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## Unable to see the diagnosis Harmed bodies and oil extraction in Peruvian Amazonia

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This article discusses two distinct notions of harm, *wakllichishka* and oil harm, and two distinct ways of shaping bodies. Following postcolonial and decolonial insights, I develop an approach that deploys two Indigenous concepts—*wakllichishka*, and *not being able to see the diagnosis*—as valid tools of analysis. Kichwa people in northern Peruvian Amazonia use both to analyze the condition of being harmed, illness, and the possibility of recovering. While *wakllichishka* rests on understandings and practices that assume that bodies are transformable and the locus of human and more-than-human sociality and agency, *not being able to see the diagnosis* reveals how biomedical and toxicological practices enact bodies as indicators of unspecific conditions and environmental degradation, and as incurable. Using Kichwa analytics shows the situatedness of these practices and counteracts a common disposition to undertake a colonizing reduction that defines our own categories as the only ones adequate for analysis of the consequences of extractive capitalism.

Keywords: bodies, human and more-than-human, diseases, decolonial perspectives, Kichwa, Amazonia

In March 2017, I arrived at the village of Belencito,<sup>1</sup> and paid a visit to the family with whom I had been living two years earlier. Andrés, my host's brother, was dying after having been sick for long time. He lay on a bed. His face was extremely pale and thin, his feet and legs were terribly swollen, and his stomach looked to me like an exercise ball. He vomited blood each time he ate. Andrés was in great pain. He could not stand upright and could barely breathe. During the many hours that his wife, his mother, and his sister spent caring for him, they would often reflect on his severe condition. Once, speaking in Kichwa, his wife Amelia explained to me that Andrés's condition was probably the effect of somebody harming him. His condition as sick (*unkushka*) was related to being harmed (*wakllichishka*). This was revealed, she said, by the swollen stomach and legs that resemble the form of the stem of the red *lupuna* tree. She was, however, not sure. She pointed out that Andrés was perhaps affected by other diseases. Hepatitis B, liver cancer, and cirrhosis were the suggestions of different physicians who had visited the village.

In the same conversation, Amelia, Andrés's mother, and his sister also emphasized that Andrés could be *unkushka* because of repeated exposure to crude oil and chemicals. Belencito, a village of around forty or fifty houses, was located right next to oil installations built when oil extraction started in the 1970s. In the 1980s these installations were moved upstream, leaving behind leaking oil wells, broken pipelines, and lakes and streams that had been used as open waste pits where production water and other wastes were deposited. Non-Indigenous traders who had settled in Belencito in the 1970s and some Kichwa families moved to the new extraction places. In the last decade, Andrés, along with many other Kichwa men living in the Uritu River, had worked cleaning such abandoned sites, and had also been involved in urgent cleanup operations after new oil leakages, which occur regularly. Andrés's illness and subsequent death prompted conversations in the village about the collection of soil and water samples in which they had engaged some years earlier and about blood and urine samples that had been recently collected in other villages.

In 2014, several men living in Belencito had traveled together with officials of the Peruvian Agency for

1. All names of places and persons are pseudonyms.





Environmental Assessment and Control (OEFA) and had shown the officials polluted places that Pluspetrol, the company operating oil field 1AB/192 at that time, had not reported. In small groups, the villagers and OEFA's employees had dug in places where nothing appeared on the surface, to reveal oil residues just beneath a thin layer of soil. They were able to demonstrate that oil residues popped up from underground when it rained heavily, slowly filtering into nearby streams. From dives into small lakes and the river, villagers had collected samples which showed that oil residues had become part of the sediments. In 2016, Peru's health authorities had collected blood and urine samples in four neighboring villages located near currently producing wells, but not in the other villages along the river. The people of Belencito deeply resented this decision, and they wondered whether such samples could show not only that they were "contaminated" but also that they could be cured so they could take care of their loved ones. This was, as I will show, a hope in vain.

In this article, I take Andrés's illness, Amelia's and the villagers' thoughts about Andrés's ensuing death, their explanations, and the production of soil, water, urine, and blood samples, as starting points to reflect on divergent understandings of harm and divergent ways of shaping affected bodies in toxic sites of oil extraction in northern Peruvian Amazonia. Deploying two notions—*wakllichishka* and *not being able to see the diagnosis*—often used by my Kichwa interlocutors to reflect on a person's illness, the condition of being harmed, and the possibility of recovering, I want moreover to contribute to approaches that admit the possibility of using Indigenous concepts as valid tools of anthropological analysis. I suggest that such use can counteract anthropologists' construction of the descriptions and analysis of their interlocutors as lacking discursive authority. The use of Indigenous concepts allows us to present and challenge ontic and epistemic assumptions—that is, assumptions regarding the existence of concrete, specific bodies and knowledges about them (Blaser 2013; Verran 2018).

My argument builds on two different strands of thought. The first of these focuses on the body, a theme central to anthropological approaches developed in the region. I propose that in the Kichwa contexts of oil extraction in northern Peruvian Amazonia, there are two coexistent but divergent kinds of harmed bodies, which I call the body of *wakllichishka* and the body related to the harm of oil. The former is co-constituted by the acts of humans and nonhumans and the relations in which they are imbricated. The body of *wakllichishka* is morphable, and it can be deconstituted by induced and unde-

sired corporeal transformations. Recovery depends on tracing the interacting agencies and relations that are destroying it, and on actively interrupting and counteracting them.

Kichwa understandings of the body of *wakllichishka* resonate with widespread Indigenous Amazonian understandings of the body. Indeed, anthropologists working in the region have consistently demonstrated that Native Amazonians, departing from notions of the body that conceive of it as biological strata, consider the body as the result of social relations and of the acts of both human and nonhuman entities (Belaunde 1992; Guzmán-Gallegos 2009, 2010; McCallum 2001; Overing and Passes 2000; Santos-Granero 2012; Seeger, Da Matta, and Viveiros de Castro 1979; Vilaça 2002). Such understandings reframe the notion of the human and of the social to include particular entities—plants, animals—that in social analysis usually are considered to belong to the realm of nature (Descola 2014; Guzmán-Gallegos 2019a; Kohn 2013; Stoltze Lima 1999). The body of *wakllichishka* is radically distinct from the body related to the harm of oil. The latter is shaped through toxicological practices as a short-term environmental indicator and as a container of pollutants. I argue that toxicological practices are closely related to biomedical diagnosis and curing practices that constitute sick bodies mainly as indicators of statistically common diseases and as containers of unstable diseases.

The second strand of thought which I draw on concerns the use of Indigenous concepts as analytical tools. Paraphrasing Latour (2005), this entails crafting ways of describing which place people's categories of analysis symmetrically in relation to Western-based modern social analysis, undoing the common assumption that the analysts have adequate concepts to undertake analysis while other people's concepts merely describe. Extending Latour's proposition, scholars working with postcolonial and decolonial approaches question and point out another common premise (and related practices), which assume North America and Western Europe as privileged sites of "unlocatable," universal theory production (Chakrabarty 2000; Mignolo and Walsh 2018; Quijano 2000). These scholars frame the possibility of using concepts developed in other contexts as valid tools of analysis. Such concepts may reveal understandings, relations, and world-making practices that common categories of social analysis may obscure, make invisible, or dismiss as invalid (Anderson 2002, 2020; Rivera Cusicanqui 2010).<sup>2</sup>

2. Framing indigenous concepts in relation to Western-based concepts—scientific or otherwise—often raises questions



In this article I approach Indigenous concepts by undertaking a diffractive reading: I am interested in the insights that might be generated if Kichwa analytics are the lens through which the harm of oil and the bodies it shapes are examined. The point of diffractive reading, as Karen Barad (2007:30) suggests, is not to pose one set of categories against another but rather to gain “insights through one another in ways that help illuminate differences as they emerge,” to carefully process and understand “which differences matter, how they matter and for whom” (Barad 2007: 90; Haraway 1992). By deploying a diffractive reading, I seek to go beyond anthropological critique that suggests that the use of Indigenous concepts entails essentializing Indigenous subjects by overlooking histories of violent contact and responses to it. With this article I wish to question the idea that essentializing is a necessary effect of such use. I argue rather that an effect of this sort of critique might be that anthropologists frame their analytical tools as the only ones which are authoritative, reinstating their discursive authority (Briggs 1996), and reinforcing their position as knowing subjects par excellence. I suggest that the use of Indigenous analytics allows us not only to underline the cultural and sociomaterial situatedness of all scientific practices, whether they be biomedical (Mol 2003), toxicological, or anthropological. It also invites us, anthropologists, to think how our stories participate and relate to diverse projects of reality-making—in this case, of divergent kinds of harm and of affected bodies.

I proceed as follows. In the first sections I present the notions of *wakllichishka* and of *not being able to see the diagnosis*. Then I deploy the notion of *not being able to see the diagnosis* to examine the bodies enacted by biomedical and toxicological practices. In the last following section I seek to illuminate certain aspects of these practices which ultimately threaten the conditions and the web of relations that enable a person to exist.

This article is based on eight months of fieldwork between 2014 and 2019 in northern Peruvian Amazonia, conducted in Kichwa and Spanish, in which I combined

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about the character of the relationships between the two. In anthropological and in STS scholarship these relations are often framed in terms of hybridity. I approach this concept with caution. Celebrations of hybridity have often translated into state policies of assimilation and cancellation of minoritarian worlding practices, and, as Prasad (2017), referring to Bhabha, puts it, into biopolitical strategies of colonial control. I am rather interested in exploring how coexistence is conceived and enacted.

participating in daily activities in two villages, located near abandoned oil installations, helping in two health centers, and visiting contaminated sites, with interviews with Indigenous and non-Indigenous biomedical practitioners. It draws also on four years of fieldwork and more than twenty-five years of engagement with three Kichwa communities, located on tributaries of the Uritu river on the Ecuadorian side of the border.<sup>3</sup>

### Wakllichishka: Co-constituted and transformable bodies

To understand my friends’ explanations about being ill, harmed, or dying because of such conditions requires accounting, first, for the intrinsically composite, co-constituted and transformable character of bodies, and second, for the agencies and actions that enter into bodily processes of constitution and deconstitution. The importance of the body’s morphable character and of the effects different agencies and actions have on it during a person’s life were indeed actualized whenever Amalia, relatives, or neighbors evaluated Andrés’s health conditions. They described it, when speaking in Kichwa, as *wakllichishka* and *unkushka*. *Wakllichishka* is the past perfect of *waklli-chi-na*, and qualifies a state of sickness by connecting it to the agency and the will of somebody/something. This is indicated by the infix *-chi-*. *Chi* specifies that an entity is subjected to another entity’s action and agency. When referring to those who are sick, people translate *wakllichishka* to Spanish as *hecho daño*. I translate it into English as “being harmed.” *Unkushka* comes from *unkui*—which means disease or illness. It describes the state of being in pain because of a particular disease. Both states entail being weak, not being able to walk, to work, and to take care of others.

Andrés’s relatives considered it possible that he might have been *wakllichishka*, because of his swollen stomach and legs that resemble the form of the trunk of the red lupuna tree. When it grows, the red lupuna gets thick in the lower part of its stem and develops a sort of bulge in its middle part. When somebody wants to harm another person, they either make a cut in the tree’s trunk and put the clothes of that person into the cut, or simply leave the clothes right beside the tree. The lupuna will

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3. In recent scholarship of Ecuadorian Amazonia, anthropologists use “Runa” instead of Kichwa. Here I prefer to use Kichwa since this is the word the people of the Uritu River most often used to refer to themselves.



slowly absorb the clothes, and gradually transform the body of the owner of the clothes. During this incorporation, the harmed person simultaneously and gradually takes on the form of the red lupuna.

The possibility of being *wakllichishka* and of this mutual incorporation reaffirms the assumption that bodies, being intrinsically co-constituted and transformable, are subject to the actions of human and nonhuman others, who alone or in collaboration may change the composition and qualities of one's body. Bodies can be deconstituted and slowly destroyed, undergoing unwanted metamorphosis (Guzmán-Gallegos 2009, 2010), as Anne-Christine Taylor (2014) also suggests in her analysis of Kichwa and Achuar understandings of healing. Bodies are, to paraphrase Eduardo Viveiros de Castro (2001) and Aparecida Vilaça (2005: 457), "chronically unstable," and thereby vulnerable.

Scholars working in Kichwa contexts in Ecuadorian Amazonia, myself included, have discussed the transformability and co-constitution and deconstitution of bodies mainly in terms of shamanism (Guzmán-Gallegos 2009; Muratorio 1987; Whitten 1976, 1985). In Kichwa shamanism a person is harmed when a *yachak* (one who knows and can see) attacks her/his body with *birutis*, which are described as sharp, pointed objects such as blowgun darts, jackknives, or injection needles. In the communities where I have worked, people relate *birutis* to a person's envy and anger, which sets off a wish to harm. A *yachak* or a person who has paid him can inflict harm by introducing *birutis* into another person's body. The harmed person's *aicha*—her body—and her *samai*—which can be translated as breath, vital force and/or will—may gradually be weakened. The person in question will lose her capacity to walk, to work, and to care for others; this condition is the opposite of what a strong Kichwa person is able to do (Guzmán-Gallegos 2010, 2015; Kohn 2002; Uzendoski 2005; Whitten 1976). Attacks with *birutis* are however one of many possibilities of being harmed. A person can get her footprint and other personalized objects abducted. In these cases, healing entails that a *yachak* after drinking *ayawaska* (*Banisteriopsis caapi*) sees who is harming and what has happened with a person's body, and removes the harming object or, if possible, recuperates what has been abducted (Guzmán-Gallegos 2009).

While shamans' attacks have received much attention in the literature, there are other important ways through which a person's body may become co-constituted or transformed. A person, especially a child, can become

*mancharishka* (scared), and her *aya* (soul) can be lured to abandon her body. This may happen when the person bumps into the wandering soul of a newly deceased person who is seeking company, or when the deceased person tries to attract a living relative's soul. Often knowledgeable women can help by rubbing the affected person with the hearth's ash, ensuring that the soul stays in the body (Guzmán-Gallegos 1997; Galli 2012).

Acts of constitution or deconstitution which entail resembling or reproducing patterns of form permeate daily life. Some of these are related to *paju*. *Paju* involves the transmission of a wide range of corporeal qualities, abilities, or conditions from humans and nonhuman beings by resembling or reproducing patterns of form (Guzmán-Gallegos 1997, 2019a; Mezzenzana 2018). An elderly woman can transmit to a younger person her capacity to cultivate and care for manioc plants by rubbing her fingers in a particular way. By using her feet instead of her hands to accommodate the hearth's logs, a woman can get *paju* which will put her at risk of giving birth to a child whose feet will come first. *Paju* rests on the similarity of a movement and of form: the woman and the child pushing with the feet in a straight position (Mezzenzana 2015). The importance ascribed to resembling, reproducing, or avoiding reproducing is moreover manifested in quotidian actions where the focus is on the relations between human and nonhumans. For instance, while bathing early in the morning children are encouraged to stare at a *chonta* palm, the trunk of which is hard and straight, so their bodies reproduce these qualities, becoming able to stand without easily falling. On particular occasions, people should not eat chicken to avoid their own legs becoming unsteady like a chicken's. The importance of resembling and assimilating corporeal forms is also manifested in encounters with nonhuman beings, which happen while persons dream or take *wantuk* (a plant belonging to the *Solanaceae* family), and when they encounter beings from the forests or rivers, or when they die (Guzmán-Gallegos 1997; Kohn 2013; Whitten 1985). The person's body may then adopt another form and composition.

In this article, when discussing *wakllichishka*, I am particularly concerned with the kinds of corporeal transformations in which resemblances or differences of form are at stake. As Francesca Mezzenzana (2018) suggests, paying attention to the importance ascribed to the similarity and difference of form may allow us to understand Kichwa and more broadly Native Amazonian perceptions of the relations between humans and nonhumans,





and how they affect each other in terms other than those of body and soul. Indeed, when Andrés's kin related his pain and illness to his body changing form and becoming similar to that of the red lupuna, they were alluding to the possibility of transforming by adopting a particular corporeal form, and of becoming somebody/something, which one originally is not.

The illness or death of a person, as in the case of Andrés, often elicits narratives about the transformability of bodies and the possibility of metamorphosis as a quality they share with other entities, in the sense that the latter can also transform by adopting the villagers' physical appearance. Multiple stories tell about these transformations. A woman washing clothes in the river or a child bathing can be attracted by a *bufeo*—the Amazonian river dolphin—and lured into the river and suddenly disappear. Men walking in the forests can be lured by a forest being called *shipshiku* or *chulla chaki* into unknown paths. Such encounters often imply the transformation of one's own body. The head of a person turned into a *bufeo* will slowly be turned around so her eyes will be placed on her back resembling a *bufeo*. The body of man turned into a *chulla chaki* will become hairy and one of his feet will be turned around. In order to attract people, *bufeos* can also turn into handsome young men, or *shipshiku* can adopt the appearance of a person's relatives or friends. Significantly, narratives about such transformations often give rise to conversations about the uncertain possibility of reversing such transformations. The villagers always emphasize that not everybody wishes to be transformed or can undo these transformations.

Being harmed involves undesired transformations caused by the ill will of other human beings, and by the acts of other entities such as the red lupuna. Corporeal transformations entail that a person's existence and vital relations are radically changed, or that the person gets sick or even dies. Consequently, when someone gets sick, people are overly concerned with tracing the co-constitutive agencies of a person's bodily transformations and decay. They are interested in finding out which relations, and through whose acts, a person's bodily transformations are brought about, and what can be done to reverse the process.

To sum up: a person's body is co-constituted and transformable because it is shaped by multiple contacts with humans and nonhuman entities, by the care of parents and relatives, by the ill-will of others, by everyday actions and unexpected events. Kichwa bodies are the re-

sult of the interventions of multiple human and nonhuman agencies. However, what we anthropologists may conceptualize as abstract matters, for instance routines, cultural beliefs, or immaterial knowledge, have for my Kichwa interlocutors very material, cumulative implications that leave traces and form their bodies, shifting its shape and constitution, making it strong or seriously weakening it.

### Not being able to see the diagnosis:

#### Unstable, opaque diseases

The premises about bodies' transformability, co-constitution and deconstitution have a bearing on what healing and curing are. Healing and curing are dependent on the capacity of a person to see and identify the heterogeneous, multiple, human and nonhuman relations and agencies that are causing a body to transform, making it sick, and even destroying it. In their search for health, as is also common among other Indigenous Amazonian peoples (Buchillet 1991; Kelly 2011), the Kichwa villagers of the Uritu River combine different therapeutic options and turn to a wide variety of experts. These experts range from people who are knowledgeable about plants, who can cure minor ailments—such as *mancharishka*—and persons who can enter and intervene in the worlds of other beings. Some of these are named healers or another kind of doctor (*curador, otro tipo de doctor*), others are Kichwa Pentecostal pastors. People also turn to the few nursing technicians, nurses, and physicians working in the area.

Regarding biomedical practitioners, both Kichwa patients and Kichwa biomedical practitioners pose that non-Indigenous practitioners are often *not able to see the diagnosis*. “*Not able to see the diagnosis*” is my composite translation of the renditions given by my interlocutors' when speaking in Spanish or in Kichwa. In Spanish my interlocutors explained to me that physicians or other biomedical practitioners *no pueden ver el diagnóstico*, which literally means “they cannot see the diagnosis.” Discussing the matter in Kichwa they said *mana yachanaun, ricunata mana ushasha*, which literally means that biomedical practitioners “do not know because they cannot see.” *Yachana*—to know—used in combination with *ricuna* and *ushana*—to see and to be able—underlines that knowing is linked to the capacity of seeing. Knowing-seeing also refers to a person's ability to enter into the worlds of other beings and to apprehend their acts. Regarding illness and curing, a person who knows and can



see is thus able to identify the acts and relations that are affecting the bodies of sick people. The analysis of Roberto, a nursing technician who had worked in several native Amazonian communities for more than twenty years, substantiates these points.

Roberto, born in one of the villages of the Uritu River was one of the two Kichwa practitioners working in the area (the other one was a nurse).<sup>4</sup> Discussing Andrés's health problems, Roberto explained to me:

When the patient's body is swollen due to liquid accumulation, surgeons diagnose it as hydrops. I have seen it in the main health center how they drain a patient, but that liquid comes back, and the body is filled with water anew. This happens over and over again. In medical terminology it is hydrops, physicians may also diagnose it as black hepatitis. But it is actually part of being harmed, it is part of the forests where people live. I will give you another example: a doctor can for instance require an X-ray, or a test of the patient's sputum, thinking that they will show the presence of tuberculosis. But nothing appears on the pictures or in the tests, even when the patient has all the symptoms associated with this disease. The patient seems clean, but, in reality, he is sick because he is harmed—*pai wakllichishka man*.

In Roberto's view, biomedical practitioners can register the liquid that accumulates in a person's body and can drain a patient, but they cannot deal with that which repeatedly makes the body be filled with water. Likewise, physicians can register particular symptoms and attempt, with the help of technical devices such as X-ray or sputum tests, to make present and visible the bacteria related to tuberculosis, without succeeding. Patients seem clean, meaning that through these biomedical practices, nothing is revealed. Roberto points out that, in these cases, what makes the patients sick is related to the forests in which they live. Roberto himself had gathered information on different treatments to deal with *wakllichishka* conditions. However, he preferred to refer the patients whom he could not help to a man in the village who was knowledgeable in identifying and curing these conditions.

In our conversation Roberto underscored the importance of being able to distinguish between symptoms that can be associated to a biomedical disease—hydrops

4. Due to economic constraints and the conditions of education, Kichwa nursing technicians and nurses can be counted on the fingers of one hand. There are no Kichwa physicians working in the area.

or tuberculosis—but which, in spite of being similar, are not manifestations of these diseases. Being himself a biomedical practitioner, he also pointed out his own limitations regarding curing ailments that might be product of being *wakllichishka*. One interpretation of Roberto's statement is that *not being able to see the diagnosis* refers to non-Indigenous biomedical practitioners' inability to distinguish between different kinds of conditions: that associated to *wakllichishka* and that associated to biomedical diseases. This explanation resonates with other scholars' propositions regarding Native Amazonians' perceptions of biomedical practitioners' inability to cure. Beth Conklin (1994) and José Antonio Kelly (2011) suggest that the Waiwai and the Yanomamo respectively consider that biomedical practitioners can cure "white diseases" or "diseases coming from the cities" and not "Indigenous diseases." Kelly (2011) and Dominique Buchillet (1991) add that according to Native Amazonians' schemes of etiology and therapy, shamanism operates in the realm of causes while biomedicine operates in the realm of effects, of symptoms.

Roberto, as Kichwa patients also do, considers it important to distinguish between being *wakllichishka*, and being sick of a disease such as malaria or hepatitis. I pose however that Kichwa are as much concerned with a person's ability to recognize the pathogenic agencies and the human-nonhuman relations that, although not easily visible and apprehensible, are gradually and slowly destroying a person's body. Attending to the importance my interlocutors ascribed to this ability, I propose to deploy *not being able to see the diagnosis* as an analytical tool to diffractively explore current biomedical practices in the area, and the sick bodies these practices constitute. The question posed is: what can we see if we use *not being able to see the diagnosis* to examine the affected bodies constituted by biomedical practices?

Consider, once again, the explanations I was given regarding Andrés's condition. According to Amelia and Andrés's relatives, he was perhaps dying of a disease which could be, they had learned, liver cancer, hepatitis B, or cirrhosis, or all at once. None of the biomedical practitioners who had examined him knew for sure what the disease was, and what could be causing it. As in Andrés's case, patients in the area often received various, "probable" diagnoses. For instance, my host's son, a young man in his twenties, had been coughing, had lost his appetite, and had periods with fever for several months. One of the physicians who visited the village believed he had tuberculosis, another considered it was pneumonia. Sharing



her worries with me, my host often underlined that these doctors, without knowing what was making her son sick, gave him medicines that were not useful. *Not being able to see the diagnosis*, as I am using it here, precisely points to my interlocutors' concerns about the inability of biomedical practitioners they meet to see and distinguish what is affecting a person over time.

I propose that this inability is produced by and within current biomedical assemblages, characterized by particular sociomaterial, human, and technological conditions, and particular modes of knowing. Most biomedical practitioners working in the area are non-Indigenous, and had temporary contracts ranging from three months to one year. This means that the medical staff is constantly changing.<sup>5</sup> In 2019, there were two non-Indigenous physicians who had to renew their contracts each year, for a population of approximately ten thousand persons. In addition, there were two non-Indigenous physicians who were doing their one-year in-service training in the area. One of them was part of a brigade that visits the area twice a year; the other was working at the area's main health center. Furthermore, only this main health center had appropriate technical devices to undertake certain tests, such as urine and glucose tests, simple hemogram tests, and blood film tests. This center had, however, no proper surgical equipment, no cooling possibilities, and therefore no vaccines or other medicines which require refrigeration. According to Manuel, a physician who had been renewing his contract for the last six years, the health centers have neither the staff nor the appropriate technical devices to properly determine a diagnosis and follow up with a sick person.

The ways diagnoses are produced are constitutive of biomedical practitioners' *inability to see the diagnosis*. Diagnoses are based on clinical examinations. In many cases, however, the nurse technicians or the nurses who for the most did the examinations found it difficult to decide how to interpret a person's symptoms. Most of them were new employees with little medical experience and no knowledge of the area. Sometimes, when they were not sure which diagnosis to make, they would try to call Manuel or the other physician at the main health center. Calling was not always possible. In most of the villages there was one telephone that stopped working if it rained heavily, which happened quite often. If they

were lucky to get through, they would explain the symptoms to the doctor who then would suggest a diagnosis and a treatment. If they did not get through, they just noted the symptoms and gave medicines that could alleviate them without noting any diagnosis.

Diagnoses must coincide with the categories defined on a form called *Formato Único de Atención* (FUA, meaning single format of attention). If a given diagnosis did not coincide with a category, the interpretation of symptoms registered were corrected by the person who was reviewing the forms, and who often was not the person who had previously examined the patient. Reviewing the forms entailed that the relation between the registered symptoms and the categories of diagnosis, specified in the FUA, often became more important than the relation between the registered symptoms and the concrete ailments of a patient. These practices contributed to separating the sick body from the registered diagnosis. This separation was reinforced by the lack of information given to the health centers of the area by the hospital in Iquitos, where patients often were referred. A patient's clinical record containing information about the diagnosis and treatment given at the hospital did not follow the referred patient. Since diagnoses and treatments given in different health institutions were not registered on a patient's clinical record, they did not relate to each other, and cumulative knowledge about a patient's conditions was not produced.

Detaching sick bodies and symptoms from diagnosis is an integral part of current biomedical practices and intertwined modes of knowing in which the main concern is the compilation of general epidemiological information. Biomedical practitioners are engaged in registering symptoms in accordance with the FUA's categories, producing statistics of medical conditions in the areas that coincide with these categories. One of the effects of these practices and modes of knowing is the production and reinforcement of biomedical practitioners' inability to recognize chronic ailments that transform and shape bodies over time. Epidemiological categorizations result in the constant production of different, probable diagnoses, as in Andrés's or in my host's son's cases. Ailments and symptoms seldom crystallize through diagnosis into particular diseases that affect particular bodies and require sustained treatments.

Reflecting on similar health registering practices carried out by non-Indigenous doctors in Venezuelan Amazonia, and on the understandings of Yanomami health agents of these practices, Johanna Gonçalves Martín

5. There are five employment categories differentiated by payment systems and varying degrees of job security.



(2016: 444) notes that the former engaged in the production of collective epidemiological conditions in the area. As in the Uritu River, patients' registers did not serve as personal clinical histories which could facilitate diagnosis, but instead doctors considered categories such as "intestinal parasites," "urinary tract infection," or "upper respiratory infection" as unspecific terms that revealed not the specific health condition of a person, but rather uncertainty and lack of diagnostic resources. Gonçalves Martín argues that the Yanomami health agents, on the contrary, consider these categories important because they were part of recognizing the pathogenic agents that were causing a disease. For my biomedical interlocutors and Kichwa patients recognizing was also central to healing; in contrast to Yanomami considerations, they underlined the impossibility and inability of "recognizing" as characteristic of biomedical practices.

Indeed, in the Uritu River, the impossibility of distinguishing pathogenic agents and relations characterizes biomedical practitioners' *inability to see the diagnosis*. This inability contributes moreover to shaping bodies, not as affected by a singular disease which can be treated, but either as indicators of diseases considered as characteristic of the area, or as sites of probable diagnoses, of a sort of general, nonspecific sickness. Except for vector-borne diseases such as malaria or dengue, ailments are rendered within these frames of biomedical practices as chronically unstable and opaque. From the perspective of patients, this instability and opacity means that there is no possibility for them of knowing what is happening with their bodies, and thereby of identifying possible ways of recovering.

Approaching diffractively the affected bodies shaped by biomedical practices, an important contrast with the bodies related to *wakllichishka* emerges. Being *wakllichishka* is premised on and at the same time enacts bodies as co-constituted, transformable by and vulnerable to the actions of human and nonhuman agents. To recover entails tracing, interrupting, and reversing the relations and actions which are transforming or destroying a person's body. Due to the ways the health care system is organized, material constraints, and modes of knowing, biomedical practitioners in the Uritu River are unable to identify and disentangle the relations and the pathogenic agencies that are causing a person's ailments. That symptoms become detached from patients' bodies, that sick bodies become indicators of general health categories, entail that chronic ailments that slowly affect a person's shape are not seen and sustained treatment is not given.

The sick bodies shaped by these biomedical practices are closely related to the bodies shaped by the harm of oil. Through toxicological practices, the latter are also constituted as bodies in which the long-standing intersecting confluence of oil-related toxins is not seen.

### The bodies related to the harm of oil

Toxicological practices, the knowledge infrastructure of which these are part, and the political configurations that support them, do not make visible the possible health effects of long-standing exposure to oil pollutants. The time scales of the harm of oil remain unseen. This toxicological gaze, formed by particular sampling techniques, and, in Michelle Murphy's words (2017: 495), by epistemic habits that portray chemicals as discrete entities, enact bodies—humans' and nonhumans' alike—as merely indicators of affected environments. Bodies become containers of pollutants. For the inhabitants of the Uritu River, one of the effects of such a gaze is that their bodies are constituted as *contaminados* (contaminated), a state of being about which nothing is possible to do. Let me situate these propositions.

The state of being *contaminado* can be traced back to the early 1970s when oil field 1AB was established and oil production started in the region.<sup>6</sup> Since then the presence of oil residues and waste around producing and abandoned installations has been recurrent. The villagers of the Uritu River came to perceive these residues as toxic when some villages along the river were affected by inexplicably high death tolls in the 1990s (Guzmán-Gallegos 2019b). Cooperation between lawyers working in a Lima-based NGO, two American and European environmental NGOs, and newly founded Indigenous organizations representing the villages located along the Uritu River and another major river, the Corrientes River, together with increasing social mobilization along the latter during 2003–2005 (La Torre 1998; Lu 2009; Orta-Martínez et al. 2007), contributed moreover to reconfiguring oil residues as oil pollutants. From the early 2000s, Pluspetrol Norte, the oil company operating the field at that time, started employing male Indigenous workers from the villages located within the oil field to do temporary cleaning and remediation operations. Many of them, such as Andrés,

6. The first private company granted concessions by the Peruvian state was Occidental Petroleum Corporation (OXY), followed by Pluspetrol Norte in 2000, and Pacific Stratus in 2015.





did so without appropriate equipment. Ten years later, during 2013–2015, the villagers of the Uritu River participated in collecting water and soil samples in abandoned installations located nearby their homes.

The production of these samples was part of agreements reached between the Indigenous organization representing the villages of the Uritu River and state authorities. Analysis of the samples showed the presence of heavy metals (such as lead, barium, cadmium), of chemicals (such as nitrogen), of total petrol hydrocarbons (TPH), and of polycyclic aromatic hydrocarbons (PAH) in river, lakes, and soils near oil-producing installations, and, importantly, in abandoned sites. Concentration levels were compared with those established in national regulations and international standards, such as those of the World Health Organization, the Canadian Environmental Quality Guidelines, and the Dutch list. The comparison showed that the concentration levels of heavy metals in soils, such as cadmium, and those of mercury, lead, and TPHs in several rivers and lakes were above permissible levels. Contrary to what had happened with earlier reports from the area, the documented presence of heavy metals in this case was constituted as toxic and hazardous. Through the production of oil samples and the quantification of heavy metals and of TPHs and by recognizing their toxicity, the longevity of oil residues and their spatial spreading were confirmed (Congreso del Perú 2013; DIGESA 2013; see also Yusta-García et al. 2017). In 2013–2014, the Peruvian authorities declared the area to be in a state of emergency in terms of environment, health, and sanitation. Exposure to oil pollutants started to be perceived and enacted as a condition and experience of toxic bodily alteration.

By 2015, conversations about hazardous exposure to oil components and bodily effects were common in the villages. People joked, talked, and worried about the possible effects hydrocarbons and heavy metals could have on their bodies and on those of the animals they ate. Pointing to similarities between what is affecting a body (a heavy metal) and the affected body, they would jokingly say to me when we were bathing: “Have you noticed that we in these villages are heavier than you? See, we sink more easily than you. You know, we are full of lead.” In a more serious tone, they would reflect on possible transformations that heavy metals and hydrocarbons might have caused in people’s bodies in the past (2019b). They would often recall times of high death tolls in their villages in the late 1980s and early 1990s, when dozens of adults and children died spewing blood, their

stomachs swollen up, and when animals and fish were found dead. They would also refer to bodily changes, establishing similarities between changes occurring in their bodies and in those of larger mammals. For example, once on the two-day boat trip from the closest city to Belencito, I met Maritsa, who was grieving the loss of her father. She described his suffering and her futile efforts to help him while he was in hospital. He urgently needed a blood transfusion, but since she could not donate her blood, they needed money to pay for a donor, which they did not have. She explained that in his last year, her father had lost much weight, and she compared his weakness and thin body to those of the deer and peccaries that frequented an abandoned oil well which leaked very salty water. “They love salt,” she said. “Salt is what candy is for us, but they do not know that salt in those places is poisonous, exactly as we did not know anything about pollution before. The liver of those animals is destroyed. It looks as if somebody had burned it with a cigarette.” Maritsa concluded that her father’s liver probably looked like the liver of a sick deer; deer would also die with swollen bellies.<sup>7</sup> These ways of establishing similarities between the qualities of that which is affecting a body (lead) and the affected body (a heavy body), and between human and nonhuman bodies (similar damaged livers of humans and animals) point to notions of being harmed in the sense of *wakllichishka*. This sense of harm differs however from *el daño del petróleo*—the harm of oil.

*El daño del petróleo*—the harm of oil is used to describe the socioenvironmental effects oil extraction has had in the area, the destruction of people’s livelihoods and the hazards’ uneven distribution between people. The harm of oil used in this sense is common in Indigenous leaders’ demands and in publications, such as for instance *El daño no se olvida* (Campanario and Doyle

7. A recently published study resonates with people’s analysis and observations. The study shows that four species of wild mammals, the lowland tapir (*Tapirus terrestris*), the paca (*Cuniculus paca*), the red-brocket deer (*Mazama Americana*), and the collared peccary (*Peccary rajacu*) regularly visited an abandoned oil well and a sump tank from which production water leaked. These animals licked, chewed, and swallowed contaminated soils and water. Since it is common that mammals visit natural mineral licks for sodium supplementation, it is probable that they came to these places due to the high salinity of water production (Orta Martínez et al. 2018). Maritsa referred in our conversation specifically to the red-brocket deer.



2017). This use is grounded in common environmental justice concerns. Villagers along the Uritu River also use the harm of oil in this sense. Furthermore, they associate this sense of harm with being “contaminados.” People would say to me when walking through polluted sites, “We know we are contaminated, but we cannot do anything with that.” Others would express their hope of keeping their children from becoming contaminated. I suggest that this sense and state of being contaminados is brought about through current and situated toxicological and biomedical practices. A toxicological study that was conducted in the area in 2016 illustrates this point.

After having documented the presence of pollutants in soil and water bodies, the Indigenous organizations representing the villages within the oil field demanded that state authorities conduct a toxicological study that could document the presence of oil-related pollutants in human bodies. As mentioned in this article’s introductory account, contrary to expectations of the villagers of Belencito, the authorities decided to limit the scope of the study to only the villages of the Uritu River, located nearby producing installations. According to Miguel, one of the toxicologists leading the study, this decision was the result of a combination of biotechnical considerations and of politics. National and US-based organizations that supported the demands of the Indigenous organizations representing the villages within the oil field were concerned with ensuring the best probabilities for establishing connections between environmental damage, pollutants, and human bodies. Their position was also the result of profound conflicts between different Indigenous organizations regarding their demands to the state, their different alliances with state institutions, and the ways in which representatives of the NGOs handled internal disagreements within the organizations (Guzmán-Gallegos 2017; Kerremans 2017).

These political configurations together with biotechnical requirements were decisive for the way in which the study was designed. The National Center for Occupational Health and Environmental Protection for Health (CENSOPAS), which was the public institution in charge of the study, proposed including all the villages of the Uritu River. Still, the national health authorities and the Presidency of the Councils of Ministries (PCM) rejected CENSOPAS’s proposal. CENSOPAS was obliged to consider only the villages that belonged to the Indigenous organizations which were supported by the NGOs and with which the central state—through the PCM—had reached an agreement. Moreover, the selection of affected bodies

and the bodily substances that were collected followed certain technical criteria. One of these was that people to be tested should have resided in the chosen villages for at least six months. This excluded people who had been working for years in the oil field installations but were not living in the selected villages.

Blood samples were taken to determine exposure to lead, and urine samples to determine exposure to cadmium, mercury, arsenic, and barium. Blood samples were also used to find out if there was exposure to benzopyrene. However, with the exception of the latter, blood and urine samples will only show recent exposure to heavy metals. Chronic exposure cannot be demonstrated through blood and urine. According to Miguel, this is because chronically exposed bodies tend to “adapt” and do not show symptoms of acute or recent exposure. Technically, the main focus of this study had a short time span.

The short time span and the spatial delimitation of the study did not permit it to account for the long-term effects of exposure. Furthermore, exposed bodies are constituted in certain ways. The results, which were preliminarily presented in 2018 (Ministerio de Salud 2018) in Iquitos, and to the chosen communities in 2019, showed the presence of mercury, arsenic, and lead in adults’ and children’s bodies. Bodies of children under twelve did not show the presence of cadmium, barium, and hydrocarbons. As Miguel stressed in several of our conversations, the study does not say anything about how these bodies are affected. It is noteworthy that the study does not account for the health effects that the presence of a mix of heavy metals may have on human bodies. Most seriously, chronic exposure is not accounted for. Given the fifty-year history of leaking oil-related pollutants in the area, the toxicologists found the study’s limitations profoundly disturbing. Miguel underlined that a danger with focusing on demonstrating the presence and amounts of diverse chemicals in humans and nonhumans alike is to treat bodies as, in his words, “if they were containers of different, discrete chemical entities.”

The toxicologists pointed moreover to the sociomaterial conditions of current biomedical apparatus and of biomedical practices, which cannot establish the health effects of exposure neither in this area nor in the rest of Peru. According to Miguel, chronic exposure does not exist as a local epidemiological problem. It is not considered a factor influencing the rates of morbidity and mortality in the area. The main focus of biomedical intervention in the area, and in the countryside in general, is on controlling epidemic diseases such as malaria, dengue, or yellow



fever. There are neither health programs aiming to identify continuous risk factors, nor physicians trained in toxicology. The FUA, the form used to register diseases, is not adequate. Recalling what I described above, Miguel highlighted that all kinds of symptoms are standardized on the forms, so that the same diseases are registered in the whole of Peru, regardless of specific conditions, specific risk factors, or regional variations in the composition of populations. “In other words,” Miguel laconically concluded, “here it is not possible to produce knowledge on chronic exposure.” In his view, human bodies do not become sick bodies since it is not possible to determine the long-term effects of exposure. Rather, bodies become merely “a type of environmental indicator of immediate exposure, of contamination.”

If one reads Miguel’s statements through the proposition of Kichwa patients and practitioners that non-Indigenous biomedical practitioners are *not able to see the diagnosis*, what could shaping bodies as containers of pollutants and as environmental indicators reveal? As mentioned, an important premise for the notion of *wakllichishka*—of being harmed—is that a person’s body is co-constituted by the acts of humans and nonhumans, and the relations in which a person is. Shaping bodies as environmental indicators reveals, however, a particular way of conceiving of and enacting the relations between human self-contained bodies with what could be called non-human chemical entities. These understandings and enactments entail that oil pollutants found in locations near oil installations are seen in and through single adults’ and children’s bodies. Blood and urine samples and toxicological analysis show indeed the immediate presence of chemical compounds. Single bodies become environmental indicators of recent exposure; they are vessels that contain pollutants in the immediate present. However, given the longevity of oil pollutants, the ways in which bodies are slowly affected and thereby shaped are not seen. An implication of this is that no disease in individual bodies and no epidemiological problem in a given area emerge. Thus, the transforming bodily effects of interacting toxins are constituted as not mattering for health practitioners and health authorities. That bodily effects of merging toxins cannot be seen by and do not matter for these actors, I hold, is consequential for how oil’s toxic harm is constituted for those who live with it. Contrasting the harm of oil with the bodies of *wakllichishka* shows that establishing oil’s toxic harm by constituting bodies as environmental indicators or vessels containing discrete oil pollutants involves isolating bodies from the re-

lations and the human and nonhuman agency that, in interaction, shape bodies. By making such relations and interactions absent, biomedical and toxicological practices do not make it possible to trace gradual, long-term bodily changes that compromise life. The biomedical and toxicological gazes make invisible affected, transformed bodies and thereby make them nonexistent. Crucially, not acknowledging the existence of slowly transformed bodies negates the possibility of recuperating their health.

### Concluding reflections

Discussing the role of bodily knowledges in comprehending environmental harm in the Ecuadorian Amazonia, Amelia Fiske (2018: 392) argues that it is necessary “to expand the boundaries of what counts as ‘harm’ in oil production.” In her article she is primarily concerned with showing that bodily knowledges, that is corporeal forms of knowing, do not constitute uncomplicated evidentiary claims of toxic exposure. She is interested in seeing bodily experiences of oil harm in relation to larger power structures, and our own complicities. In this article, tweaking her invitation to rethink what counts as harm, I have argued that, for the Kichwa inhabitants of the Uritu River, the harm of oil is better understood if it is considered in relation to other understandings of harm, such as those expressed in the notion of *wakllichishka*. For the Kichwa, the harm related to oil does not encompass or displace other notions and experiences of harm. As the introductory account suggests, when people evaluate the conditions of a sick person, they consider both forms of harm, and evaluate divergent practices related to healing and the abilities of their practitioners. I have showed moreover that different relations and practices constitute radically different bodies. The body of a person who is *wakllichishka* is enacted as co-constituted and transformable by human and nonhuman agencies, and as curable. In contrast, the affected body related to oil harm is shaped as a short-term environmental indicator and as a container of pollutants. Since it is not constituted as a transformed body, it cannot be healed. For the body of *wakllichishka*, healing presupposes that the relations and the human and nonhuman agencies that are causing damage are identified. That is what allows an interruption of the bodily destruction that is occurring, and reinstating the web of relations a person’s life depends on.

I have moreover deployed the notions of *wakllichishka* and of *not being able to see the diagnosis* to undertake a



diffractive reading of biomedical and toxicological practices in the Uritu River. Such diffractive reading entails acknowledging my Kichwa interlocutors' discursive authority and the validity of the concepts they use for social analysis. As I have discussed, *wakllichishka* points to understandings and practices that constitute the body as the material locus of sociality, of human and nonhuman relations and agencies. *Not being able to see the diagnosis* underlines precisely the importance of acknowledging and tracing these relations and agencies, and, importantly, points to the lack of the ability to do so. Attending to this Kichwa focus on the constitution of bodies, to their renditions of specific bodily transformations, and to their concerns with tracing destroying relations and agencies allows us to provincialize biomedical and toxicological epistemic habits and practices that make affected bodies absent and makes what affects them imperceptible. By admitting the validity of Kichwa analytics, I suggest that their analytics may also be considered as a profound critique of situated biomedical practices' inability to account for chronic ailing conditions in contexts of long-standing oil pollution. Not being able to see the bodily harm of oil is indeed not being able to see time scales, relations, and hazardous transformations and becomings.

By taking my interlocutors' insistence on making affected bodies present and on the importance of the ability of recognizing what affects them as the starting points of my analysis, I aim to add to current critiques of hegemonic models within Western sciences of epidemiology, toxicology, and medicine *without* rendering my interlocutors' concepts and analysis as flawed or insufficient to account for global issues, such as the health effects of oil extraction. My analysis shows how the situated enactments of these models are interventions that constitute the world (and bodies) in particular ways. Indeed, as Michelle Murphy (2006) and Suzana Sawyer (2015, 2017, 2022) cogently demonstrate, the inability to perceive the life-debilitating capacity of exposure is actively produced by epistemic assumptions, methodological design, and the sociomaterial apparatus through which knowledge is produced. Thus, far from being a universal quandary caused by the limitations of "existing knowledge," the constitution of bodies as environmental indicators and the impossibility of making present the bodily effects of chronic exposure are just the ways these models materialize in spaces such as the Uritu River. Regarding the situatedness of these models, it is worth recalling Kate Brown's (2017, 2019) and Susanne Bauer's (2018) insights. They tell us how Western radiation medicine has relied

on registering the amount of pollutants in the environment, to calculate individual risk and health damage. By contrast, their Soviet colleagues discerned bodily damage by attending to changes in nervous systems, blood cells, and hormone levels in patients living in an exposed area (Brown 2019: 199). These latter practices made affected bodies effectively present.

Finally, exploring the harm of oil through the harm of *wakllichishka*, and deploying it together with *not being able to see the diagnosis* as analytical tools to approach the bodies constituted by biomedical and toxicological practices, is part of decolonial tactics. I strive to work against our own anthropological complicity, to paraphrase Ellen Verran (2013: 20), in undertaking a colonizing reduction by which our categories are the only ones deemed as adequate for analysis. By refusing such reduction, I aim to make present and challenge ontic and epistemic assumptions about affected bodies, which not only serve the interests of petrocultural, but that also effectively silence Indigenous knowledge and experience of the effects of extraction.

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