AI and the Epistemologies of the South

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In this text I briefly analyze AI from the perspective of the social classes, groups, and regions that have suffered most from the multifaceted injustice, social exclusion, and discrimination caused by the three main motors of modern domination: capitalism (exploitation of labor, infinite growth, privatization of gains, and socialization of losses), colonialism (racism, unequal trade, plunder of natural resources) and patriarchy (sexism, femicide, heteronormativity). I start from the assumption that such an analysis must be based on an epistemic perspective that does justice to the aspirations of justice and liberation by oppressed classes and populations. This is not the case of the dominant Western centric epistemologies centered on monolithic and monocultural techno-scientific understanding of social reality. Such epistemologies tend to lead to conclusions and propose solutions that systematically reproduce social inequality and injustice while claiming to do the opposite.

I propose, as an alternative, the "epistemologies of the South" (Santos 2014, 2018). The epistemologies of the South consist in the identification and validation of knowledges born in struggle against the main modes of modern domination, that is, capitalism, colonialism, and patriarchy. The world is epistemically diverse, which, rather than a burden, is a precious asset of

human creativity and sociability. There is nothing anti-science in the epistemologies of the South; modern science has often been used by social movements and oppressed peoples in their resistance against domination. The epistemologies of the South simply claim that modern science is a valid knowledge but not the only one. There are other ways of knowing, vernacular or situated knowledges, with other criteria of validation. In order to go to the moon I need scientific knowledge, while in order to know the biodiversity of a rain forest I need indigenous, vernacular knowledge. The relations between scientific and vernacular knowledges may be either of incompatibility or complementarity.

The central claim of the epistemologies of the South is that the world is epistemically diverse poses a problem and raises a challenge to AI. As AI presses to the extreme the positivist conception of science, AI knowledge and AI development are highly centralized and monocultural. They are monolithic in their use of science and extremely opposed to any idea of epistemic diversity. From the epistemic perspective sustaining AI research and development, all social problems are convertible to technological problems, and as such, amenable to technological solutions. Whatever problem or issue cannot be formulated in scientific, technological terms is either irrelevant or incomprehensible. For the epistemologies of the South, on the contrary, there are many questions that in spite of not being adequately formulated in scientific terms are nonetheless crucial to provide meaning to our existence. A few examples: What is the meaning of life? What is happiness? Why are we in this world? What will come after? Does God (or Gods or Godesses) exist? Do our ancestors accompany our existence?

The epistemologies of the South offer both a critique of AI and alternatives in either living with AI or living without AI. I will start with the critique. The epistemologies of the South start from the idea that modern society is run by three main modes of domination, oppression, and unequal power: capitalism, colonialism, and patriarchy. These three modes of domination are interconnected and in such a way that fighting against one of them leaving the others unquestioned will inevitably lead to defeat. Colonialism did not end with the political independence of the European colonies in early nineteenth century in Latin America and in mid-twentieth century in Africa and Asia. Historical colonialism, conceived of as territorial occupation by a foreign country, came indeed to an end, but colonialism continued in different forms as racism, plunder of natural resources, concentration of land, and expulsion of peasants form their ancestral lands in the name of development (megaprojects). These new (and old) forms of colonialism have been called internal colonialism or neocolonialism. Both colonialism and patriarchy existed before capitalism, but they were reconfigured by capitalism to justify highly devalued labor (slave labor, labor analogous to slave labor, immigrant labor) and non-paid labor (domestic family care labor carried out by women). In other words, the sustainability of capitalism on a global scale requires the existence of racialized and sexualized bodies. It is impossible to imagine a capitalist society that is not also and at the same time a racist and a sexist society. Conversely, in order to be successful the struggles against racism and sexism must include the struggles against capitalism, and vice-versa, struggles against capitalism must include the struggles against racism and sexism.

This means that any new development in our society being promoted by capitalism is likely to be as well promoting new dimensions of colonialism and patriarchy. The consequences of AI for capitalist development have been abundantly analyzed. The slogan of "AI for all" has been widely criticized since it is increasingly evident that AI is not only deepening systemic inequalities globally but also making it more difficult to imagine ways of resisting against them.

AI and the Market Capitalist Society

AI takes to the extreme the neoliberal dream (or rather, nightmare) of extending the market economy in such a way that society as a whole becomes a market, the market society. The range of data extraction makes it possible to transform any social action (or omission) into an informational field open to capitalist exploitation. Following Karl Polanyi (2001 [1944]) in *The Great Transformation,* I suggest that AI adds a new false or fictitious commodity to those previously existing. These are the resources that are treated as commodities even though they are not created according to market relations, such as land, labor, and money. These are public goods or social necessities that prior to capitalism were embedded in social relations and could not be bought or sold. The same can be said of personal data, the new false commodity. Data fuses labor with non-labor, land with aterritoriality, money with non-money. Data is everything once dispossessed of the sovereign right over it. This gives an idea of the capitalist hubris of AI. The ultimate defiance of the gods, probably leading to nemesis?

As AI expands, the concentration and monopolization characterizing its technological infrastructure will not only deeply affect the workings of capitalism and of capitalist relations; it will also transform and probably undermine democracy by manipulating both information, consultation, and deliberation upon which democracy rests. On April 12, 2021 *The Guardian carried the story of Sophie Zhang*, a former data scientist at Facebook. According to her, "Facebook makes election interference easy, and that unless such activity hurts the company's business interests, it can't be bothered to fix the problem." If it is not possible to democratize AI, how seriously can it be imagined that AI may contribute to strengthen democracy?

AI and Colonialism

AI is at the core a colonialist enterprise involving new and immensely powerful tools for plundering, such as data colonialism[1]. But the association of AI with colonialism has many other facets, from the total supremacy of Western reason to the natural resources and the highly devalued labor that sustain the AI industry.

Indeed it is becoming more and more evident that AI is not an objective or neutral technology. As stated by Paola Ricaurte,

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[1] There is an emerging bibliography on this topic. See, among others: "Artificial Intelligence and the Risk of New Colonialism" (Sahbaz 2019); "Automated Imperialism, Expansionist Dreams: Exploring Digital Extractivism in Africa" (Iyer et al. 2021); "The New Silk Route: On China, Neo-colonialism and Cyber Extractivism in Africa" (Ikem 2023).

AI technologies, particularly machine learning (ML) models, are used to decide who will be more inclined to commit a crime, who fits better to get financial aid or a job, what languages and whose knowledge is elevated, etc. Due to the biases incorporated in data and algorithmic models, and the punitive use of these technologies, the results of the deployment of intelligent systems in society are often discriminatory against women, non-binary people, immigrants, low-income groups, non-white populations, and non-English speakers" (2022).

AI operates in complex and deep ways to redefine not only what it means to be human but also what it means to be in society together with other human beings. By reducing humanity to a computable artifact and human behavior to a commodity or to an inexhaustible natural resource of data and free extraction, AI flattens both diversity and (only apparently) inequalities of power in social relations. It does so not by eliminating them, but rather by converting one specific manifestation of diversity into a universal category and by eliminating any conception of power, and consequently, of unequal power. Yarden Katz (2020) speaks of "artificial whiteness," meaning by that an ideology that relies on epistemological forgeries to pass off as "universal" what in fact constitutes a white, elite, and masculinized perspective. Whiteness is the organizing logic of AI, which explains how experts become readily invested in AI and how they adapt it to meet social challenges. "As a product of an elite white world, then, AI became isomorphic to whiteness as an ideology: a quintessentially nebulous and dynamic endeavor, whose ebbs and flows are animated by capitalist and imperial aims" (Katz 2020: 154). AI serves the aims of whiteness—and thus it is one more tool in the arsenal of a white supremacist social order—but it also mirrors the nebulous and shifting form of whiteness as an ideology. As any other ideology, AI presents as universal goals based on universal understandings of reality; that in reality are goals that further capitalist, white supremacist, and sexist goals sustained by equally biased understandings of reality. The AI industry is repeating colonial violence today, using other, more insidious means to enrich the wealthy and powerful at the great expense of the poor.

When AI enthusiasts ask the rhetorical question—"Why not replace the slaves with AI-powered robots, creating a digital utopia that everyone can enjoy?" —they express a racist state of mind in more than one sense. On the one hand, by resorting to the metaphor of slaves in a neutral way, and on the other, by using abstract conceptions of "everyone" and of "joy." In both ways, they prove to be incapable of imagining the universal other than in ways that mirror their own privileged position and that of the elites they serve. Such promises are always formulated in such ways that "the history of colonialism, enslavement, white supremacist governments, and other forms of exploitation by Western powers is omitted—an erasure that alone reinstates an imperial narrative" (Katz 2020: 158).

This erasure (and the consequent flatness of social relations) extends to any context of unequal power in which AI-generated social technology is involved. Let's examine the sentence cited by Katz (2020: 169): "AI can make our legal systems more fair and efficient if we can figure out how to make robojudges transparent and unbiased....[These could] treat everyone equally, transparently applying the law in truly unbiased fashion." It may be noted that this apparently utopian promise

is already being imagined as a realistic promise by real judges. Even assuming that full transparency and unbiasedness would be achieved, the sentence omits any reference to the nature of the laws to be implemented in transparent and unbiased ways. Assuming that such an implementation would be possible, what would be the benefit for society of applying with full transparency and unbiasedness a highly biased and arbitrary law? Questions such as this one are omitted by AI technologists across the board. The technological worldview takes always the foreground, and to such an extent that it credibly negates the existence of any background issue, be it the political, the ethical, the epistemic or still the ontological worldview.

AI and Patriarchy

AI has been criticized for being male chauvinistic in its assumptions, thus reproducing patriarchal domination against women and sexually marginalized people. Patriarchal prejudices are part of conventional common sense and mainstream opinions and practices that supply the information for algorithmic manipulation. It is not surprising that AI sexist discrimination surfaces in AI-dependent interactions. Very often sexist prejudices combine with colonial prejudice thus deepening the levels of oppression. This is notably the case of impoverished, racialized women in the global South, considered to be "fundamental agents in the global supply chains that enable technological development" (Ricaurte 2022). Venturini and Canales (2022) explore the consequences of datafication of welfare policies in Latin America and the Role of intersectional feminist perspectives.

Is it Possible to Democratize, Decolonize, or Depatriarchalize AI?

Given the hubris surrounding AI, is there any room to use AI for progressive democratic purposes? Some practitioners believe so. According to them, in the hands of military technocrats AI is one thing, in the hands of progressive activists it is another. As suggested above, AI cannot promise any positive contribution to democracy if AI itself (its production and distribution) is not democratized. There have been some attempts to democratize AI. As an illustration, the initiative of redesigning digital public goods. According to its promoters,

> ...most digital public goods disempower publics and distract them from strengthening more fundamental democratic devices. It is time to design and manage them not as technologies from above but as technologies for communities… digital artifacts such as software, platforms, datasets, or machine learning models made available in a universally accessible manner and meant for public welfare… The use of digital technologies should be understandable and manageable by local communities even if the technologies were not produced by them. (Seth 2022)

This trend is particularly strong in India where ideas such as "appropriate technologies" and "technologies for communities" have a consolidated tradition. The extent to which we are before another round of technological utopias that often end up generating counter-productive results

remains an open question. After all, the basic AI philosophical premise of converting human behavior into a computational field is in force here and it collides with the philosophical premises of community life. Will this lead to new dimensions of inequality and discrimination in the communities?

A similar movement to approximate AI to the concrete needs of concrete publics is "situated AI," an attempt to replace the analytical philosophy underlying AI by a phenomenological philosophy and situated or embodied epistemologies. In this case, the contradiction lies between a laudable epistemology and the concrete realizations in what might be involved. After all, a situated lethal autonomous weapon is nothing but a more effective tool of life destruction.

Concerning the issue of decolonizing and depatriachalizing AI, some are of the opinion that AI, although mainly used as a new tool in the service of colonialism and imperialism, is not inherently colonialist and could be reformatted in order to be beneficial to the victims of colonial and sexist discrimination. This is, for instance, the position of the *MIT Technology Review* and its new series on AI colonialism. They have recognized that AI is impoverishing the communities and countries that don't have a say in its development—the same communities and countries already impoverished by former colonial empires. But "AI could be so much more—a way for the historically dispossessed to reassert their culture, their voice, and their right to determine their own future" (Hao 2022). According to this view, depatriarchalizing and decolonizing initiatives may bring about "feminist values applied to AI design and development, communitarian principles of AI governance, indigenous data stewardship principles, and the recognition of original languages and cultures" (Ricaurte 2022).

The initiative of the group Black in AI goes in the same direction as the feminist AI. The group's aim is to increase the presence of Black people in the field of Artificial Intelligence; Black in AI draws on the imagery and language of the U.S. civil rights movement and the Black radical tradition: the group's logo is a schematic raised fist, associated with Black Power and the workers' movements. But, as Katz rightly notes, "Black in AI shares its corporate sponsors' view that AI is a coherent and transformative practice that can be harnessed to everyone's benefit" (Katz, 2020).

The Epistemologies of the South and the Alternatives

In my view, asking for "alternatives" to an endeavor such as AI is fraught with contradictions. I agree with Alison Adams, who problematizes AI as

> ...an invocation to make intelligible, to critique, and to seek to undo the logics and politics of race and coloniality that continue to operate in technologies and imaginaries associated with AI in ways that exclude, delimit, and degrade other ways of knowing, living, and being that do not align with the hegemony of Western reason. (n.d.)

By focusing on the cognitive dimensions of the lives of people oppressed by capitalist, colonialist, and patriarchal domination, epistemologies of the South are particularly apt to identify the discrepancy between datification and algorithms and the real problems and demands, fears,

and hopes of impoverished, racialized, and sexualized populations—women and girls, indigenous people, peasants, immigrants, refugees, workers without rights, platform workers, transgender or non-binary people—in sum, the majority of the world population. Once processed by AI machinism, such discrepancy translates into systemic harm and exclusion. By focusing on knowledges born in struggle, the epistemologies of the South dramatically show how, under the aegis of AI, social exclusion is both globally deepening and becoming more invisible.

The epistemologies of the South offer two possible ways of confronting the risks and threats posed by the mainstream conceptions and uses of AI: exit/liberation and counter-hegemonic use.

Exit/Liberation

Vernacular, non-scientific knowledge circulates in society in multiple circuits of social relations, very often in face-to-face relations. They are oral knowledges and, as long as they are not registered in electronic devices, they are out of the reach of AI. They are not amenable to AI encoding and decoding. Social contexts in which oral knowledge prevails over written or transcribed knowledge (face-to-face relations, debates and conversation concerning past or future social struggles without machine intermediation, etc.) and is transmitted in non-colonial languages or in informal linguistic protocols tend to offer poor perspectives and results in terms of AI efficiency. Of course, in a global society dominated by AI, this out-of-reachness will entail an additional dimension of discrimination and disempowerment. But conversely, such AI poor social contexts may be conceived of as liberated zones, zones of civil disobedience in which, performatively at least, a non AI-dependent society will be imagined. Political and cultural awareness may transform disempowering silences into empowering silences. The epistemologies of the South symbolize possible areas of refuge and a politics of resistance against AI-dependent capitalist, colonialist, and patriarchal power. Such zones of sociability liberated from AI dependence are constant reminders of possible human existence and flourishing beyond AI diktats.

Liberation resides not only in non-recorded information and knowledge but also in the ways of being and of being in society corresponding to such knowledges. These ways of being contradict and defy the atomistic conception of reality underlying programming. In sum, a silence imposed by dominant and oppressive forces may be reinvented in political terms by dominated, oppressed social groups to resist against domination and oppression.

From the perspective of the epistemologies of the South, exit/liberation does not entail the return to the Eurocentric Enlightenment proposed by Kissinger. The epistemologies of the South constitute a radical critique of the European Enlightenment and of the Eurocentric or Northcentric glasses which occulted or disfigured the epistemic diversity of the world. AI is just another pair of glasses, albeit exponentially more powerful, to view the world with old biases and reproduce the prejudices and the injustices derived therefrom on a much larger scale. From the perspective of the epistemologies of the South I propose, the AI does not represent the end of the Enlightenment but rather its culmination, which dialectically may also mean its self-destruction. To use an expression advanced by Harney and Moten, and cited by Katz, exit/liberation from the perspective of the

epistemologies of the South means the claim of "the undercommons of enlightenment," a way of being that runs away from AI, not seeking inclusion in it or recognition from it.

Counter-Hegemonic Use

The other alternative concerns what I have been designating as counter-hegemonic use of hegemonic tools. This is a permanent feature of struggles against modern domination. This has been the case of political ideas such as human rights, democracy, and the rule of law, which under certain specific conditions may be resorted to to fight for social justice. In general, such ideas tend at best to marginally or temporarily reduce the harshness of capitalist, racist, and sexist domination while keeping untouched the structural mechanisms that systematically reproduce social inequality and discrimination. I have been studying the ways in which oppressed social groups resort to such political tools and the specific conditions under which they may have some success in strengthening their struggles and advancing their demands for social justice. AI is a hard case in this regard.

Given the current concentration and monopolization of the technological infrastructure of AI, it is almost unthinkable that AI might be used in ways that significantly damage the interests of the capitalist enterprises promoting it, thereby reducing social inequality and discrimination. In the case of AI, the technological intermediation is of such magnitude that it is hard to imagine the ways in which AI could be turned against its masters. The quasi-impossibility of counter-hegemonic use must be particularly emphasized in those areas of AI that represent red lights. More on this below.

Notwithstanding these caveats, the possibility of counter-hegemonic uses of AI cannot be excluded in principle. I have in mind the initiatives in line with the epistemologies of the South that have ventured in the AI universe. In doing this they perform what in my epistemological proposal is called an "ecology of knowledges," that is, the combination of different systems of knowledge to achieve specific results. In the case of AI, the ecology of knowledges combines vernacular, non-scientific knowledge with data science. I have specifically in mind the case of Papa Reo, a multilingual language platform grounded in indigenous knowledge and ways of thinking and powered by cutting-edge data science with the ultimate purpose of "enabling a sovereign digital future for indigenous languages." It formulates its mission in the following way[2].

"Kaupapa — Our Mission"

Papa Reo will enable smaller indigenous language communities to develop their own speech recognition and natural language processing capabilities, ensuring that the sovereignty of the data remains with them and the benefits derived from these technologies goes directly to their communities.

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[2] https://papareo.nz/#kaitiakitanga, accessed on March 15, 2023.

The Papa Reo project is the culmination of work undertaken by Te Reo Irirangi o Te Hiku o Te Ika (Te Hiku Media) over the last 30 years to instil, nurture, and proliferate the Māori language unique to *haukāinga* of Te Hiku o Te Ika.

Minority languages and their communities, such as te reo Māori, are largely invisible and unheard in the digital world. Everyday tasks can be completed using your voice and speaking to your devices, but due to the absence of the large datasets required for machine learning, speakers of minority languages cannot engage with this technology. This further marginalises their language and reduces their ability to fully participate in society.

Our vision is for a multilingual language platform that will develop cutting edge natural language processing methods and tools. The program will begin with *te reo* Māori, ensuring intergenerational transmission and accessibility to the language alongside the rapid development of technologies. New Zealand English will be touched upon to support multilingual language use and, drawing on international collaborators, advance Hawaiian and Samoan languages. This is pioneering data science research that will ultimately support minority languages worldwide.

Existing machine learning techniques require large data sets to support the development of speech to text, text to speech, and speech synthesis. Papa Reo aims to make these tools and methods available for languages with smaller data sets to ensure their languages are present in the digital age.

Papa Reo aims to support smaller language communities to gather their own data and grow capabilities within their own communities to use the tools from the platform. If we look at big tech companies like Google, they have all failed to provide quality natural language processing tools for indigenous languages due to their failure to engage and grow the capability of the community. Central to this is a staunch belief that each community must maintain control and sovereignty of their data.

Kaitiakitanga — Guardianship

"Kia u ki te whakapono, kia aroha tetahi ki tetahi."

Te Hiku Media have developed a Kaitiakitanga licence, which states that data is not owned but is cared for under the principle of *kaitiakitanga* and any benefit derived from data flows to the source of the data. *Kaitiakitanga* is a principle that expresses guardianship rather than ownership of data. Te Hiku Media are merely caretakers of the data and seek to ensure that all decisions made about the use of that data respect its mana and that of the people from whom it descends.

Māori data will not be openly released, but requests for access to the data, or for the use of the tools developed under the platform, will be managed using *tikanga* Māori. Te Hiku Media have been invited to speak on their *kaitiakitanga* licence and it has been adopted by a government department and a social enterprise.

Research on other indigenous languages that is carried out under this platform will be for the primary benefit of those peoples. The language platform will also collect data on New Zealand English and, where appropriate, this will be released under an open-access licence. Machine

learning software that is independent of the language communities will be made openly accessible where appropriate.

It remains to be seen the extent to which initiatives such as this will be able to successfully pursue an anti-capitalist, anti-colonialist, and anti-patriarchal politics and epistemology while heavily relying on instruments and operational logics that have been designed according to an opposite politics and epistemology.

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