

# Internet, Coloniality and Environment: Technology, Economic Commensurability of Diversity, and *Ich'el ta muk'*

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## Abstract

*This article questions the assumption of the Internet as a human right and of technology as fundamental for everyday life through inquiring into the relation between capitalism, technology and coloniality. By drawing on a postcolonial approach to the constitution of a European/Western subject and bridging postcolonial studies and political ecology, the article analyses how and to what extent coloniality, capitalism and technology might be intertwined. The main argument is that the Internet as we know it and expect it to mediate everyday life is grounded on capitalism and coloniality as socio-ecological regimes embedded in technological devices. The use of the Internet by the Zapatista rebellion in Chiapas, Mexico, is analysed to demonstrate how their alternative use of the Internet redefines some of the basic traits of this technology's expansion but also how the use of these devices and assemblages reproduces coloniality even when applied to activism and social transformation. Finally, the article looks more deeply into both the socio-ecological constitution of technology and other ways of understanding human and non-human beings; in this instance, using Tseltal and Tsotsil knowledge –constituent of the Maya roots of Zapatismo in Chiapas– and the idea of *ich'el ta muk'* (recognition-respect) to explore different perspectives to the one offered by capitalism and coloniality from which “non-technological” socio-ecological relations and communities can emerge.*

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## 1. Introduction

In December 2019, the human rights firm International Rights Advocates filed a forced child labour case on behalf of fourteen Congolese families against the giant tech corporations Apple, Alphabet (Google), Dell, Microsoft and Tesla (Kelly, “Apple;” Soguel-dit-Picard). On the basis of field research by anti-slavery economist Siddharth Kara and Dr. Roger-Claude Liwanga (Kelly, “Apple”), and in collaboration with the Congo-based NGO Alternatives Plus (Kelly, “Human”), the lawsuit is for “aiding and abetting extreme abuse of children mining cobalt in the Democratic Republic of Congo [DRC]” (International Rights Advocates). Cobalt is necessary to produce lithium batteries for electronic devices like smartphones, laptops, and tablets. However, cobalt is not the only mineral that is crucial for the Internet's expansion and inextricably linked to violence and coloniality: tantalum, tungsten, tin, gold, columbite and

tantalite (coltan) are fundamental components of informatic devices associated with violence not only in the DRC but also in other countries, like Colombia in the case of gold (ALBOAN), or Indonesia, where tin mining equals high “death and injury rates, and the destruction of coral reefs and forests” (Kirby).

While the lawsuit is a novel enterprise, attention has been drawn before to the regulation of conflict minerals (for example, United States Securities and Exchange Commission, OECD). Consequently, efforts to promote violence-free technology have emerged, such as “technology free of conflict” campaigns that advocate responsible supply chains to protect human rights and the environment in the local communities where these minerals are being mined (ALBOAN), and “due diligence” policies that try to reveal companies' supply chains to the public, in case minerals are being sourced from conflict areas. Unfortunately, such policy measures, as undertaken by the United States,

Europe, China and the DRC, are a matter of controversy as unintended negative effects have been widely reported [1] and, as the above-mentioned lawsuit clearly testifies, violence and forced labour continue to happen.

Notwithstanding the exploitative material basis of the digital expansion, in 2011 a United Nations Special Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression called upon all nations to ensure universal access to the Internet. [2] By 2016, the Human Rights Council had affirmed “the importance of applying a comprehensive human rights-based approach in providing and expanding access to Internet and request[ed] all States to make efforts to bridge the many forms of digital divides” (Human Rights Council 3). Access to the Internet was optimistically and widely embraced as a “human right.” More recently, in the midst of the Covid-19 pandemic, several individuals, institutions and nations have urged guaranteeing access, which is increasingly considered a fundamental right. Unfortunately, as exposed by the lawsuit above, this human right has been declared, embraced and promoted before minimum conditions and “human rights” have been guaranteed to those who make this technology’s envisioned expansion materially possible. In other words, a human right for privileged digital subjects is based on the exploitation of other subjects who make possible, together with the minerals and ore mined, the massive accumulation of profit by giant corporations who mobilise the expansion of digital devices and Internet infrastructure. The Internet is, in more than one sense, being transformed into a “tool on which even the victims of colonization would now seem to depend” (Couldry and Mejías ix), and vice versa: victims of colonisation are being transformed into an instrument on which the Internet seems to depend.

Despite visibilisation and regulation efforts, mining is one of the most environmentally pernicious activities, not only part of a global electronics industry but emblematic of Silicon Valley’s pervasive exacerbation of environmental and social inequality, racism and injustice, which have been documented in the large production of contaminants, temporary work and gender

inequities as linked to historical patterns of colonialism. [3] Rare-earth mining, as well as being crucial to smartphone and other device manufacture, also implies great environmental destruction linked to coloniality and the production of expendable human and non-human beings (Kaiman). Regardless of the violence inflicted, the myriad devices that represent connectivity are assumed from a privileged position to be fundamentals of “human” life. In this context, we need to question how violence (in terms of dispossession, plunder and depletion), capitalism and technology are related, whether and how this violence and the Internet are linked to coloniality and, therefore, whether a conflict-free technology is actually possible or rather, other “non-technological” ethical horizons are to follow.

This article questions the assumption of the Internet as a human right and of technology as fundamental for everyday life through inquiring into the relation between capitalism, technology and coloniality. The article is organised in four sections. The first section points out the current limitations in the literature on colonialism and the digital. The second section draws on a postcolonial approach to the constitution of a European/Western subject [4] and bridges postcolonial studies and political ecology [5] in order to analyse how coloniality, capitalism and technology –as material devices and assemblages put into “human” use– are linked. The third section, drawing on the previous sections, complements data colonialism as analysed by Nick Couldry and Ulises Mejías and contends that the Internet as we know it and expect it to mediate everyday life is grounded on capitalism and coloniality. The final section draws on the use of the Internet by the Zapatista rebellion in Chiapas, Mexico, to see how an alternative use of the Internet, one that does not assume a sociotechnical reality and does not mediate their daily interactions as a community, redefines some of the basic traits of this technology’s expansion but also how the use of these artefacts and systems reproduce coloniality even in their use for activism and social transformation. The article finally proposes to look more deeply into both the socio-ecological constitution of technology

and into other ways of being and understanding human and non-human beings; in this instance, into Tzeltal knowledge and the Maya roots of Zapatismo in Chiapas. The latter, it is argued, offers a different perspective: *ich'el ta muk'* –to live in recognition and respect for every being– to the one offered by capitalism and coloniality, and concealed through technology, from which “non-technological” beings can emerge.

## 2. Colonialism and the Internet

While great contributions have been made in denouncing practices of colonialism and imperialism through and on the Internet, the assumption of a technological world and its digital futures remain largely unquestioned. [6] For instance, data colonialism in the case of international aid work and development has been addressed as ‘ongoing Western control over data’ and ‘lack of ethical processes around data collection’ (“Data Colonialism”), with limited proposals such as local data ownership and consent as measures to prevent exploitation and colonialism. In this way, countering data colonialism remains a task that starts in the “West” with the creation of sustainable models in and by western agencies (“Data Colonialism”). In a similar way, attention has been paid to the need either to evenly distribute the benefits of an expanding Internet [7] or for each community to develop its own infrastructure, programming codes and alternative and decolonised digital futures, without questioning the “digital” in such futures. [8] In addition, technopolitical analyses have considered “how the material properties of technologies [have] shaped the exercise of political power”, providing means to accomplish strategic goals in world politics but also opportunities to escape the intentions of its designers (Hecht 3). Along these lines, analyses of the Internet and colonialism, despite recognising that a “new form of imperialism, techno-imperialism, is conflated with traditional political imperialism for what concerns Internet governance,” have concluded “that new governance models should be envisaged so as to achieve true democratic and multilateral Internet governance” (Hill 78).

Efforts to decolonise technology and the

Internet through equality in access, design, production and/or distribution remain within the scope of technological development, power politics and/or human rights, finally proposing “harm reduction” [9] instead of questioning the colonial character of the technological object. The same happens when violations to privacy and surveillance are taken to correlate to cyber-colonialism and traditional economic domination –“as a legacy of traditional colonialism” (Danezis), a perspective which despite having enormous relevance in pointing out the economic, military and government potential of direct control over people, data and resources, remains within the framework of competitiveness and economic/technological development. The link between technology and coloniality has not yet been addressed through their shared socio-ecological relations, which, recalling Science and Technology Studies and Critical Theory of Technology, [10] most probably are embedded by design in technological artifacts and systems like the Internet. An important contribution in that direction has been Nick Couldry and Ulises Mejias’ study on data colonialism, analysed in detail in the fourth section of this article, although their main focus is on “human” autonomy and not “human” and “non-human” socio-ecological relations. So far, attempts to decolonise the digital maintain the digital and the technological as its playground, assuming its place and continuity as part of an established everyday technical experience. This article questions such everyday technical experience on the basis of its intertwinement with coloniality and capitalism.

## 3. On socio-ecological relations: Technology, coloniality and the constitution of a privileged subject

Gayatri Spivak, in “Can the subaltern speak?,” called for attention to the risks of totalizing certain views corresponding to specific formations of subject, desire and power. While considering that resistance to power can ‘complement’, but not substitute, ‘macrological struggles along “Marxist” lines’, she warned against any attempts to universalize the consideration of resistance to power as a guaranteed privilege of the (European) subject. More recently,

regarding celebratory expectations of employing digital communications for activism, she has pointed out how “rather than the end of imperialism (postcolonial digital multitudes or social networks), globalization is a new stage of imperialism” (Spivak, “What is to be done” 5). Nowadays, a privileged digital literate subject has been repeatedly assumed on the basis and possibility of politically neutral technologies, with the underside of technology and its constitutive links to coloniality and capitalism often disregarded.

Recalling that her critique was directed at Foucault’s disregard for a theory of ideology and imperialism, Spivak argues that there has been a lack of “awareness of the topographical reinscription of imperialism” and calls upon us to “[n]otice the omission of the fact ... that the new mechanism of power in the seventeenth and eighteenth centuries (the extraction of surplus value without extraeconomic coercion is its Marxist description) is secured *by means of territorial imperialism—the Earth and its products—‘elsewhere’*” (“Subaltern” 85). This assertion might help explain how current practices of data mining and big data, known as the 21st century’s oil, are made possible by dispossession and plunder “elsewhere,” for instance the DRC, but also points towards a fundamental appraisal of “the restricted version of the West produced by that reinscription” (Spivak, “Subaltern” 85).

Spivak questions how “a conception of ‘power’... is made possible by a certain stage in exploitation” and calls for attention to ‘the broader narratives of imperialism’ in an effort to avoid isolation in a “self-contained version of the West” (“Subaltern” 85-86), regarding not only the first transformation described by Foucault from sovereign societies to discipline societies, when the focus and dependency shifts from the Earth and its products to ‘bodies’ and their practices, but a more contemporary transformation in the middle of the twentieth century. This transformation refers to “Atlantic imperialism under American leadership” and the integrations that made “possible the new era of commercial liberalism” as described by Mike Davis (qtd. in Spivak, “Subaltern” 86). By paying attention to how the exploitation of the Earth and its products is entailed by any power formation,

a broad narrative of imperialism allows one to consider that its privileged subject is constituted by otherness, one of exploitation and domination not limited to the human social. The subjective constitution and praxis of such a subject can be drawn from a self-consolidating constitution through the inclusion/exclusion of its human “other,” but also from that subject’s consideration or exclusion of its “extra-human other” and relation to the environment. The introduction of a decolonial element through political ecology, and more precisely critical environmental studies, helps us understand such a relationship. Without assuming capital as purely economic, the socio-ecological relations of capitalism (Moore, “Transcending” 5) are fundamental for interpreting and understanding subjectivation. It is not only the “other” social subject –colonized or subaltern– but also an “other” extra-human object of exploitation, including technologies and resources, that constitute the European and/or Western privileged subject.

While aiming to elucidate those concealed relations to “the Earth and its products,” a decolonial element acknowledges that there is no modernity without coloniality and that “modernity, capitalism and coloniality are aspects of the same package of control of economy and authority, of gender and sexuality, of knowledge and subjectivity” (Mignolo 9). Moreover, the capitalist world-ecological system is inextricably linked to coloniality. [11] As political ecology has unfolded a global perspective cognizant of the problematics brought by ecological crises in the so-called Anthropocene, Capitalocene [12] or Technocene, [13] it has also drawn attention to the socio-technical networks that underpin such transformations. [14] Global assemblages of artefacts appear within such approaches and analyses as parts of a highly inequitable world-system based on appropriation, economic commensurability, and interchangeability of diversity. From this perspective, “the steam engine ... was made possible not only by James Watt’s engineering, but by the eighteenth-century world-system in which capital accumulation in Britain was based on African slave labor and depopulated American land” (Hornborg, “Global” 17). Technology, like capitalism, has been understood as profoundly intertwined with

colonialism, according to Alf Hornborg.

Along such lines, Hornborg has pointed out how “the continued operation of a given technology [...] is contingent on asymmetric flows of energy, labor time, and/or other resources” (“Global” 151). Therefore, he conceptualises technology in terms of appropriation and capitalism, as the “machine or infrastructure as a material entity, which requires continuous inputs of fuel and maintenance work to function over time” (“Global” 151). Technology, like capitalism, depends on asymmetric resource flows –ecologically unequal exchange– and the economic equivalence or commensurability of diversity that is expressed in the use of money. Moreover, Hornborg makes the case that “the cross-cultural essence of capitalist power [is] a recursive relation between some kind of material infrastructure, on the one hand, and the capacity to make claims on other people’s labor and resources, on the other” (“Global” 151). Therefore, as appropriation, capitalism refers to any supralocal system of exchange dependent on asymmetric resource flows, any system “[urging] to displace work and environmental loads to other populations” (Hornborg, “Global” 5). Ultimately, sustainability is not only a matter of purely physical calculations but also needs to be cognizant of how technology is “embedded in global societal exchange relations” (Hornborg, “Nature” 117). On this basis, the author argues that there is no technological fix to problems of sustainability as technology is embedded in capitalism and colonialism and vice versa: technology’s agency depends on an ongoing supply of resources provided through a global system of exchange, whose social strategy and interests are obscured –by its own fetishism– assuming instruments’ agency on the basis of properties socially assigned by “humans” (Hornborg, “Global” 151).

Technology then, which is to be distinguished from techniques and implements, is inherently and profoundly intertwined with capitalism and coloniality as the appropriation of human and extra-human life. Turning to Jason Moore’s detailed analysis of nature(s) and capitalism adds important detail here. The author does not render these two categories a binary or two separate spheres –Nature and Society; rather,

he asserts, capitalism “does not act upon nature so much as develop through nature-society relations,” “*through* human and extra-human natures” (“Transcending” 2-4). In contrast to other interpretations of the metabolic rift, [15] environmental degradation is constitutive of capitalism and not a consequence of it: “[h]istorical capitalism does not create ecological crises so much as it has been created through them” (Moore, “Transcending” 11). Therefore, for Moore, “the town-country division of labour does not produce a metabolic rift; it is a metabolic rift”: the separation between direct producers and means of production, the unequal exchange of resources or biophysical wealth and nutrient loss and “depletion in the countryside, and pollution in the cities” integrate an ongoing rupture in nutrient cycling (“Transcending” 7). The author thus theorizes capitalism “as *world-ecology*, a perspective that joins the accumulation of capital and the production of nature in dialectical unity” (“Transcending” 2), being able to analyse the “socio-ecological constitution of capitalism” through its socio-ecological relations and maintaining a critical view on the “irremediable tension between the ‘economic equivalence’ and the ‘natural distinctiveness’ of the commodity” (“Transcending” 3).

With respect to technology and “epoch-making innovations,” including the shipbuilding-cartographic revolution, the steam engine, and the internal combustion engine, Moore asserts that “[e]ach epoch-making innovation has [...] joined together productivity and plunder” (“Transcending” 26, emphasis in original) and their success has depended on their operation within ecological regimes that expand “the opportunities for the appropriation of human and extra-human nature” (“Transcending” 26). Each of such innovations has been dependent on the vast appropriation of uncaptured nature –as a “free gift” or “Cheap Natures” (Moore, “Transcending” 26) “[driving down] *the share of world nature directly dependent on the circuit of capital*” (Moore, “Capitalocene II” 242, emphasis in original). This means that successful epoch-making technological innovations have been clearly dependent on and fundamental for accumulation, which takes place on the basis of appropriation, plunder and dispossession of

natures in the outskirts of the circuit of capital and with disregard for “the socio-ecological conditions of its (uncapitalized) reproduction” (Moore, “Transcending” 20). Technology, in this respect, has depended on and extended geographical expansion for the appropriation and depletion of natures, which the cultural, legal and philosophical referents of capitalism are unable to value and respect independently of their being-as-resource (even within “sustainable” efforts).

In a similar way to Hornborg’s understanding of technology as appropriation and economic equivalence and commensurability of diverse natures (“Global,” “Nature”), Moore argues that “value as world-historical project presupposes something false, that all of nature can be reduced to an interchangeable part; at the same time, it powerfully effects the partial transformation of nature into simplified spaces, such as cashcrop monocultures” (“Transcending” 17). Technology then, this article contends, *is based on and expands value as world-historical project, reproduces the economic commensurability and equivalence of natures, and produces simplified spaces*. Technological artifacts appear as simplified spaces that appropriate and compress time and space through homogenised incorporation of diversity based on the “immanent” (“human” socially conferred) instrumental properties of distant resources whose agency depends not on such alleged natural properties but rather on an ongoing supply of resources. The latter is provided through an unequal system of exchange and through technology’s embedded strategic interests, which are concealed and thus socially and politically unable to acknowledge the socio-ecological conditions of their uncapitalized reproduction. Therefore, they are unable to witness the diversity or multiplicity of beings and entangled intentionalities that constitute natures before and beyond their resource value form. Technology, in this view, is embedded with coloniality as a socio-ecological regime that silences its own socio-ecological and political trajectories and affects.

#### 4. Data Colonialism and the economic commensurability of natures

Recalling Jason Moore’s analysis of capitalist dependency on “cheap natures,” Nick Couldry and Ulises Mejias have understood colonization by data as “the systematic attempt to turn all human lives and relations into inputs for the generation of profit” (x). Such forms of colonisation draw upon the fundamental logic of capitalism and “historical colonialism,” which assumes the existence of uncapitalized nature or “natural” resources (“cheap social data”) to be appropriated and exploited in massive amounts to generate larger profits (Couldry and Mejias 89). However, in this instance, data is extracted from the mediation of social interactions through digital devices and according to the social strategies and interests of those third parties who program the artifacts and mine and process the data. This extraction through mediation, it can be argued, expresses the arbitrary attribution of value and the production of “nature” and the “social” as dependent on a socio-ecological regime and not as naturally given. Ultimately, extractivism and dispossession of “social resources,” according to the authors, leads to the destruction of social life in the name of economic progress (90) and to the human body being “reworked into something that requires a distant infrastructure, from which, incidentally, profit can be made” (x). In this case, they argue, individuals need not work for the capitalist but just “participate in social life, as they ordinarily would, in order to generate value for the capitalist” (102). Accordingly, dataism presents human life as graspable only through algorithms (Couldry and Mejias 199), while data infrastructures ultimately tend to dismantle human autonomy as data relations are “the means whereby capitalist relations are formed and extended –literally, as we connect” (ibid. 193) and data collection serves “deep and partial interests” (ibid. 208). Therefore, regarding platform activism, the authors assert that short-term achievements are important but “if the price of new tools for ‘overthrowing capitalism’ is to annex all of social life to capitalism, then the deal is a bad one” (103).

To counter data colonialism, Couldry and

Mejias put forth “*a vision that rejects the idea that the continuous collection of data from human beings is a rational way of organizing human life*” and propose “research as a decolonial tool, a tool in the hands of the subjects of colonial oppression” (203-208, emphasis in the original). Notwithstanding, and recalling Moore (“Transcending”) and Hornborg (“Power,” “Global,” “Nature”), the link between coloniality and the Internet unfolds beyond a call for more grounded designs for a decolonial tool or local “human” participatory and control processes. Rather, coloniality in this instance affects human and extra-human beings and, in times of unprecedented ecological crises, we cannot remain afraid of exploring and experiencing “non-technological” realities or communities “which de facto require *less* [or no] technological activity, thus less resource-concentration and inequity, and less environmental “turnover” consumption, and destruction’ (Wynne xiv, emphasis in the original). The latter is never intended as either an imposition or a prohibition, but as an invitation to rediscover the multiplicity of beings and natures to which the “environment” and the “Earth” refer – “the environment of each organism, and therefore of all organisms, is all other organisms” (Viveiros de Castro and Danowski 180), and to value each one beyond their exchange or economic value based on economic commensurability of diversity. Accordingly, coloniality in this instance is not only about datafication in the 21st century but also about the persistence of socio-ecological regimes that have made data exploitation possible.

In other words, and emphasising Moore’s (“Transcending” 17) and Hornborg’s (“Global” 171) attention to value as world-historical project, the economic commensurability of all beings for capitalism (through money) implies the insignificance of diversity outside the margins of capitalism, except for its availability as “cheap nature” or “free gift.” It means that data colonialism is not only a matter of data and human social life but is also about exploitation of extra-human and “non-human” resources. The ideal of connectivity expressed in the Internet as a human right not only ignores such beings but also constitutes a “connected humanity” on

the basis of such concealment. Across layers of socio-ecological relations, technological devices and assemblages as complex as the Internet reproduce economic commensurability and indifference toward diverse natures (and communities) through each of its standardised (material) components, many of them (if not all) coming from distant geographies and intertwined with appropriation, exploitation and ignorance. Alternatives to data colonialism and, more importantly, to coloniality, may not appear within a socio-technical reality that assumes technology as basic to everyday life, even if this reality is critical of its own conditions. The proposal here is to consider not a romanticized perspective of a non-technological past that allegedly happened “before” a technological present, subject to an ongoing timeline of progress, but rather the multiplicities of “non-technological” (non-capitalist/non-colonialist/non-instrumental) diversified socio-ecological relations and entangled intentionalities that take place simultaneously but are dismissed on the basis of progress/development/humanity (and comfort) and the assumption of particular cultural values.

The following section explores the Zapatista experience of the Internet in order to further understand how the Internet and technology can be revisited through acknowledging the primacy of the Earth and community knowledge and practices. Through emphasising the critical adoption and collective use of the internet by the Zapatistas as an alternative to data colonialism, the section calls attention to the task of acknowledging how even alternative and activist uses of technology, although collective and observant of diversity at a local stage, may reproduce and operate on the basis of coloniality as embedded in artifacts. Therefore, it is important to address socio-ecological relations not only at the local level of reinscription or use of technological devices but also as embedded in technological artifacts and systems. The final part of the article draws on Tseltal and Tsotsil knowledge, in which Zapatismo in Chiapas is rooted, to offer an important instance in which recognition of and respect for all beings is an important foundation of community life.

## 5. The Zapatistas in Chiapas and the Internet

The most emblematic mobilisation in Mexico that has found the Internet an asset for activism is the *Zapatista* organisation in Chiapas, known as EZLN. This predominantly ‘indigenous’ guerrilla movement comprises Tsotsil, Tseltal, Tojolabal, Chol, Mame, Zoque and mestizo communities. It became visible in 1994, after more than ten years of being clandestine (Muñoz 27), the day the North America Free Trade Agreement (NAFTA) came into effect supported by amendments to Article 27 of the Mexican constitution, which had previously promoted territorial distribution and been used to protect indigenous peoples’ communal land and *ejidos* from being sold as private property. This uprising brought attention to the inequities of capitalism and the persistence of colonization within modernity as a long-lasting (more than 500 years long) reality in Mexico. This reality was fostered by the Mexican state and transnational capitalism under the banners of progress, globalisation and free trade (Subcomandante Marcos, “Entrevista”). As the *Zapatista* spokesperson, then Subcomandante Marcos, explained, the “free trade” agreement was for them an expression of transnational liberalism and the neoliberalisation process that was intensifying its effects over other models of production and political understanding. NAFTA was emblematic of a confrontation between ‘two winds’, one from above aiming towards the exploitation of land as a mere resource for consumption and the concentration of wealth, and one from below claiming ‘tierra y libertad’ [land and liberty]: a wind that ‘born below the trees, will come down from the mountains; it whispers of a new world, so new that it is but an intuition in the collective heart’ (Subcomandante Marcos, “Chiapas” 297). Beyond any idealisations of the Zapatista struggle, it is the strategic significance and political use of digital technologies by EZLN that is addressed in the following lines as indissociable from ‘tierra y libertad’ and that ‘collective heart’ to which Marcos refers.

The displacement of indigenous peoples from their territory has been a constant practice in Mexico, spearheaded by racism and the inequalities it fosters. Territories have been seized from peasants and indigenous peoples, either

illegally or by exploiting the gaps in agrarian and land tenure laws. Pushed deeper and deeper into lowland rainforest, Maya communities in Chiapas were increasingly excluded from political and economic life, and the territories they inhabited further exploited and depleted. [16] In this context, the Zapatistas –mainly Maya communities and urban Marxist and middle-class revolutionaries (Tsotsil, Tseltal, Tojolabal, Chol, Mame, Zoque and mestizo)– gained national visibility on the 1st of January 1994, occupying prominent towns and municipalities in the state of Chiapas, the poorest state in Mexico. The guerrillas initially relied on military skills and the programme of action developed by the rebellion’s military command. [17] Once the EZLN was forced back into the mountains by the military strength of the Mexican state, the movement and allied activists resorted to information technologies as a main strategic component. The EZLN developed an international information campaign that was retransmitted through the Internet thanks to a network of activists and NGOs from within Mexico, the US and Canada (*redes de solidaridad*, “solidarity networks” in English). [18] The campaign and the network established “gave constant visibility” (Rovira Sancho, “Networks” 388) to events regarding the Zapatista indigenous communities and achieved international pressure against the Mexican government.

The EZLN later consolidated itself as an anti-systemic heritage retrieved by new movements standing against neoliberalism, and more concretely against corporate media. Its innovative Internet operation inspired new efforts based in the US and Canada –such as the *Indymedia* project, a network of independent media that developed in the wake of the battle of Seattle in 1999 (Wolfson) – and other contemporary social movements. [19] The Zapatistas’ example gave activists interested in new media and the Internet an extraordinary case: a “framework and a language that catalyzed the development of a new type of social movement that had media and communications at the core” (Wolfson 152).

It is significant that the Zapatistas and EZLN, an insurgency mainly composed of indigenous peoples and with very limited access to the Internet, successfully gathered a support

network that made it the “first major case anywhere” of “information-age social netwar” (Arquilla et al. 3). Unlike many other movements and mobilisations that have employed digital devices and the Internet to advance their demands and agendas, the Zapatistas have pointed to the peculiarity of the Internet as it has been designed within capitalist expansion, offering a critique of development agendas and discrimination and making a very specific use of such technology. Part of a thirty-year-long organisational effort toward national liberation and autonomy, the Zapatista use of the Internet is worth revisiting against the background of an expanding normalisation of Internet-based digital technologies.

Despite having a “superb media spokesman,” the insurgency “did not have their own laptop computers, Internet connections, fax machines, and cellular telephones” (Arquilla et al. 3). Such devices “were in the hands of most transnational and some Mexican NGOs –and they used them to great effect for conveying the EZLN’s and their own views, for communicating and coordinating with each other, and for creating an extraordinary mobilization of support” (Arquilla et al. 23). As Todd Wolfson has explained in a particularly clear way, “it was the use of new media tools principally taken up by activists and NGO leaders outside the EZLN that marked the movement” in the eyes of an international audience (160-163). Technological mediation allowed both NGOs and the EZLN to take advantage of already existing relations of solidarity and to create new ones that received increasing support from beyond Chiapas. Nevertheless, the use of the Internet was always politically grounded in “a process that comes from a clear political line, based first and foremost in the interests of ... peasants of southern Mexico, and consequently allows for an adaptable strategy of confrontation” (Wolfson 160-163). This clear political line is expressed in the slogan ‘tierra y libertad’ [land and liberty]. In other words, NGO and civil society support was included within an already and to a large extent consistent process of political understanding that had land and autonomous self-government [liberty] at the core of its efforts.

It is in relation to land and liberty that we may comprehend the historical and spatial

development of Zapatismo in Chiapas as a complex set of events and multiple encounters, from the organization of Maya communities in the jungle, the on-going relationship with the Catholic church and liberation theologians, to the arrival in indigenous communities of urban Marxist and middle-class revolutionaries coming from Northern Mexico. The translation and mixture between western revolutionary traditions and Maya roots [20] led to what has been described as a sort of “Marxist/Mayan synthesis” in armed confrontation with the Mexican military, which led finally to the change of strategy and the use of information networks (Wolfson 160). By the 1990s, the Zapatistas were listening to and *talking with* variegated expressions of a common concern against neo-liberalism and a common understanding of humanity expressed in eleven demands: work, land, housing, food, health, education, independence, liberty, democracy, justice and peace (*trabajo, tierra, techo, alimentación, salud, educación, independencia, libertad, democracia, justicia y paz*) (Comandancia EZLN 35). [21]

The Internet provided an opportunity for dialogue, coordination and organization between the community in rebellion and outside organizations and activists. The shared experience of being together as a community as such did not rely on technological support but on a form of living together grounded on and translated into territory. Paying more attention to the latter, the constitution of the Zapatistas as a political process and collective subject was not due to its digital networked character, which was only acquired after the uprising. The collective practice was constantly formed and transformed through decades of everyday interactions and organization that go back to the years of land distribution, *ejidos* formation from jungle settlements, extra communitarian solidarity networks [22] and the intersubjective translation –respect and dialogue– that started in the 1970s. [23] All that was finally expressed to world audiences as a visible collective voice on the 1st of January 1994.

The insurgency’s use of the Internet has much more to do with their own experience of the political than with information networks, communiqués, or bullets. The “EZLN was not a

‘wired’ indigenous army” (Arquilla et al. 23), the insurgency neither saw information technologies as fundamental to their political unity nor expressed static guidelines and principles of organization for technological endorsement. In contrast to more recent mobilisations – ‘connected multitudes’– with collective actions fundamentally mediated by the Internet, [24] the Zapatista’s distinctive practice did not rely on mediating collective existence and practice through the Internet. Recent urban activism and mobilisation through social media platforms can be understood as mainly responding, as Stefania Milan has characterised, to the importance of private individuals personalising and putting forth their own experiences, where the “‘collective’ [is] experienced through the ‘individual’ and the group is the means of collective action, rather than its end” (887). The individual is constituted within the limits of the platform, then grouped in a collective as a result of individual aims and shared emotions, which then cluster around a perception of reality and a specific aim [25] that although fulfilled temporarily does not necessarily have the collective as its end. In contrast, the Zapatistas located the Internet within their own way of life and experience of the earth [la tierra] and according to their own knowledge, understanding and practice of community, which has underpinned their use of technology and their ongoing questioning of developmental efforts and mainstream trends towards the normalisation of Internet mediation of everyday life, using the technology they question to diffuse their critique.

As many Zapatista members have asserted recently, a crucial motivation for using the Internet has been to stay informed about what happens beyond Zapatista territory and mainly about the grievances committed against other peoples across the world in the name of capital, in addition to establishing solidarity with those peoples (personal communications). The rebellion has used information technologies to gather support, coordinate actions, and diffuse information against capitalism and the neoliberal agenda. Strategic skills and savvy use of the media have proved fundamental for the Zapatista organisation.

In 2014, once the organisation noticed that commercial media copyrighted information on the organisation and offered their interpretation of events but not the Zapatista voice, they decided to organise their own media: *Los Tercios Compas*. Instead of media, which in Spanish is *medios* and in terms of portions means “halves,” they used *tercios*, which would mean “thirds” in addition to *compas*, short for *compañeros* or partners (Subcomandante Insurgente Galeano, “Medios”). *Los Tercios Compas* stands for the organisation’s use of their own information and diffusion appliances, describing them as thirds that are partners (ibid.). *Tercios Compas* is an alternative to mass media and an option for information to become a partner, not a worker under the sign of commodification. The communities required journalism that performed investigation and analysis, so scarce in mass and commercial media, as well as avoiding third party mediation of their voice to the world. They wanted to speak for themselves to other communities and groups within and beyond the Zapatista territory. They recorded events and information to share with sympathisers and the general public and allowed Zapatista members to recognise the many events that take place between them and other sectors of national and international society. With *Tercios Compas*, the Zapatista organisation took over the administration and publication of the website *Enlace Zapatista*, where they publish *communiqués* and call for participation in events. More recently, they have produced and presented films at their own film festival *Puyta cuxlejaltic* in Chiapas (Comisión Sexta del EZLN).

The collective use of the Internet has thus maintained a shared political meaning and orientation within the framework of the organization, while their understanding of the Internet corresponds in many ways to their political orientation. Paradigmatically, Subcomandante Insurgente Galeano (former Subcomandante Marcos) when talking to alternative and free media has described the Internet as a battlefield (“Primera parte”), a notion that has been alluded to in more recent events like CompArte Cybernetic Edition in 2017. Moreover, informatics has been described

by Subcomandante Marcos as the means of globalisation to expand and conquer the world, as all languages are to be translated into that of informatics (Subcomandante Marcos, “Cuarta”). “Alongside a technological revolution that sets the entire world, through a computer, in their desks and to its commands, financial markets imposed their laws and precepts on the entire planet;” the informatics revolution, just like the industrial revolution replaced muscle with machine, replaces brain with computer (Subcomandante Marcos, “7 piezas,” my translation). Contrary to understandings of the Internet as a new public sphere that is essentially open and democratic, Subcomandante Insurgente Galeano and the Zapatistas have emphasised its conflicting traits and the necessity to spread art, resistance and rebellion across and through this space. In this light, the Internet and social media platforms are part of an overall critique of capitalism and developmentalism with a particular focus on technology. As Subcomandante Insurgente Moisés and Subcomandante Insurgente Galeano (“300”) have emphasised in a Zapatista forum:

The possibility to purchase labor power is provided for by private ownership of the means of production, circulation, and consumption. Private ownership of the means of production forms the nucleus of the system. Built upon this class division (the owner of private property and the dispossessed), and hiding it as such, are a whole range of juridical and media simulations, as well as other dominant evidentiary forms: citizenship and juridical equality; the penal and police system; electoral democracy and entertainment (increasingly difficult to differentiate); neo-religions and the supposed neutrality of technology; social sciences and the arts; free access to the market and to consumption; and a whole spectrum of nonsense (with some versions more developed than others) of things like “change begins within oneself,” “you are the architect of your own destiny,” “when life gives you lemons, make lemonade,” “don’t give fish to the hungry, teach them to fish” (“and sell them fishing poles”), and, highly fashionable today, efforts to

“humanize” capitalism by making it good, rational, and objective, that is, “capitalism light.”

The neutrality of technology as a form of simulation is understood in relation to private ownership. This form of simulation can be seen as part of the effort of those who simulate to sympathise with other political communities in order to make them embrace a capitalist way of life by subterfuge, taking advantage of simulation to convince and expand but directly threatening territory and, with it, community life. Thus, Subcomandante Moisés and Subcomandante Galeano explain that

[w]hen a mining company invades the territory of originary peoples —often with the alibi of offering “work opportunities” to the “autochthonous population” (yes, that’s what they call us), they aren’t just offering people wages to buy a new high-end cell phone: they are also discarding a part of this population and annihilating (in all senses of the word) the territory in which that population functions. The “development” and “progress” offered by the system in reality disguises what is truly its own development and progress and, more importantly, hides the fact that that progress and development are obtained via the death and destruction of populations and territories (“300,” emphasis in the original).

The neutrality of technology, as a promise with no cost, helps conceal the core practice of capitalism regarding originary territories: depletion and dispossession. Capitalism expands through concealment embedded in the implicit, although for the Zapatistas explicit, agreement to be governed. In this same line, discussions through social media platforms have been described as “autoerotic exercise” (Subcomandante Moisés and Subcomandante Galeano, “A continent”), thus calling into question the idea of a new public sphere from its capitalist foundations. Besides waging war through the Internet through spreading their word (or word-seed, in Spanish *palabra-semilla*), it is clear that in terms of information, communication

and most importantly organisation, there is an intent to surpass concealment and the mediation of third parties and establish interpersonal communication and autonomy. Even the use of social media platforms like Facebook and YouTube has been notably limited to diffusion of information under a collective account.

Subcomandante Galeano has emphasised that “the best information is that which comes from the actor and not from that who is covering the news” (“Primera parte,” my translation). The idea is to have those who are living in the place you want information about “tell us what is going on, not through someone else” (ibid.). In addition, it is clear that the Internet offers huge amounts of information and “you can find whatever you want, if you are in favour of something you will find arguments in favour, if you are against something in there you will find arguments against” (ibid.). What is needed, according to Subcomandante Galeano, is “for that information to have a space to accommodate within, to be legible” (ibid.). This is where free, autonomous and alternative media have an opportunity to investigate and inform and maybe even communicate as direct interlocutors. This is why he asserts that “those who have disrupted the world of information are collectives where the individual is completely diluted” (ibid.). And he finishes off by saying that “what they have seen is that the anonymity of the collective is what is starting to replace and put in crisis [that] media eagerness of those above for finding individualities and personalities” (ibid.).

In light of data colonialism, Zapatista municipalities have intended to establish autonomous infrastructure, or at least try not to compromise autonomy as a community through third party commitments. While the Zapatistas support art, resistance and rebellion, and of course the copyleft idea as opposed to the copyright regime (Subcomandante Galeano, “Medios”), information on everyday life in the communities has not been digitised so technologically and technically equipped corporations and organisations cannot exploit such data. In developing their own services, they have dismissed digitisation as intended by governmental agendas and as expanded through health, education, revenues, taxes, and banking services. Limiting their use of

the Internet mainly to communication with the outside, with individual and family limitations on mobile phones with Internet connections and geographic limitations to infrastructure, drastically reduces the amount of data available. Most importantly, their decision-making process is able to assess collectively instead of according to foreign parameters of development and digitisation.

As emphasised by Subcomandante Galeano, the intent of the Zapatistas is to establish direct communication while upholding anonymity and collectivity instead of personalisation and individuality (“Primera parte”). Without dismissing individuality, there has been a tendency to locate and ground such individuality in community life and face-to-face interaction. Neither community organisation nor internal communications rely on the Internet. Their sense of being a community has not depended on technological support but rather on the shared horizon of an autonomous way of coexistence, collectivity and practices like patience, listening, and decision informed by a ‘culture of intersubjectivity’ that consists in considering all beings as subjects to be respected. [26] The organisation looks towards awareness and constant reiteration of the importance of recognising and respecting equality (which does not necessarily mean a *de facto* condition) rather than individualistic fashions.

The individualisation of identity, through profiling and data mining of behaviour, desires and attitudes, becomes ineffective in a non-mediated community. The principle of non-commodification of information, communication and organisation, along with fundamental cultural values and knowledge of equality and patience, makes appropriating individual identities that are distinguished from the collective less probable. Where members of a community live together, there is less space for foreign mediation of community practices. This does not mean taking for granted that Internet expansion and the vast use of profiling platforms is merely impossible within the Zapatista municipios; it means that the political experience of the Zapatistas is grounded in concrete communities, on concrete territory, and in a concrete mode of life. To expand the individualisation of identity and its associated

capitalist values would most probably mean displacing autonomous self-government and the principles and practices that have nurtured the endurance of these peoples. It is also necessary to acknowledge, however, that despite a local and embodied political process that underpins their use of the Internet, socio-ecological relations as embedded in artifacts still remain unaccounted for, at least in a direct manner.

It is clear how the Zapatista use of the Internet rejects what Couldry and Mejias call data colonialism – “*the idea that the continuous collection of data from human beings is a rational way of organizing human life*” (203)– and the interests that motivate it. Just as these authors propose constructing a different vision of order, one that rejects “the imposition of one reading of how the world and its knowledges should be organized” (203), the Zapatistas uphold a world where many worlds are possible. The Zapatistas, as Couldry and Mejias propose, have “disidentif[ied] from the social pressures of digital networks” and they “do not conform to the organizing logic of the network, whether by choice, by accident or by exclusion” (205). The Zapatistas, one could argue, have been “outside the network even while remaining formally inside” (Couldry and Mejias 206), the Zapatista’s rebellion “acknowledges the totality that must be rejected but denies the legitimacy of that emerging order *as a whole* while admitting our continuing complicity in the practical relations of data colonialism” (ibid.). Notwithstanding, efforts to understand capitalism, modernity, technology and coloniality should not stop at this point as the internet and technological artifacts can be used in the name of a different reality without destabilising technology’s socio-ecological and cultural/philosophical groundings.

Considering the above, the collective knowledges on which the Zapatista rebellion has been rooted have received little attention so far, despite offering alternative readings to value as a world-historical project based on economic equivalence. Indigenous peoples’ knowledges, as with many other knowledges and philosophies across the world, might offer different perspectives on how socio-ecological relations *in toto* can be organised. In other words, it does not seem enough to imagine and develop

alternative orders of sociality if we still do not acknowledge, first, the socio-ecological regime and the multiplicities this regime dismisses, as embedded in “technological” artifacts; and second, the multiplicity that is already here, situated and incorporated in ourselves. We need to acknowledge how technological artifacts and systems entail embedded processes and socio-ecological relations no longer explicit in their everyday, anthropocentric and socio-technical instrumental forms, a task still pending within important anthropological readings (for example, Viveiros de Castro and Danowski 187). Technology, taken as expanding economic commensurability and instruments that are means to a “human” end, halts this acknowledgement and affection. Therefore, the need remains to recognise and respect the diversity of natures and entangled intentionalities that constitute us.

As Xuno López Intzín explained in a Zapatista forum, among the Tseltal and Tsotsil peoples “everything that exists has its *O’tan*-heart and all *O’tan* has *W’otan*, its guardian” (267), and

this notion of *O’tan* is one of the forms of our *sna’el k’inal* in our pueblos [towns]. *Sna’el k’inal* is something like knowing the world [saber el mundo], meeting/getting to know the world, to comprehend it, understand it, recognise it, to long for it, to miss it, to apprehend it, knowing to be-exist in it, knowing to direct the word, knowing to live in the *ich’el ta muk’*-recognition-respect, knowing to listen, knowing to feel, being awake, being vigilant, being guardians [estar de guardianes], knowing to correspond (ibid., my translation).

From the *O’tan*-heart the *sna’el k’inal* unfolds, while at the same time the *O’tan*-heart unfolds as a form of *sna’el k’inal*. *Ich’el ta muk* appears as a mode of knowing and living in recognition and respect for everything as everything has *O’tan*. This is the seed-word [semilla-palabra] that is taught by current *Tsotsil* youngest elders [mayores-menores actuales] (López Intzín 267). As the author continued explaining, “our grandmothers and grandfathers also comment that, just as everything has *O’tan* and *Wo’tan*, as well everything has *Ch’ulel*, which ‘is like the spirit, the soul, conscience and language,

it is being, that which on its own [de por sí naturally] exists” (269, my translation). Instead of an instrumental understanding of nature in which beings are objects designed or meant to follow another being’s specific programme, each and every being in the universe has its *Ch’ulel*. In contrast to digitisation’s rush to relocate trust from human mediation to machine mediation and concealed human strategies, recognition and respect for every single and *whatever* being speak of a fundamental and immediate interaction and trust among a multiplicity of beings and worlds. “With the existence of many *Ch’ulel*, Tselal and Tsotsil people, among others, ‘consider that a pluriverse *Ch’ulel* exists” (*ibidem*). “From this notion our world was ordered,” asserted López Intzín as he emphasised how “the sacred is co-substantial to our humanity,” as it is about “matter and spirit amalgamated” and about all that exists being sacred (271).

López Intzín has described how “this mode of *sna’el k’inal* [the notion of *O’tan*] is increasingly less common” as “[capitalism] has taken away *Ch’ulel* from all that exists and has turned it into an object, a thing, a commodity” (269). However, he underlines, “re-cognising [re-conocer] again the sacred in everything that exists means to take back our sacrality, our humanity, to hearten-us [*corazonarnos*] and unite-us [*hermanarnos*]” (271). The way of being-together in this account is an inquiry into collective experience accompanied by the reiteration of equality in facticity and from which meaning and order arise in a specific form. As López confirms,

constituting us into a *kol-lek-tive Wo’tan* is as well to become a *kol-lek-tive Ch’ulel* and to become a cosmic-*kolektive Xch’ulel wo’tan*, so to speak, in guardian spirit-consciousnesses of all that exists. In this all that exists is included our own existence. To be vigilant, sentinels... each one in the place that corresponds to her but with feet, heart and eyes [from/on] the earth. It is a come-and-go... We enunciate ourselves from an exclusive-excluded *ko’tanjo’tik* [heart] in order to reconstruct, reincarnate a *ko’tantik*, a new heart, an our-we-humanity [una nosotras humanidad nuestra], in which we walk *pajal-pajal* [as equals], in evenness as

those women in our towns demand, in which there is *ich’el ta muk’*- respect and recognition to each one of its grandeur, its value, its importance, its being, its doing, its thinking and its existence (268-269).

In the preceding lines, the experience of collective existence pushes towards becoming ethics, not as prescriptive points or specific norms of conduct but as a call for and embodiment in place and community of a concrete and grounded encounter. This encounter occurs, firstly, within an exclusive community and within and between each of its members through awareness of what *is* (facticity) and the way in which tradition has preserved knowledge; and secondly, through the awareness of community’s collective form and its distance from other modes of life, both based on the awareness of a fundamental living together in recognition and respect –*ich’el ta muk’*– for the equality of all things. This ethical direction might speak of “non-technological” politics and societies, in which beings and natures are not reduced to interchangeable parts and appropriated to be exploited and ignored as members of a community.

## 6. Conclusion

The article analysed how, while access to the internet is championed as a fundamental human right, “human” and “extra-human” beings are being exploited at affective and cognitive distances generally concealed from everyday users in privileged socio-technical realities. Following Spivak, in order to not enclose the location of the “other” as homogeneous, we explored heterogeneity in ways that make it possible to acknowledge the multiplicity of socio-ecological relations (and affections) that constitute us but that we have consistently ignored. In this instance, technology has been analysed through the lens of coloniality and political ecology, elucidating what from a postcolonial-marxist perspective are concealed relations to “the Earth and its products,” in order to show how the latter are not only constituted as objects of an existing exploited “Nature” but also as an index to the multiplicity of socio-ecological relations that constitute each of us.

The article has demonstrated how technological devices are embedded with capitalism and coloniality as a socio-ecological regime. These devices and assemblages reproduce the economic commensurability and equivalence of natures and produce simplified spaces through disregard for the socio-ecological conditions of their uncaptialized reproduction. Technology, then, silences its own socio-ecological and political trajectories and affects and is unable to witness the diversity or multiplicity of beings and entangled intentionalities that constitute natures before and beyond their resource value form.

Bridging the political-ecological, the postcolonial, the decolonial and the Tsotsil and Tseltal philosophical contributions analysed here, this article's contribution has been to account for the socio-ecological regime of coloniality and capitalism in which technological artifacts are embedded, as well as propose how to learn from other political praxes and philosophical traditions that point towards non-reductionist understandings of nature and the multiplicity and difference that constitute each one of us. Ultimately, the suggestion is not to reject technological devices or assemblages but reincorporate and acknowledge those beings before and beyond their becoming instrumental, with their being as "Nature" reduced to an interchangeable part. To do so, we acknowledged, first, the socio-ecological regime, and the multiplicities and socio-ecological relations this regime dismisses; and second, the multiplicity that is already here, situated and incorporated in ourselves. This means acknowledging and sensing how technological artifacts and systems entail embedded processes and socio-ecological relations no longer explicit in their everyday, anthropocentric and socio-technical instrumental forms.

The contribution also points toward future inquiries into similarities with philosophical analyses such as those of Giorgio Agamben, who offers a critical account of the notion of *instrumentality* within Western ontologies and proposes "use" as a modal ontology, an ethics of modes of being. On this basis, it is possible to acknowledge both the persistence of coloniality in alternative uses of technological artifacts and systems as well as the open possibilities that

other experiences not only of technology but also of reality can offer in times of planetary uncertainty and ecological crises. This means that we still have to consider the analysis of capitalism as world-ecology, in which technology is based on inequality and concealment (Hornborg, "Nature") and reproduces and diffuses economic commensurability of diversity and Nature as "cheap" (Moore, "Capitalocene II") and a "free gift" (Moore, "Transcending"). The philosophical foundations of such constructions of nature within the Western tradition also require analysis in order to further develop, along with different modes of being, different socio-ecological relations as ethics. Perhaps other horizons might unfold in *ich'el ta muk'* – recognition and respect for all beings (López Intzín)– from such diversity. In other words, in *ich'el ta muk'*, "non-technological" politics and societies might unfold, in which beings and natures are not reduced to interchangeable parts and appropriated, thus ignoring diversity and affection –our collective heart– in service of a highly inequitable world-system.

## Endnotes

- [1] See Jameson et al., Koch and Kinsbergen, Radley and Vogel, Vogel and Raeymaekers.
- [2] See La Rue 2011.
- [3] See Pellow and Park 2002.
- [4] See Spivak 1988.
- [5] See Hornborg 2019, 2016, 2015, 2001, and Moore 2017a, 2017b, 2011.
- [6] See (Anonymous, Danezis 2014, Hill 2014, Knowledge Commons Brasil, Martini 2017, Simmons 2018, and Soundararajan 2017.
- [7] See Hill 2014.
- [8] See Kwet 2019, Martini 2018, Ogden et al. 2015.
- [9] See Soundararajan 2017.
- [10] See McCarthy 2015 and 2017.
- [11] See Escobar 2004, Quijano 2010.
- [12] See Moore 2017b.
- [13] See Hornborg 2001 and 2015.
- [14] See Hornborg 2019, 2016, 2015 and 2001.
- [15] See Foster 2015, Clark and York 2005, Clark and

Foster 2009.

[16] See Subcomandante Marcos 1994, 2003, and Estrada Saavedra 2007.

[17] See Ejército Zapatista de Liberación Nacional (EZLN) 1993.

[18] See Rovira Sancho 2009.

[19] See Castells 1996, Cleaver 1998, Dyer- Witheford 1999, Juris 2008, and Wolfson 2012.

[20] See Bartra 1998.

[21] See Ceceña 2004.

[22] See Estrada Saavedra 2007 and Renard 1997.

[23] See Bartra 1998, García de León 1995, and Renard 1997.

[24] See Toret et al. 2013. See Castells 2012.

[25] See Castells 2012.

[26] See Ceceña 2004, Lenkersdorf 2002, and López Intzín 2015.

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