

Health geography: (Re)visiting territories in search of professionals who know how to work with their feet on the ground

Geografia da saúde: (re)visitando territórios em busca de profissionais que sabem-fazer com os pés no chão

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ABSTRACT Discussing collective health without examining issues that impact communities, without these communities using their critical capacity, and, at the same time, analyzing public policies related to a universal health system without questioning their contradictions, is to pretend that reality is not being distorted. This essay, of a qualitative approach, seeks to identify and outline concepts by allowing certain fields of knowledge to be traversed by other forms of expression. It questions bio-deterministic practices, addresses the comfort zone of certain professionals who identify and propose interconnections between self-contained knowledge reservoirs. The objective of this paper, therefore, is to reflect on the importance of intersectionality and collective intelligence for health promotion in a territorial context. It seeks to discuss how this approach can contribute to improving health promotion and care practices through a grounded science that is attentive to the multiple social determinants of health and disease. The topics presented here offer theoretical and conceptual approximations that allow for a critical perspective on how medicine is practiced, how technology has affected various processes, and how these approaches need to be reconsidered.

KEYWORDS Public health. Geography. Artificial intelligence. Collective intelligence. Intersectionality.

RESUMO *Debater a saúde coletiva sem examinar questões que atravessam os coletivos, sem que estes utilizem sua capacidade crítica, e, ao mesmo tempo, examinar políticas públicas referentes ao sistema universal de saúde sem questionar as suas contradições é fazer de conta de que não se está vendendo a realidade. Este ensaio, de abordagem qualitativa, propõe-se a buscar e desenhar conceitos, fazendo com que determinados campos do conhecimento se deixem atravessar por outras formas de exposição. Questiona práticas biodeterministas e aborda a zona de conforto de certos profissionais que encontram e propõem a interconexão entre reservatórios de conhecimento que ocorrem entre si. O objetivo deste ensaio, portanto, é refletir sobre a importância da interseccionalidade e da inteligência coletiva para a promoção da saúde no contexto territorial. Dessa maneira, busca discutir como essa aproximação pode contribuir para a melhoria das práticas de cuidados e promoção da saúde por meio de uma ciência de pés no chão e atenta aos múltiplos determinantes sociais da saúde-doença. Os tópicos apresentam aproximações teórico-conceituais das quais se conclui a importância de um olhar crítico para a forma como a medicina é exercida, como a tecnologia tem afetado processos diversos e como essas abordagens precisam ser repensadas.*

PALAVRAS-CHAVE Saúde pública. Geografia. Inteligência artificial. Inteligência coletiva. Interseccionalidade.

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Introduction

Life unfolds within territories, and thus territory itself becomes a key determinant of health and disease¹.

A vida é territorialmente constituída, logo, o território é uma determinação da saúde-doença¹.

As we set out to write this article, we shared a quiet glance, as though we were searching for a map—a sign that could pull us from inertia. In that silent moment of recognition, we realized that the book ‘Uma Ponte ao Mundo’² (‘A Bridge to the World’), from its opening chapter, offered precisely such a key, unlocking the first meanings of the path we were about to take.

This essay examines the meeting point between health geography, Artificial Intelligence (AI), and intersectionality, seeking to understand how these perspectives can be brought into dialogue and how, together, they inform care practices and health promotion within specific territorial contexts. Health geography, understood as the study of how health is shaped by place, invites reflection on living conditions, access to services, and the ways social determinants of health are expressed unevenly across different territories^{3,4}.

Artificial Intelligence (AI), in turn, emerges as an ambivalent tool: it can streamline processes and support diagnosis, yet it can also deepen inequalities and foster exclusion. Intersectionality—a foundational concept for analyzing power relations, as discussed by Gertner, Amorim, and Costa⁵, and by Collins and Bilge⁶—enables us to understand how different social markers (such as race, class, and gender) intersect to produce experiences of oppression and marginalization.

From this dialogue, we seek to broaden the debate around the following questions: can there be a health geography that fails to account for the intersectional forces shaping the lives of those who seek care within Brazil’s Unified Health System (SUS)? Can AI—that is, an algorithm

designed to gather data and generate text-based responses—meaningfully contribute to care practices and/or to health promotion?

These questions inevitably give rise to others. Has the health sector—and medical science, more specifically—adequately addressed the complex issues that shape health across territories? What has its actual role been? Is briefly listening and then prescribing medication, without engaging with complex contexts, fundamentally different from asking AI which drug to take to treat a given condition? This line of inquiry leads us to a central challenge: is it possible to confront the factors that affect people’s health without considering their relationship to space and the multiple social markers—such as race, class, and gender—in their respective territories?

It is from these questions that we move toward proposing a necessary rapprochement between geography and health, grounded in the concept of intersectionality, as a way of challenging a sterile model of medicine and the uncritical expansion of AI in health promotion processes.

Poets, however, always seem to possess a certain magic for entering the scene, perhaps by opening it with a gesture—something that sets in motion what runs through us and unexpectedly pushes us in some direction. Where are we going? Readers may ask. Are we following something carefully agreed upon? Hardly.

Some of us had signaled our agreement through exchanged glances that the trajectories of two masters of words were guiding us toward another encounter, beyond the rooftop. Perhaps walking through the dusty backlands beneath our feet, toward the landscapes that inhabit the stories we collect with each step, in each encounter with other forms of existence—some deeply singular, others oddly academic.

A pause made itself present, and our gazes gently laid these opening words toward two masters who were walking silently near a school. Not just any school, but one that had been touched by the words of Sergio Arouca, announcing that the path to be taken—hand

in hand, eyes firmly held by a passion for the land—would be the one that leads our gaze to our Health System, and to how it might serve as inspiration for the discovery of other existential territories, to be cared for and attended to by the Brazilian Public Health System (SUS).

Chaveiro and Vasconcellos² were right on target in suggesting that people are landscapes, action plans, and processes—harbingers of symbolic sites of belonging that one seeks along the way. If the aim is to consider collective health and the SUS in defense of, and in dialogue with, the sociobiodiversity of territories, then we must pay attention to each of these individuals whom some call passersby. We refer to them as subjects of health rights⁷ and, therefore, we wish to sit by the roadside and listen attentively to their journeys—perhaps as if in search of new toolkits in which their *saberes-fazer* (know how) can find new horizons.

In the first section, we discuss the place of geography in debates on health-related issues. Under the provocative title ‘The place from which one speaks: the geographer’s writing’, we aim to examine, from an intersectional perspective, the successful paths already taken in addressing this question. For instance, when we look at the ‘comfort zone’ of medical professionals, we find that most of them remain within Primary Health Care Units (UBS), assigning community health workers the task of collecting information, functioning as a kind of filter for those who will later be ‘examined’. In doing so, they lose sight of the sociocultural context in which individuals live and the way each person’s life unfolds. This form of ‘immobility’ leads physicians to focus primarily on signs, symptoms, and illness, while overlooking other equally important dimensions.

Would it not therefore be appropriate to ask whether quality of life is affected by socio-environmental issues? Or by the fragility of the formation of social bonds, whose existence is also shaped by local or traditional forms of knowledge? Walking together means breaking inertia, since the Greek word *klínikós*

translates as to lean, not specifically ‘at the bedside’, but toward the other.

Another aspect that calls for closer examination is medical education and training itself, which, in our view, remains largely rooted in a bio-determinist perspective, leaving little or no space for dialogue with other theoretical and conceptual frameworks such as sociology and anthropology. In the case of the present article, this also includes the health geography, opening up a necessary dialogue with experiences and practices that differ substantially from biomedicine.

Whether this amounts to a reconfiguration of the very concept of the health geography—one that allows for new mappings and new forms of writing—only time, and perhaps poetry, will tell.

The place from which one speaks: the geographer’s writing

Geography and health, as sciences and as ways of writing the world—possible ways of speaking about who we are and how we live—each have their place. So far, so good. However, for Chaveiro⁸, if we follow the dominant logic of fragmented knowledge and departmentalized science, in which political bargaining and individual interests become unquestioned norms, then that is indeed how things stand. Yet this is not the direction we wish to take here. We therefore seek to look elsewhere, from a different perspective. After all, the ‘place from which one speaks’ is not a fixed point in space, but a set of social, cultural, and political relations that shape our view of the world and influence us.

In his review of the book ‘Onde você está nessa lama?’ (‘Where do you stand in this mud?’), by Ricardo Assis Gonçalves¹⁰, Chaveiro⁹ offers a geographical reading of what he considers essential to understanding what geography is, and—just as importantly—what the author of the book, as a geographer, defines as the object of his work:

The geographer walks with their feet on the ground, their eyes on the horizon, and their questions rooted in the social, political, cultural, and economic realities of each place. Their imagination moves beyond immediate perception, tracing entire constellations before returning to the world by touching what may seem insignificant and ordinary. Their craft builds engines of ideas and narratives to explore the abundance of images, symbols, contradictions, and conflicts that pulse through every territory and throughout society¹⁰⁽⁶³⁾.

Thus, before venturing into the health geography—the central theme of this article on the Cerrado and sociobiodiversity—it is necessary to identify who these people are who walk with their feet on the ground and their eyes on the horizon, filled with questions, and whose imagination is sometimes capable of transcending imposed limits. We therefore begin with a simple gesture of recognition: coming to know the geographers who, in their territorial journeys, allow themselves to be permeated by ideas and narratives, without which their craft would amount to little more than describing landscapes, without opening a path to the constellation of historical subjects who inhabit these territories.

It is essential to consider that the ‘geographer’s writing’ is not limited to cartographic representation, but encompasses the interpretation of the social, cultural, and political processes that shape territory. This form of writing is expressed in the ability to identify relations of power, inequalities, and injustices as they materialize in geographic space, which, for Chaveiro⁸, constitutes the identity code of Brazilian geography. By walking with their feet on the ground, the geographer encounters the complexity of social life, along with the contradictions and conflicts that mark territory. It is therefore necessary for the geographer to adopt a stance of attentive listening and dialogue with different social actors, seeking to understand their demands and perspectives.

To better understand what the relationship between geography and health can offer, we need to listen to the dreams and nightmares of those who come into direct contact with the land—sometimes in search of gold, as in mining contexts, and sometimes confronting populations devastated by environmental disasters driven by the reckless pursuit of profit, by those who first promise prosperity and then leave destruction behind.

We are led to wonder what Gonçalves¹⁰—who describes the craft of geography through his own literogeographical neologisms—might say, in his literary phrasing, about the impacts on workers’ health in the face of their ‘fractured territories’, ‘environmental suffering’, ‘enclosure of waters’, and ‘environmental disaster’. What words and worlds are capable of expressing the dramatic nature of human suffering—fear, mortal wounds, oppression? Faced with so many ‘wounds’, are geographers destined to endlessly interpret a kind of psychoanalysis of environmental horror stories?

This *literogeógrafo* (literogeographer) perspective, found in both Gonçalves¹⁰ and Lima and Chaveiro¹¹, invites us to move beyond a cold, purely objective reading of data and to engage with the subjective and emotional dimensions of the relationship between people and territory. The pain, suffering, and anguish that run through workers’ accounts—shaped by exposure to degrading conditions of work and life—cannot be set aside. The geographer is thus called to adopt a stance of empathy and solidarity, seeking to amplify the voices of those who are silenced and marginalized.

In the specific case of Brumadinho, in the state of Minas Gerais, Brazil, we momentarily step away from the Cerrado region and turn to Gonçalves, the literary geographer, who evokes the ‘anguish’ of the sea of mud that forever transformed Brumadinho—an allusion to the collapse of a mining tailings dam in 2019, which unleashed a torrent of sludge, killed 272 people, and caused severe environmental damage:

As a disaster-crime, its implications unfold across complex scales, affecting not only environments, landscapes, and territories, but also bodies that have become guardians of painful affections and memories... lives entangled in a continent of longing. There are mothers, fathers, children, friends, and neighbors who suddenly found themselves confronting the abyssal emptiness of a missing embrace, a smile, a presence, a handshake¹⁰⁽³⁴⁾.

In concluding his review of Gonçalves's book, Chaveiro⁹ draws on what he terms a 'reflective stitch':

The psychoanalytic premise that pain demands the pulsation of language, and that language is what one has at hand to confront trauma, is revealed in several of the chronicles contained in the book in question. The book itself, as a whole, is a voice of both pain and courage⁹⁽³⁶⁷⁾.

As the poet would say, 'Minas is no more', nor are the pains of Brumadinho in its muddy surroundings... There are no adequate words to describe the suffering caused by the mud that still symbolically haunts Brazil, while impunity and the brazen handling of an environmental crime continue to prevail around us, along with an agreement that offers no room even for a minimally symbolic interpretation. For those who have lost everything, recognition becomes both a value and a principle to be recovered—or better still, reclaimed. They have lost the 'sense of where they came from' and 'where they were going'. Now, all they can see is mud.

In 'Geografia e Saúde: a produção contemporânea de uma teoria espacial enferma' ('Geography and Health: the contemporary production of an ailing spatial theory'), the authors clearly demonstrate that

[...] the foundations of an ailing science produce an ailing body of work, manifested in precarious labor conditions, exploitation, subcontracting,

deregulation, structural unemployment, outsourcing, and the deepening informalization of work¹⁽²⁾.

We argue that this ultimately contributes to an unchecked pathologization of social life¹, as well as to illness understood as "a possibility of plunder that lays waste to human potential shaped through a medicalized life"¹². This raises an unavoidable question: in the face of such pathologization, is it still possible to address a reality in which, day after day, we observe a per capita increase in medication use, its constant diversification, and the resulting deterioration of health alongside the precarization of work? This question leads us to the need to defend the role of health geography—that is, the rapprochement between geography and health—in the construction of public policies.

We can, no doubt, add to the data discussed above the fact that what has been called the Medical–Academic–Industrial Complex (MAIC) has helped disseminate a language of deficit throughout culture, progressively rendering it pathological^{13–21}. With each new edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM), this cycle renews itself, and new deficit-based terms are added, repeatedly exposing us to a form of poisoned sociality.

Drawing on the three premises put forward by Chaveiro, Vasconcellos and Gonçalves¹—the first, which identifies science and culture as being in a state of illness; the second, concerning the growing pathologization of social life; and the third, which highlights the deterioration of health and the precarization of work—we are compelled not only to approach this essay from a necessary critical perspective, but also to point to the paths it illuminates:

When the fields of geography and health intersect, a hope may emerge: to clarify our understanding of the health–disease process through the lens of territory, and to read the territory that falls ill¹⁽²⁾.

Thus, if health science and culture are themselves in a state of illness, so too are their work processes—driven not only by subcontracting but also by the informalization of employment ties among professionals, resulting in a profound precarization that extends to those who are ‘assisted’ and ‘cared for’ by them. This precarization, affecting both health workers and service users, reflects the broader devaluation of work and care. It is therefore necessary for the health geography to stand alongside SUS workers and users as a matter of principle.

The authors¹ warn that people—initially regarded as subjects of health rights—end up experiencing, within their territories, a form of ‘regulated citizenship’, and they emphasize that the compartmentalization of science and the near-total absence of an intersectional perspective point to a troubling horizon, one in which we are always waiting for a ‘next blow’. We therefore believe it is necessary to break with this logic of regulated citizenship and to move toward building a system.

We could use the expression ‘a jolt of recognition’ to signal that we can no longer pretend not to see what is happening around us, whether as scientists and especially as geographers. This also entails abandoning the isolationist mindset of ‘solving everything on our own’, in which boys play only with boys, geographers talk only to their peers, and physicians remain confined to their private professional circles.

Breaking down these barriers and bringing intersectionality into studies of geography and health is only the key to dismantling ready-made formulas (medical circles, geography seminars, and so on) and, more specifically, to challenging a form of ‘regulated science’ that continues to discipline its fellow citizens.

Who benefits from a compartmentalized science that refuses to be nourished by other sciences, one that, from an early stage, has learned to walk with ‘its feet on the ground’, as geography has, in part, been taught to

do? Would physicians be willing to know how from geographers? And would some renowned geographers—masters of their own subjects and fields of study—be willing to approach other sciences, especially beyond the humanities, at the risk of being ‘contaminated’ and losing focus or full control of their niche? We raise many questions in light of this prevailing egocentric character.

We wonder whether the DNA of Health is conceived as an ascending spiral that sees itself as so superior that it is unable to open itself to attentive and observant listening—to those who, with ‘feet on the ground’ and a ‘passion for the Earth’, may speak a language other than that of a supposedly superior, quasi-mythical lineage of demigods. We also wonder whether many of those already well established within their territories in the field of geographical science would have the courage or willingness to approach other areas of study that appear so different at first glance.

Deliberately, we return to the expression ‘boys play with boys’ as a provocation, so that the presence of scientific intersectionality may stand as proof that we are open to the ‘know how’ that many geographers practice day in and day out. It is an invitation to seminars beyond the ‘clubs we have learned to frequent’, because, whether we like it or not, we too are ‘regulated citizens’.

Before delving more deeply into the relationship between territory and health, it is worth clarifying the concept of intersectionality as set out in the article by the North American author, Kimberlé Crenshaw²², the first intellectual to systematize this idea. She defined it as a method for understanding how multiple axes of subordination are articulated and for thinking through strategies aimed at overcoming them. In her words:

Intersectionality addresses how specific actions and policies generate oppression that operate along these axes, constituting dynamic or active dimensions of disempowerment²²⁽¹⁷⁷⁾.

In the context of this essay, we point to the fragmentation and distancing among the various scientific disciplines as a serious issue; equally serious, however, is the distance between academia and the people, which, at the territorial level, can exacerbate health-related problems. For this reason, and to preserve coherence, we—as the authors of this essay—insist on the need to keep our feet on the ground, above all to strengthen, at the territorial level, those who are committed to the ‘know how’ involved in caring for the population, drawing on the diversity of scientific fields.

The territoriality of know how in geography and health

In line with the argument advanced by Chaveiro, Vasconcellos, and Gonçalves¹, it is essential to underscore the importance of an organic partnership between geography and health, one that is committed to closely examining the social determinants of the health–disease process:

By expressing the concrete conditions of life and the symbolic dimensions of relationships and sociability, it becomes clear that the social determinants of health and illness are inscribed within territorial content at different scales. Life is territorially constituted; therefore, territory is a determinant of health and illness¹⁽⁸⁾.

In an effort to clarify ‘what the patient’s complaints are about’, we draw on geography as a metaphor for how the physical examination of those seeking care is conducted. The examination itself cannot disregard the historical narrative of the illness and the processes that preceded its onset. Thus, the geography of the physical examination becomes intertwined with the historical features that inhabit the patient’s existential territory, here understood as a subject of health rights⁷.

Nevertheless, it is important to note that the experiences described by this subject are not limited to external geography, but often

extend to the internal repercussions that the health–disease process brings to the individual and to those who inhabit the boundaries of a singular territory, including those surrounding it, their collective, so to speak. This latter ‘detail’ may help us better understand the importance of what can be characterized as subject constitutive of socio-biodiversity.

Far from suggesting that we are dealing merely with the ‘geophysical examination’ of a body, we recognize that the latter is far more than it appears: it is the body of a worker, of a particular social class, whose way of living is territorially situated—whether in conditions of vulnerability or not. We cannot, nor should we, assume that the ‘health geography of this body’ is contained within itself, for this body may belong to a racial or ethnic group, it may be an immigrant body, or a body that has been violently affected by the absence or inaction of the State.

That body—also known as a subject of the right to health—is part of another body, society, shaped by *escrevivências*²¹ (lived experiences). As a body that forms part of a whole, it is historically situated in a moment when all other ‘geophysical bodies’ are undergoing change and facing extreme climatic events. It may also be a ‘regulated body’, governed by fake discourses claiming that vaccines kill, or by assertions that its rights are limited to specific working hours.

How many characteristics can a body be assigned in times of necropolitics or of so-called (ultra)neoliberal globalization? Would our ‘geophysical examination’ be limited to the external surface of the body under scrutiny? And what if, more broadly, we turned instead to its interiority?

We come to realize that the body ‘brought into our presence’ gathers as many dimensions as are attributed to it in its analysis. If we were to open ourselves to understanding where this human condition dwells, we would come to know a little more about the interdependencies that this ‘portion of humanity’ establishes with other bodies.

Robin Cooper²³, in the chapter ‘Dwelling and the ‘therapeutic community’, seeks to demonstrate that ‘dwelling in community’ can serve as an inspiration for those who provide care to those in need. He argues that behind the category of ‘dwelling’ there must lie an ethical and professional commitment that can be traced back to Heidegger, and that even those we refer to as ‘homeless’ call our attention to their plight. What, then, can be said about these ‘abandoned bodies’ in the city, left to their fate due to the lack of social programs, inaction, or absence of the State?

It is well known that physicians often show little interest in ‘turning their attention’ to the conditions of habitability of the ‘bodies’ that seek their care. Medical training may therefore need to incorporate studies of existential cartography², as well as geographies of the body, so that future professionals can develop a deeper understanding of health–disease processes.

In professional training, little or nothing has been taught about providing care in which geography and health move hand in hand, as in a walk through the landscapes that these bodies inhabit—territories that they both constitute and through which they come to constitute their place in the world. In most cases, ‘anamnesis’ is reduced to the ‘signs and symptoms’ that can be elicited from the narrative, and when the word is fully granted to them.

Therefore, to understand relations that go beyond a given existential territory and extend into the collective, it is essential to recover the historical processes that preceded collective health and the SUS.

What might Artificial Intelligence have to say about strengthening the SUS?

The historical context in which we live is marked by how human intelligence is increasingly shaped by the sophistication of high-tech modes of production. In the contemporary world, competition among

data-driven companies will be defined by two distinct moments: before and after the advent of AI. Following the launch of ChatGPT and numerous other Western-developed models, DeepSeek has emerged in the Eastern context. This accelerating race to offer ever more advanced capabilities may contribute to political and social outcomes, but above all, to economic gains.

Based on the problem addressed in this essay, we posed some questions to AI (ChatGPT), such as what it might have to say about the contributions of the 8th National Health Conference to the improvement of care services and the promotion of health. After analyzing the AI’s standard responses, it became apparent that the resulting discursive formation, in some cases, omitted the original authorship and the place of publication, almost as if concealing the enduring traces of those who produced that knowledge.

This line of questioning marked a pragmatic redirection of the essay. Rather than publishing the responses generated by the AI, we chose to deepen the debate between AI and CI—here understood as Collective Intelligence—drawing on the anarcho-ontology of Michel Foucault, alongside contributions from sociology and anthropology.

Drawing on Silveira²⁴, and referring to Michel Foucault in ‘The Order of Discourse’, ‘The Order of Things’, and ‘The Archaeology of Knowledge’, as well as to Jacques Le Goff in ‘History and Memory’, we continue our search for a method capable of assisting in the analysis of any discursive material. For the author:

[...] The document is not merely something left to the past; it is a product of the society in which it was produced, shaped by relations of force in which power held sway at the time. Only the analysis of the document as a monument allows collective memory to recover it for the historian to use it scientifically—that is, with full awareness of the facts. [...] ²⁴⁽⁴¹⁾.

Thus, from a Foucauldian perspective, the analysis of the discursive subject entails recognizing the multiple voices that traverse it and find expression in its speech. This understanding stems from the premise that, for Michel Foucault, discourse is not reducible to a set of signs that refer to representations or contents; rather, it constitutes a practice that systematically produces the very objects of which it speaks. According to Silveira²⁴, Foucauldian archaeology analyses discourse in terms of its exteriority.

In this sense, how might we think about discursive subjects in relation to content generated by AI? Where is authorship to be located? Which voices can be identified, and to which authors' discourses do they correspond, if what is presented as a response is always a kind of pseudoscientific patchwork? Does this patchwork produce meaning? If so, what kinds of meanings does it produce? Do these meanings remain consistent with the original sense of the texts algorithmically analyzed and reassembled in response to prompts? These are pertinent questions for further reflection on the possibilities of advancement that this technology may offer for social issues, particularly, as in the focus of this essay, for health.

In Foucault's words, as cited by Silveira²⁴⁽⁴⁵⁾:

[...] Understood as such, diagnosis does not establish the authentication of our identity through a play of distinctions. It establishes that difference instead is what we are—that our reason is the difference of discourses, our history the difference of times, our selfhood the difference of masks. Difference, far from being a forgotten or concealed origin, is the dispersion that we are and that we produce [...].

Drawing on key works in geography and health, such as those by Barcellos, Buzai, and Handschumacher³, and Guimarães⁴, one may ask: is the most important task simply to reproduce 'more of the same', thereby diverting attention from the collective? The collective, indeed, is a crucial concept for recognizing our

differences, our histories, and the 'difference of times', as Michel Foucault observed.

Therefore, bringing to light summaries artificially generated by AI is not, once again, to enter the 'masked ball' of a modernity that gains meaning through what Simmel¹⁴ describes as the instantaneous *sub specie aeternitatis*, in which the act of seeing becomes a strategy of knowledge that reproduces masses of artificial information which do not respond to the hardships and demands of populations in their 'existential territories'¹⁴.

A Snapshot—Behind the Scenes of Nefarious Rationality

Strange as it may seem, we pause to reflect, with Braz, Tubaro, and Casilli²⁵, that we are witnessing a technological dispute over who, by right, are the Brazilians who feed AI systems. This very recent text lays bare crucial issues embedded in the proliferation of mental maps, produced in a veritable frenzy, which in turn reinforces the state of hypnosis in which we find ourselves immersed.

The authors denounce mental suffering and the precariousness of digital micro-work, and the text is essential reading, as is the chapter in the book 'The New Productive Infrastructures: digitization of work, e-logistics, and industry 4.0'²⁶.

Just to sharpen our senses and raise questions, the authors draw attention to the fact that the immediacy of data circulating through cyberspaces

[...] also depends, at different stages, on a multitude of precarious, underpaid, and rendered invisible workers [...] who, dispersed globally, perform repetitive, fragmented tasks, paid per assignment and completed in a matter of seconds [...]²⁵.

Fascinated by the speed at which data is generated, we end up overlooking another form of 'slave labor' involving around 160 million workers who, under the logic of extreme

productivity, are subjected to fragile or simply non-existent labor relations. According to the authors²⁵, 54 digital platforms are operating in Brazil in this type of micro-work, in which the logic of production is tied to the feeding of algorithms.

It should therefore be emphasized that the research, of ethnographic excellence, reveals the scale of processes affecting both the Global North and the Global South, resulting in illness and the precarization of human existence rendered invisible by AI.

It may therefore be asked what value the information produced by AI (regarding the 8th National Health Conference) truly holds, when what is actually needed is to move through the territories of the Cerrado, which, as we know, reproduce, to a greater or lesser extent, the precariousness of Primary Health Care Units (UBS), most of which are managed by social organizations that remain firmly distant from the Cerrado territory.

It is also worth asking whether the aforementioned authors (who have dedicated themselves to the health geography for years and thus constitute the critical mass of Collective Health Intelligence) can help us discern whether we have already been carried away by the uninterrupted flow of ‘liquid modernity’ and, in so doing, have definitively abandoned what defines our identity and what constitutes the subjectivity of those ‘who know how to stay grounded’?

Then, rather than following ‘the clues provided by those who produce AI systems’, attention turns to those who devote themselves to the proliferation of data upon data, without realizing their subjection to the *modus faciendi* so characteristic of (ultra)neoliberalism. The subjects who generate thousands of data traces that feed algorithms are, in the final analysis, consumed by the very AI they believe they are feeding. They thereby reproduce an endless cycle within postmodernity, aligned with the maxims of neoliberalism—meritocracy, entrepreneurship, self-management, and the shrinking of the state’s role.

This essay draws on Avelino²⁷⁽⁸¹³⁾, referring to the seminar entitled ‘Technologies of the Self’, delivered at the University of Vermont (United States of America) in 1982, where the philosopher Michel Foucault concluded by stating:

[...] Throughout the history of Christianity, a link has been established between the theatrical or verbal revelation of the self and the subject’s renunciation of the self. [...] From the eighteenth century to the present day, the ‘human sciences’ have reintroduced techniques of verbalization into a different context, making them no longer an instrument of the subject’s renunciation of the self, but rather a positive instrument for the constitution of a new subject. The fact that the use of these techniques has ceased to entail the subject’s renunciation of the self-constitutes a decisive rupture [...].

It is therefore worth asking those who produce thousands of algorithmic pieces of information whether they do so through a form of ‘self-government’ or to respond to the market-driven imperatives of homo economicus, who emerges riding the fast-moving *Cyberneticus* ‘horse’?

Between geography and health—are there lost words that need to be revisited?

In this dialogue between Artificial Intelligence and Collective Intelligence, it becomes clear that certain words seem lost in the ‘landscape’, or at least ‘lost on the horizon’ (citizenship, collectivity, hope, collective struggle). At times, we have the impression that we are chasing after words; at others, that they are ‘hidden somewhere’, without our being able to find them.

One thing is certain: engaging solely with AI achieves little when our efforts are increasingly precarious in the workplace, subjected to forces external to the territory on which our feet stand—at times through precarious labor relations, at others through decisions

that serve political interests that are, at the very least, contradictory.

When we are not the ones running after words, it is the words themselves that escape us through the emptiness of the meanings assigned to them. We are searching for answers that AI is not even capable of understanding in the questions we pose.

Sometimes we feel that, in resorting to AI-based research, Collective Intelligence is left aside, almost in search of an oracle that might, once and for all, point out the paths to follow, even though we know that we are walking through a country fueled by ‘coup-ism’, skewed, and, above all, shifting to the right.

It is precisely at this moment—when we feel that our feet have lost contact with the territory—that we argue for the importance of geography and health becoming intersectoral²⁸, so as to prevent the loss of the concrete meaning of effective actions in caring for the population. Consequently, if geography and health move forward together and seek to listen to the voice and grassroots outcry based in existential territories, it becomes necessary to determine which words guide the management of services, thereby mitigating the suffering of our people, who have been left disoriented by unproductive measures.

Even when we draw on the literogeography of Gonçalves¹⁰ and Lima and Chaveiro¹¹, we still face difficulties in communicating with the population. No landscape can withstand a ‘headache of this magnitude’, a desperate user might say after being told at the reception desk that they would have to be ‘referred to by someone’, even after having been stabbed in the street during an attempted robbery. In such a case, wouldn’t the knife remaining in the victim’s body be evidence enough? I asked—and the AI did not know how to answer.

Moreover, to the words that behave as elusive, we extend an invitation to a ‘whispered conversation’.

The nefarious character referred to in this section points to the fact that we are being subjected to—and regulated by—the artificiality of

the time in which we live. It therefore becomes necessary to open ourselves to ‘conversation circles’ in which Collective Intelligence can redirect the ‘word as a gift’, one that entails the trilogy of giving–receiving–reciprocating²⁹.

Final considerations

In contemporary discourse, much is said about the multiverse—perhaps the reverse of the reverse of AI—but, for the obvious reasons this essay has sought to demonstrate, we cannot take our ‘feet off the ground’ if we wish to find paths that lead us to those who ‘know how to practice healthcare in the Cerrado’, thus affirming the *‘esprit de corps’* of what we understand as Collective Intelligence and Collective Health. Today, we declare our independence from AI and embrace CI.

As a post-independence act, this essay opts to refer to AI ‘translation’ no longer as Artificial Intelligence, but as Ancestral Intelligence, insofar as it invokes the literogeographical nuances of where one’s feet touch the ground in the course of walking. Therefore, it is our view that this not only broadens perspectives beyond the landscape but also opens up horizons mediated by intersectional encounters, particularly towards conceptions that move away from the self-enclosure of biomedicine.

So, is the multiverse to be refused? Instead, we open ourselves to the multiple verses produced along the edges of the Cerrado paths. Let us welcome the *escrevivências* of those who weave histories in the form of tales and faithful narratives of those who believe that practicing collective health is an art in its rawest and most unadorned form, visible to our eyes, emerging in ‘whispered conversations’ and ‘conversation circles’. In the words of Leonardo Brandão, a popular poet from the Pajeú hinterland in Pernambuco, known as ‘the illiterate poet’, as he contemplates the landscapes of a Brazilian Cerrado, he says:

The shadow that accompanies me is not the one that saves me.

If I walk, it walks; if I run, it runs—
and it is happier than I am, it neither gets ill nor dies.

The Juazeiro is a tree that resists, that resists the dry land.

Its fruit is worth nothing, and its wood is twisted and rough,
but the kindness of its shade takes away the bitterness of the fruit.

And all that humankind has learned about nature is not enough;

it cannot make a coconut tree—if it tries, one goes crazy,

running for the pipe that carries water from the ground

to place it inside the coconut!³⁰.

A sombra que me acompanha, não é a que me socorre.

Se eu andar, ela anda, se eu correr, ela corre e é mais feliz do que eu, nem adoce e nem morre.

Juazeiro é uma planta que resiste, que resiste à terra enxuta.

A fruta não vale nada e a madeira torta e bruta, mas a bondade da sombra tira a ruindade da fruta.

E tudo que o homem estudou pra natureza foi pouco.

Ele não faz um coqueiro, se inventar fica louco, caçando a encanação que leva água do chão para botar dentro do coco!³⁰.

Authorship contributions

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