrated an epistemic failure (2015). The event involved an invitation to Quechua leader Nazario Turpo to be a consultant for an exhibition planned by the United States National Museum of the American Indian (NMAI). The translation challenges in this collaboration were enormous, and, as she shows, the failures of translation occurred in a way that the museum officials seemed unaware. Translation work across wide cultural divergences can only yield partial communication and cannot avoid some degree of misrepresentations. To refer to Turpo as a leader, as I just did, is itself a misrepresentation: his community’s understanding of what it means to be “in-ayllu” is not representational but relational in ways that require some significant unpacking and dialogue for outsiders to grasp.

The NMAI pursued Turpo’s help in a project of repatriation of human remains, but, as with the case of the Ahayu?:da, there were challenges to the translation of concepts. Human remains are divided by the Quechua into two different sorts depending on the era in which they lived. Those that lived in a different era are referred to as suq’akuna and their contact with living beings today is considered potentially dangerous. Turpo believed the remains in question may have lost their power or may have been “tamed” in the intervening period by changes in material conditions or the blessings of priests. Just to be safe, however, when the remains were returned Turpo and his family organized several events to reduce the likelihood of negative effects. The NMAI officials, as de la Cadena recounts,

were thrilled to witness the ceremonies, which they saw as a celebration of the repatriation of ancestors’ remains. The suq’akuna (as potentially dangerous entities) were lost in this translation of the event. (De la Cadena 2015, 212)

De la Cadena describes this incident as one in a long series of mistranslations or, following Eduardo Vivieros de Castro (2004a and 2004b), “equivocations.” An equivocation is neither an error nor a failure but a “communicative disjuncture … in which interlocutors are not talking about the same thing” (De la Cadena 215, 27). Equivocations are constitutive features of cultural translation, thus unavoidable, but this also means that they are incorrectly understood as failures. Attempting to overcome them is the wrong goal, Vivieros de Castro argues. Colonial ventures sometimes go so far as to destroy languages in a vain attempt to produce singular, unified meanings; epistemic collaborations are hobbled by such methods, not enhanced.

A dialogic collaboration across cultures cannot be effective if it seeks to purge all differences in the pursuit of complete univocality. Instead, there needs to be a steady
awareness of divergences of meaning within communicative practices. Mutually productive relations between speakers do not require perfect translatability and in fact, the attempt to purge differences will likely diminish relations, erode trust and adversely affect what understanding is genuinely possible. If equivocations are taken to be failures, this could motivate silencing and the downplaying of divergences.

The case studies just discussed yield lessons about the move to a relation-based, dialogic practice of knowing, but also about the challenges to creating collaborative projects. Let me summarize these before moving onto the final section.

The case of Neem showcases the necessarily collaborative nature of human knowledge. Farmers could not develop techniques of cultivation if they refused to share their knowledge with outsiders or future generations. The use of patents to hoard knowledge and to thwart cooperation between the complex knowledge communities that can contribute to making the most out of the critical causative properties of given plants has a negative epistemic impact: not only promoting the misrepresentation of practices as new or obvious but also curtailing opportunities for expansion of knowledge through collaboration. Patents create distrust and erode potential relationships among knowers. The principal motivation for private patents is private profit, but this is not the only motivation human beings have to innovate. Nor is private gain the best or most efficient route to innovation and development; in fact, these are likely to be stymied by exclusionary rules that curtail creativity and open communication.

The problem with museums that house human remains cannot be represented as a moral and political problem without epistemic implications. Material objects are sources of knowledge, as de’ Pizzicolli claimed, and yet their interpretation requires contextualization and collaboration with cultural insiders. Dialogically pursued projects cannot epistemically rank the contributions of various parties in an a priori way, so that only one side is assumed to have the capacity to judge claims or understand significance. Instead, collaborators should be open to learning from anyone. The conditions necessary for fruitful collaborations should be explored and protected, even while the inevitability of equivocation, in Vivieros de Castro’s sense, is accepted. If the focus turns to developing robust relations over time rather than securing particular outcomes that can be monetized, the possibilities for advancing greater understanding will be enhanced.

4. Corrective norms for alternative epistemic practices

Extractivist epistemologies that have developed in the epoch of global empires have specific features that facilitate the extraction of knowledge from subaltern groups to dominant groups. Such facilitation is enhanced by specific and concrete practices but also by epistemic ideas that conceptualize knowledge and justification in ways that legitimize non-cooperation and excuse non-transparency. For example, oversimplified conceptions of expertise downplay the role of interpretation and the inevitable perspectival aspect of knowing, as we’ve seen in the two case studies just discussed.

Clearly, profit making can undermine the motive to collaborate or to be transparent. But beyond assessing the epistemic assumptions involved in specific profit-making projects, I argue we need to consider how the ideas and practices that have undergirded colonial and capitalist practices of extraction have influenced general approaches to knowledge. It may well be that extractivism has provided a model of knowing with a
reach far beyond mining projects or biopiracy. As we’ve seen, museum practices may be genuinely motivated by an interest in historical truth rather than profit yet have long felt justified in operating without collaboration with “non-experts.” This larger claim about the effects of colonialism on western epistemologies is a task for historians of ideas, but epistemologists and philosophers of science are beginning to weigh in on the social contexts that have affected which ideas become influential (e.g. Tuana 1992; Tiles and Tiles 1993; Dussel 1995; Potter 2001; Harding 2008).

We can now develop a more precise definition of extractivist epistemologies as exhibiting four features: the practice of ranking knowers, denying the need for collaboration across groups, defining values as non-relational and objectively determinable, and seeking exclusive appropriation and control over intellectual items such as knowledges and processes. Defining extractivist epistemologies with these four points excludes collaborative projects in which one group may seek knowledge from another but without seeking exclusive control or ranking knowers.

In this final section, I will elaborate four corrective epistemic norms that can counteract extractivist epistemologies: (i) acknowledging the incompleteness of all knowledge, (ii) developing an approach that recognizes plural epistemologies and seeks productive relationships of inter-epistemology; (iii) practicing relational epistemic humility, and (iv) regularizing the assessment of epistemic relationships in projects of knowing.

Boaventura de Sousa Santos calls for a principle of the incompleteness of all knowledge, meaning that no singular approach to knowing will ever achieve absoluteness or sufficiency. Sciences and technologies are developed in historically contingent ways with concepts and practices that are affected by contextual conditions. As we’ve seen, museum curators trained in Western methods and tribal members may operate with quite divergent ontologies, yet both can reveal some aspects of a given artifact: curators can often date objects, while tribal members can provide context and history, but we should note that the usage of concepts like “object,” “artifact,” and so on may not be common across these different approaches. Santos argues that, instead of seeking a singular approach, we should acknowledge that “there is no essential or definitive way of describing, ordering, and classifying processes, entities, and relationships in the world” (2014, 196). In relation to specific goals, there will be better and worse ways to describe, order, and classify phenomena but this does not entail that there is a singular approach that will someday win out overall, or that aiming for a singular approach is the most fruitful way to pursue knowledge. In fact, it may disable the development and improvement of any specific approach to knowing practices (see also Massimi 2022).

The claim of incompleteness is familiar in twentieth-century traditions of philosophy of science, especially the historicist trend developed by Imre Lakatos, Thomas Kuhn, Hilary Putnam, Paul Feyerabend, and others. As Putnam argues, the impressive achievements of modern science are compatible with the partiality of their ontological picture of the world, since Western ontologies are based on contingent conceptual repertoires that will no doubt be modified if not replaced (Putnam 1981; see also Boyd 1989). Hence, incompleteness does not challenge all versions of scientific realism. And, acknowledging incompleteness motivates engagement with other approaches that may operate with quite different concepts, and it counters the disposition to engage in an overall ranking of approaches at some contrived meta-level. Thus starting from an acceptance
of incompleteness can serve as a corrective norm by motivating an openness to divergent ideas and practices.  

The second corrective norm follows from the first. If we acknowledge incompleteness we need to develop a concept of “inter-epistemology” as an alternative to epistemic imperialism (Santos 2014, 2018). The stance of an inter-epistemology is to accept that diverse approaches to knowing may be epistemically valid or productive, that any given approach will be incomplete, and thus we need to think through the terms by which we can develop constructive relationships between different approaches. This need not be a relativism that would accommodate all theories of knowledge or disallow the raising of critical questions across different approaches, but it would reject the idea that the only intelligible epistemological goal is a unified theory that will overcome all differences in how knowledge is defined and how knowing practices are pursued. As Santos explains, “In the ecology of knowledges, finding credibility for nonscientific knowledges does not entail discrediting scientific knowledge. It implies, rather, using it in a broader context of dialogue with other knowledges” (Santos 2018, 189). Thus the concept of inter-epistemology takes us a step further than merely acknowledging incompleteness, because it also acknowledges the existence of fundamental diversities in conceptualizing knowledge.

Mignolo has argued against the use of the term epistemology itself for fear that the weight of its typical usage in the modern West carries framing assumptions that deny the interpretive element in knowing. Richard Rorty held a similar view and argued for the term “hermeneutics” as a replacement (Rorty 1979). Modern Western epistemologies tend to seek a systematic or meta-level approach that judges the doxastic content of common sense as if from above, without an interpretive frame. Mignolo favors the older concept of gnoseology which he argues takes a more general approach to knowledge, without privileging science or assuming there is an essential form of valid knowing that rules all practices (Mignolo 2000, 9; see also Alcoff 2007). He wants a concept that combines what Western modernity separated, that is, epistemology and hermeneutics, or knowledge and the interpretive frameworks of a given cultural location, so that we can move to a pluralist approach.

Santos’s usage of the term “inter-epistemology,” however, unites with this project. It is an effort to bring epistemology down from the clouds so that it can accept multiple framing assumptions. And as previously stated, influential trends in twentieth century Western epistemology and philosophy of science, such as pragmatism, historicism, naturalized epistemology, and contextualism, can accord with Mignolo’s aims as well. But Mignolo’s critique helps to shift our focus to the constitutive nature of interpretive elements in our practices and the need for a pluralist stance. The question is, how do we enhance practices of inter-epistemological collaboration?

We need to explore, more than can be done in one paper, the ideas that inhibit collaboration across epistemological differences. One of the typical criticisms of (so-called) traditional approaches to knowing is the worry with conformism. Traditional approaches generally do not work on individualist models of knowing, in which individualism is

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4One might think that these corrective norms are operating at a meta-level, but I am putting these forward as correctives for the particular shortcomings of many current Western approaches to knowing, though of course they may be helpful elsewhere.
assumed to be the generator of advances in knowing. Knowledges achieved over millen-
nia operate with a respect for the past and a diffuse understanding of invention and own-
ership. Who “owns” the traditional process of cultivating the properties of the Neem tree? This diffused framing of invention is a more realistic account of the nature of intellectual work in general, but these approaches may be seen as having endemic conformist ten-
dencies that can limit innovation. Santos quotes the didactic sage Odera Oruka who reports, however, that popular wisdom can be subjected to debate, as well as “the com-
munal set-up” that sometimes tries to fend off challenges. And it is also important to recall
that the same dangers of a dysfunctional conformism can be found in Western sciences, as many have argued (see Lloyd 2006 and Smolin 2006 for recent case studies). No system
of knowledge may be immune from the danger of conformism and remaining open to
alternative epistemologies can provide a helpfully corrective norm to ward off calcification.

Another challenge to the idea of inter-epistemology is the assumption that multiple
research communities can only cooperate if all participants share methodological
approaches and standards. But this requirement can inhibit collaboration before it is
begun and may reduce its epistemic value. To see why, we need to understand that meth-
odological standards are not objective but “conventional in character and irreducibly
social” (Wilholt 2016, 223; see also Rudner 1953; Douglas 2009).

Research projects are guided by specific aims, such as whether to value positive results
over negative results or vice versa. These may work at cross purposes, so both cannot be
valued equally. Rapid HIV tests and certain Covid tests confer highly reliable negative
results but highly unreliable positive results. Methodological choices are thus guided
by priorities of utility as well as decisions about resource allocation. The impact of false
positives is generally lower from a public health perspective than the impact of false nega-
tives, especially if a positive result from a rapid test can be quickly followed up with a
more reliable test.

The epistemic advantage of collaboration across diverse communities with divergent
priorities thus becomes clear: when standards and methods come out from behind the
cloak of (traditional) objectivity and disinterestedness, debates must include a recognition
that diverse goals can shift assessments of practices. It is then clear why collaborations
need not pursue consensus on the research methods. Dissensus about priorities and
values may enlarge the overall understanding of the phenomena, such as when human
remains are viewed divergently as (a) a source of cultural knowledge that overrides all
other considerations, (b) entities with intrinsic moral value that require respect and def-
erence, or (c) potentially dangerous forces. Each of these counsel different methods of
engagement with human remains. Collaboration does not require that only one under-
standing wins out: there may be ways to accommodate more than one goal and more
than one method of engagement. Thus if the diversity in understanding human
remains is viewed as an inevitable impediment to knowledge, epistemic outcomes will
be unnecessarily foreshortened.

Yet a global relativism should also be rejected because some practices of knowing do
not interact fruitfully but degrade trust and disable motivations to cooperate. As Sandra
Harding explains, “only modern Western sciences” are viewed as having “the resources to
escape the universal human tendency to project onto nature cultural assumptions” (Harding 2008, 4). When Western science is viewed as exceptional and triumphal over
all others, Harding explains, relationships are disabled. Such frameworks portray a zero-sum game in regard to contrasting epistemologies and methodologies. Moreover, triumphalism and exceptionalism inhibit critique from the outside, preempting the potential benefits of openness to criticism built into the scientific method. Santos suggests this is the often unacknowledged defining feature of hegemony-seeking epistemologies, that “they only recognize internal limits” (2018, 189). The concept of inter-epistemology aims instead to approach epistemological diversity as a potential epistemic resource for all parties even if no singular epistemology achieves consensus.

A third corrective norm is the one discussed earlier as developed by Dalmiya: relational humility. The history of the pursuit of knowledge under the long duree of colonialism is reason enough to seek to develop an unfamiliar humility. Abrupt dismissals of other claims to know have not served the West very well; many are now trying to develop sustainable practices about natural environments, for example, and recognize that Western science has much to learn in this area from indigenous knowers. But there is also a more general methodological reason to cultivate relational humility.

The Neem case is particularly instructive. Profit-making motivations can work against humility by simply aiming for a legal triumph rather than expanding knowledge and understanding. Achieving the right to exclusive patents may tempt litigants to conceal information and portray indigenous farmers as ignorant and backward, thus enabling the continuance of racist and sexist ideas. Adversarial court systems provide little motivation for relational humility. In truth, the enormous organizational efforts and financial costs incurred by holding off Neem patents should never have been required: the international court system should not allow private corporations to initiate claims without establishing that they have worked collaboratively with the relevant knowers before deciding to push their patent requests. To make genuine collaboration necessary would impact the power imbalance, giving locals an effective veto power.

Relational humility is a critically important corrective to centuries of colonialism that still reverberate in our discourses and institutions. As Dalmiya argues, in this context relational humility is not only a moral virtue but also, as she says, “an epistemic excellence” (Dalmiya 2016, 115, emphasis in original). The point is not simply to ascribe ignorance to oneself, but also, to ascribe knowledge, or likely knowledge, to others. This entails changes in practice but also an altered self-understanding (Dalmiya 2016, 122). The positive effects of relational humility are both moral and epistemic since it allows those with higher status “to learn from people at the epistemic and social margins” (Dalmiya 2016, 97). The Neem case demonstrates the lack of relational humility not only toward small farmers but also toward the Indian Agriculture Research Institute and the Khadi and Village Industries Commission that had already done extensive research on the Neem plant.

Many Western sciences, as Harding and others argue, have long promoted the idea that knowledge is enhanced by individualism, arrogance, and making a sharp division between moral and epistemic issues of concern. The concept of the “genius” often portrays a lone figure who makes his path, ignoring its repercussions for others. The significance of Dalmiya’s concept of relational humility is that it shows the weaknesses in these arguments from an epistemic point of view. Standard conceptions of objectivity counsel openness to criticisms, or the ability to consider every possible objection to one’s favored view, but if the viability of objections is assessed by only one side there may not be

TAPUYA: LATIN AMERICAN SCIENCE, TECHNOLOGY AND SOCIETY
“strong objectivity” as Harding calls for (Harding 2015). The practice of preemptively ranking knowers offers a way to deflect their alternative views based on spurious considerations, such as illiteracy or lack of formal education.

However, relational humility is not an attitude that is exclusively relevant to the dominant parties or those from colonizing nations. It is always possible that others know things that I do not know. Overturning histories of domination requires formerly subordinate groups to reflect on our tendency to lack confidence and manifest excessive deference and humility, but we should define the problem as excessive humility, not humility per se, since the sort of epistemic arrogance that assumes I have nothing to learn from others, all sorts of others, will not serve my own epistemic and liberatory aims.

Work on the epistemologies of the social sciences has long discussed the idea of “insider” and “outsider” knowledge. Insiders to a sphere of practice, a culture, or a language, and so on, will have clear epistemic advantages in picking up nuances and distinctions that others may miss. This idea has been marshaled against the claim that the most reliable knower will be an “objective” outsider, without attachments or investments of any sort. The reality is that all knowers are positioned in some relationship to the knowledge project, and these include such things as profit and individual career advancement. Hence all knowers have investments of some sort. Still, it makes sense to distinguish “insider” and “outsider” positions not on the grounds of disinterestedness but in regard to the specific relationship to the knowledge being pursued. And it also makes sense to see both positionalities as having potential epistemic advantages. As Edward Said pointed out, although they are in some ways outsiders, colonial subjects have shed new light on the great literature of Europe, raising new questions and developing new interpretations (Said 2004). Outsiders have detected subtle patterns of self-protection and racist myths operating in Western literature and philosophy. The lesson is that neither outsider nor insider viewpoints have a priori privilege. Diverse positionalities can increase the interpretive frames and thus enlarge understanding.

The fourth and final corrective norm that can redress extractivist epistemologies is to require an analysis of the qualities of relationships between the relevant parties to a knowledge project part of standard procedure. Shifting to the stance of inter-epistemology and giving up universalist aspirations involve developing our thinking about what kind of relationships across epistemological differences are possible as well as functional. Pursuing a relational humility requires a conscious reorientation of our epistemic pre-judgments of others, but this needs to be built into institutional mandates rather than left to individuals.

Attending to the quality of our relationships should involve an examination of trust, reciprocity, care, lack of envy, patience, and benevolence. While I have been emphasizing the epistemic reasons that should motivate our move away from extractivism, it is important to acknowledge that, in truth, epistemic considerations are bound up with other considerations. The social character of research, its reliance on conventions and local assumptions, the variability of interpretation and judgment, all point to the need to consider the normative character of social relationships between diverse groups that are situated differently vis-à-vis political and economic power. Despite inequality, all sides may benefit from becoming aware of multiple and conflicting assumptions and priorities: these can enhance group self-awareness and the possibility of an eventual shared understanding, even though this is likely to remain partial.
Attending to the moral and political character of relationships is thus critical for knowledge, even if, as Dalmiya perceptively points out, enhancing relationships requires shutting down some knowledge projects or lines of inquiry. This is not a paradox but a feature of long-term epistemic relationships. Museum curators must be prepared to relinquish some epistemic goals to achieve productive relationships that include a sense of trust and care. These values must be manifested in practice and not merely in word, and this requires foregoing some pursuits.

To conclude, to overcome extractivist influences in our norms and practices of knowing, we need to seek more genuinely egalitarian epistemic collaborations without presumptively discrediting certain knowers or alternative epistemologies.

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