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Ultra-Neoliberalism and Higher Education: A Critical (but Hopeful) View from Brazil

Ultra-néolibéralisme et enseignement supérieur : une vision critique (mais pleine d'espoir) du Brésil

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Résumé de l'article

Dans cet essai, j'analyse la crise éducative du capitalisme cognitif mondial, en particulier la responsabilité de l'université en tant qu'institution sociale concernée par l'éducation démocratique, la conscience critique et la sensibilité éco-sociale. À cette fin, je discute d'abord du contexte mondial de l'ultra-néolibéralisme et de ses regrets par rapport aux macro tendances économiques, sociales, politiques, épistémologiques et scientifiques. Deuxièmement, je présente le cas de l'éducation brésilienne et de son balayage dialectique de la reproduction des cycles trans-générationnels des relations de pouvoir. Troisièmement, je propose un programme politique pour l'éducation en tant que droit humain fondamental, en analysant l'enseignement supérieur comme une condition de la citoyenneté planétaire concernée et responsable. Quatrièmement, j'élaborerai un programme conceptuel pour l'Université basé sur les épistémologies du Sud Global pour aider à surmonter les menaces autoritaires et destructrices de l'ultra-néolibéralisme dans les sociétés contemporaines.

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Ultra-Neoliberalism and Higher Education: A Critical (but Hopeful) View from Brazil

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Abstract

In this essay, I analyze the educational crisis of global cognitive capitalism, focusing on the responsibility of the University as a social institution concerned with democratic education, critical awareness, and eco-social sensibility. With this aim, first I discuss the context of ultra-neoliberalism and its discontents regarding economic, social, political, epistemological, and scientific macrotrends. Secondly, I introduce the case of Brazilian education and its dialectics of reproducing cycles of transgenerational power relations. Third, I propose a political agenda for education as a fundamental human right, analyzing higher education as a condition of concerned, responsible planetary citizenship. Fourth, I elaborate a conceptual agenda for the University based on epistemologies of the Global South to help overcoming authoritarian, destructive threats of ultra-neoliberalism in contemporary societies.

Keywords: university, higher education, neoliberalism, capitalism, globalization

Ultra-néolibéralisme et enseignement supérieur: une vision critique (mais pleine d'espoir) du Brésil

Résumé

Dans cet essai, j'analyse la crise éducative du capitalisme cognitif mondial, en particulier la responsabilité de l'université en tant qu'institution sociale concernée par l'éducation démocratique, la conscience critique et la sensibilité eco-sociale. À cette fin, je discute d'abord du contexte mondial de l'ultra-néolibéralisme et de ses regrets par rapport aux macro tendances économiques, sociales, politiques, épistémologiques et scientifiques. Deuxièmement, je présente le cas de l'éducation brésilienne et de son balayage dialectique de la reproduction des cycles trans-générationnels des relations de pouvoir. Troisièmement, je propose un programme politique pour l'éducation en tant que droit humain fondamental, en analysant l'enseignement supérieur comme une condition de la citoyenneté planétaire concernée et responsable. Quatrièmement, j'élaboré un programme conceptuel pour l'Université basé sur les épistémologies du Sud Global pour aider à surmonter les menaces autoritaires et destructrices de l'ultra-néolibéralisme dans les sociétés contemporaines.

Mots-clés : université, l'enseignement supérieur, néolibéralisme, capitalisme, mondialisation

Ultra-neoliberalismo e ensino superior: Uma visão crítica (mas esperançosa) do Brasil

Resumo

Neste ensaio, analiso a crise educacional do capitalismo cognitivo global, particularmente a responsabilidade da universidade como instituição social preocupada com educação democrática, consciência crítica e sensibilidade ecosocial. Com esse objetivo, primeiro discuto o contexto global do ultra neoliberalismo e seus pesares, em relação às macrotendências econômicas, sociais, políticas, epistemológicas e científicas. Em segundo lugar, apresento o caso da educação brasileira e sua dialética de reprodução de ciclos transgeracionais de relações de poder. Em terceiro lugar, discuto uma agenda política para a educação como direito humano fundamental, onde se analisa o ensino superior como condição de cidadania planetária responsável e preocupada. Em quarto lugar, elaboro uma agenda conceitual para a Universidade

baseada em epistemologias do Sul global, a fim de ajudar a superar ameaças autoritárias e destrutivas do ultraliberalismo nas sociedades contemporâneas.

Palavras-chave: universidade, ensino superior, neoliberalismo, capitalismo, globalização

Ultra-neoliberalismo y educación superior: una visión crítica (pero esperanzadora) de Brasil

Resumen

En este ensayo, analizo la crisis educativa del capitalismo cognitivo global, particularmente la responsabilidad de la universidad como una institución social preocupada por la educación democrática, la conciencia crítica y la sensibilidad ecosocial. Con este fin, primero discuto el contexto global del ultra neoliberalismo y sus descontentos en relación con las macrotendencias económicas, sociales, políticas, epistemológicas y científicas. En segundo lugar, presento el caso de la educación brasileña y su dialéctica de reproducción de ciclos trans-generacionales de relaciones de poder. En tercer lugar, propongo una agenda política para la educación como un derecho humano fundamental, donde la educación superior se analiza como una condición de ciudadanía planetaria responsable y preocupada. Cuarto, desarrollo una agenda conceptual para la Universidad basada en epistemologías del Sur global, con el fin de ayudar a superar las amenazas autoritarias y destructivas del ultraliberalismo en las sociedades contemporáneas.

Palabras-clave: universidad, educación superior, neoliberalismo, capitalismo, globalización

Introduction

Recent transformations in the world economic system have turned the prevailing mode of production into what has been called hyper-capitalism (Graham, 2002), cognitive capitalism (Boutang, 2011), digital capitalism (Fuchs & Mosco 2016), or surveillance capitalism (Venkatesh, 2021). These constructs have been justified by societal trends that theoretically support the notion of a society of knowledge (Stehr & Adolf, 2017). The combination of globalized capitalism (on economic grounds) with fundamentalism and social fascism (in the politico-ideological arena) has justified the label of deep-neoliberalism or ultra-neoliberalism (Bebbington & Bebbington, 2011). Taking into

account today's environmental challenges (global warming, climate change, catastrophic events, etc.) and threats to democratic political culture, the technoscientific frontier (big data, artificial intelligence, quantum computing, biomodeling, nanotechnology, robotics, design thinking, etc.) no doubt requires a new model of higher education if we are to cope with the political and eco-social impact of economic globalization (Sousa-Santos, 2018).

The global context has currently been marked by diverse, multidimensional crises—economic, environmental, societal, political, scientific, and ethical. In these times of social unrest and somber political horizons, the educational crisis stands out as a crucial one, due to its key strategic position in human culture. From a critical perspective, education can be either of two vectors: a central factor in the world's social and cultural problematic of widespread social injustice and inequity (Delgado-Gal et al., 2013), and/or a powerful source of potential solutions for overcoming the complex set of obstacles to humanity inherited from late modernity (Sodré, 2012). What about the University? This millenary institution of Western culture emerged in the Middle Ages from the flowering of intellectuals and ideas in the urban scenario (Verger, 1992). Invented to protect Christendom's values against barbarian invasions and the Islamic expansion in medieval times, it evolved across the centuries to perform new social and political missions (Scott, 2006). How can the University help us confront the new barbarianism of ultra-neoliberalism? Can it be regarded as an apt institutional model for building a better future in the cognitive era?

The purpose of this essay is to analyze the educational crisis within this framework, particularly the broader responsibility of the University as a social institution—one that is committed to a radically democratic education that fosters critical awareness and ecosocial sensibility. Brazil is taken herewith as a problematic and peculiar case of subordinate globalization, highlighted for being a place of social perversions in education while at the same time a source of inspiration, challenging possibilities of education as a liberating political praxis. First, I briefly examine the global context of ultra-neoliberalism and its discontents in regard to economic, social, political, epistemological, and scientific macro trends. Second, I introduce the case of Brazilian education and its dialectics of reproducing cycles of transgenerational power relations. Third, I discuss the political agenda of education as a fundamental human right and analyze the idea of university general education as a condition for a conscious, responsible planetary citizenship. Fourth, I propose a conceptual agenda for the University based on radical critical approaches to help overcoming authoritarian, destructive threats of ultra-neoliberalism in contemporary societies.

This essay is intended as an act of epistemic decolonial disobedience, a notion devised by Walter D. Mignolo (2011). For that, I rely upon the theoretical contributions of Brazilian scholars representative of Southern epistemologies: Anísio Teixeira (1900-1971), one of the pioneering advocates of democratic education in Brazil; philosopher and psychologist Hilton Japiassu (1934-2015); geographer and philosopher Milton

Santos (1926-2001); educator and media theorist Muniz Sodré Cabral (1942-); and Portuguese social theorist and political activist Boaventura de Sousa-Santos (1940-).

The Global Context

The most fundamental economic trend of today's world is the globalization of the production process overdetermined by technoscientific and political vectors, with structural economic inequalities producing unjust social inequities (Piketty, 2019). Technologies of increasingly common use, comprising highly complex equipment and processes, receive massive, widespread implementation. These technologies are based on intellectual products configured in chains of algorithms, conventionally designated as programming. Production has changed dramatically and rapidly, particularly considering fourth-generation multifunctional industrial products, establishing what has been named as the "knowledge-based economy" (OECD, 1996). A fundamental element of automated industrial production is the knowledge embedded in the hardware and the servo-control mechanisms involved in programming these machines that produce machines (Noble, 1984). What is paid to buy such a device covers much more than the intelligence incorporated in it, to the extent that, from the point of view of its materiality, the digital processor that controls the equipment costs very little. The value of goods is less and less defined by the costs of the physical basis of products (raw material, means of production, labor, inputs, etc.) and the time used to process new products from them (Azhar, 2017). Nature, design, utility, and price of goods also cannot be measured by the same patterns, norms, and parameters as in the original industrial mode of production. These are essential elements to understand new forms of value constitution that do not follow the rules of logic that were valid in the era of industrial capitalism (Fuchs & Mosco, 2016).

Particularly in industrialized countries, intense de-professionalization of labor has followed the automation of production and the growing use of artificial intelligence (Menezes, 2021). The amount of human labour and time used to build a small digital machine like a smartphone is very short, if any, because the miniaturized processes operate virtually out of reach of human capacity. So, impossible to be made manually, it is therefore also automated. Markets and prices are no longer explained by the classical economic theory of value-cost based on matter-time-energy, but rather in consideration of an extreme optimization of potential utility enhanced by embedded intelligence. This intelligence and its effects can be reproduced without physical input, so that for each device, the surplus value is theoretically replicated with marginal loss, and profitability goes without decay (Azhar, 2017). Finally, the current form of value aggregation to the product is totally different from the conventional industrial paradigm: first, because being miniaturized, it is manufactured in a process of almost total automation; second, because operating systems and respective applications have no materiality whatsoever;

and third, the multiplication of utilities means that the cost paid by the user accounts for new functions that will never be used.

Contemporarily, a fast, broad, and deep technological transition is occurring worldwide; so fast that it seems almost impossible to assess its effects on everyday life and to predict its impact in the future (Menezes, 2021). On the edge of a new millennium, human existence is marked by cultural and behavioral trends provoked by a fast pace of change at all levels and dimensions. With a strong space-time compression, space is transposed in its boundaries onto a trans-limited digital reality, and time is nowadays redefined and projected into the future. When French architect and philosopher Paul Virilio wrote *Speed and Politics* in 1976, nobody, not even Virilio himself, could predict that *dromology*—a concept he defined as the “logic of speed”—would become dominant so soon and so widespread (Virilio, 1986).

Technoscience turned out to be a general, ubiquitous, and pervasive societal superstructure, led by hyperconnectivity, collective intelligence, and machine learning. The centrality of technology in the economic sphere produces intellectual surplus value, which no doubt makes knowledge the main economic asset of a mode of production that has been called “hyper-capitalism” (Graham, 2002) or “cognitive capitalism” (Boutang, 2011). Beyond cognitive capitalism, with digital media companies capturing, monitoring, and processing private personal data for marketing and profitability, and knowing more about people than the persons themselves could, there is the “superindustry of the imaginary” (Bucci, 2021). Thus, Marx’s concept of commodity fetishism must be updated to account for the symbolic dimension of the economic and politico-ideological instances of society, resulting in what has been called “surveillance capitalism” (Venkatesh, 2021). In this all-encompassing digital planetary coverage, immediately followed by the worldwide integration of financial systems, a gigantic, new kind of epistemodiversity emerges, with social networks operated by robots open for immediate dissemination of strange narratives, fake news, or pseudo-true stories (Darnton, 2017).

Nowadays, the mode of knowledge production called science is in a deep crisis. Historically, this Eurocentric system of knowledge production and legitimized scholarship has been at the service of the cognitive demands of capitalism, founded upon epistemological features such as objectification by empirical methods, linear data analysis, and development of technological devices and strategies to control supposedly causal connections between events (Quijano, 2015). Science has become inter-transdisciplinary by necessity to maintain and enhance its predictive power. For Portuguese political scientist and social thinker Boaventura de Sousa-Santos, contemporary sciences have been through both a paradigmatic crisis and a crisis of development (Sousa-Santos, 1989). These crises exist because the practice of science is continually producing new objects; not only new ways of referring to the same old objects, but in fact radically new objects, with new, truly emergent properties. Within a practice which flagrantly reaffirms fragmentation, scientists are becoming conscious that it is necessary to open their practice to critical questioning at a more fundamental

and global level; otherwise their disciplines will be transformed into a mere repertory of techniques and knowledge from now on surpassed (Geuna, 1999). There is no more room for the anthropocentric narcissism typical of the Cartesian tradition in sciences that increasingly values complexity, de-centering, and relativism (Sousa-Santos, 1989).

Trends in the economic, scientific, and technological arenas influence the societal and political spheres, allowing us to recognize new sociopolitical trends: extreme inequalities, perverse effects of social and political crises, redefinition of the state, neoliberal trans-nationalization, hegemony of economic blocks, adjustments with fiscal austerity, withdrawal of public policies, widespread individualism, racism, and xenophobia. Among the sociopolitical trends of this complex contemporary context, there are perverse effects of social and political crises, with economic adjustments guided by neoliberalism (Peck et al., 2010). The transition of the techno-scientific paradigm, with great speed, intensity, and reach, is bringing an unexpected social component: the inequality of subjects' access to the uses and benefits of the products of this transition.

In this globalized hyper-capitalism, politics has been often ruled by a combination of fundamentalism, obscurantism, individualism, and social fascism, resulting in authoritarian political regimes ruled by neoliberal economic models, which has been called ultra-neoliberalism (Bebbington & Bebbington, 2011). The redefinition of the state-market relationship has produced a new form of colonial dominance based on the imperialism of economic blocks, which are replacing the nation-state as the main geopolitical reference (Haesbaert, 2021). This trend has provoked a crisis of the welfare state, resulting in fiscal adjustments with austerity and gradual withdrawal of public policies, which has given room to short cycles of economic crises affecting the whole planet. In post-neoliberal countries, governments do not comply even with the basic functions of a liberal democratic state, as established since its conception in the early 19th century as a superstructural device capable of redistributing power and wealth, attenuating the economic inequality effects and political imbalances to their minimum to ensure social peace. Therefore, instead of welfare states, they confirm their status of an ill-fare state, or "predator state" (Galbraith, 2009). In these societies, most of the population is vulnerable to social, political, and economic exclusion, producing unjust social discrimination, racism, and violence, with negative impacts on societal and cultural life. Underfunded and inefficient to conduct public policies capable to offset current disadvantages and fix historical social debts, the public sectors of the predator state have become a device for transforming economic inequalities into social and political inequities, mostly in areas such as education.

Almost everywhere, with an economy increasingly based on technological assets, the current human social organization has become more and more dependent upon databases, information sources, digital networks, and electronic devices, justifying the fashionable label of *knowledge society* (Stehr & Adolf, 2017). However, what is called knowledge has evolved and is continuously transforming itself into new different shades and shapes. For French philosopher Edgar Morin (1999):

Gigantic progress in knowledge has been accomplished within the framework of disciplinary specializations during the 20th century. But this progress is dispersed and disjointed, precisely because of specialization, which often shattered contexts, globalities, complexities. As a result, tremendous obstacles that hinder the exercise of pertinent knowledge have accumulated right within our educational systems. These systems make the disjunction between the humanities and the sciences, and the division of the sciences into disciplines that have become hyper-specialized, self-enclosed. (pp. 15-16)

According to Morin (1999), to meet the challenges of an increasingly complex, rapidly changing, unpredictable world, the knowledge society needs to think/rethink its way of organizing knowledge, away from the 18th-century idea of the unity of sciences and towards a new alliance for the reconnection of knowledges. Therefore, we must call upon not the old encyclopedism based on the brilliance and talent of a few gifted individuals, as in the Renaissance or during the Enlightenment, but rather renewed forms of knowledge constructed collectively. Such a process, which happens both at societal and epistemological levels, certainly resonates in the field of education.

The fragmentation of science into isolated disciplines—which is defined by Japiassu (1976) as a “pathology of knowledge”—corresponds to a disintegration of learning objects into atomized teaching units. This aspect is also masterfully analyzed by Morin (1999):

Here is a major problem that is always misunderstood: how can we encourage a way of learning that is able to grasp general, fundamental problems and insert partial, circumscribed knowledge within them. The predominance of fragmented learning divided up into disciplines often makes us unable to connect parts and wholes; it should be replaced by learning that can grasp subjects within their context, their complex, their totality. (p. 1)

In sum, economic globalization of the productive process, along with some ubiquitous side-effects of the technological revolution, has made popular the misleading idea that the world is becoming better, more equal, and less oppressive. The global versus local dichotomy has been used to comfortably explain and deny conflicts between the old versus the new, tradition versus modernity, and poverty versus richness (Santos, 2000). The assumption that globalization is an inevitable, desirable vector towards improvement of humankind is based on metaphors of doubtful validity, such as global village, free market, world community, and one society. In fact, political dependency, economic inequality, and social inequity have increased and expanded in the international scene by new forms of neocolonialism, leaving several countries in a subordinate position in the globalization process (Gómez & Grosfóguel, 2007; Haesbaert, 2021).

The Brazilian Context of Higher Education

Brazil, one of the most unequal countries in the world, is a case of subordinate globalization (Santos, 1978; Souza, 2021). A brutal history of colonial exploitation, slavery, patriarchalism, and political oppression left a legacy of structural inequality and systemic racism in this country (Gonzalez, 1988; Schwarcz & Starling, 2015). For two centuries after its independence from Portugal in 1822, Brazilian society has been dominated by an oligarchical political system, closely connected to a patrimonial state marked by corrupt relationships between public and private spheres. Waves of cultural change and economic development during the 1930s and after World War II allowed for short-lived attempts to modernize labor relations and educational policies, in a context of rapid urbanization and implementation of a national industrial infrastructure (Schwarcz & Starling, 2015; Souza, 2021).

After the military dictatorship between 1964 and 1985, the democratic state was rebuilt in Brazil through a political process that turned out to be incomplete and delayed. Brazil's social context, which for a while had economic inclusion as its main feature for the growth of an internal consumer market in parallel with poverty-reducing public policies, nowadays suffers from the reemergence of unemployment, inequity, and exclusion (Souza, 2021). Recently, the country has been run by a right-wing populist government which has deepened its unequal social structure and threatened its weak, unstable democracy. Currently, labor relations are deteriorating, social protection policies are being suppressed, and economic inequality has been translated as social inequities. There is an increasing social perception of corruption, recent but very intense, combined with strong political-ideological regression and legal-police repression. Environmental destruction has been promoted by the federal government and, with rules for firearm liberation backed up by official support, Brazil has quickly become a society of overt violence, intolerance, and racism (Souza, 2021).

Previously, I have discussed how Brazilian public universities inadvertently contribute to the reproduction and consolidation of inequalities and their transformation into social inequities (Almeida-Filho, 2015). The first universities of Brazil were established only in the 1930s in connection with a national movement towards considering education as a condition for democracy (Teixeira, 1971). However, since the education reforms implemented by the military regime in the 1970s (Cunha, 2007), the country's higher education system has been dominated by the private sector, seeking profitability more than academic excellence, and without a firm commitment to quality and equity (Vechia & Ferreira, 2020). In our country, economically privileged and politically dominant social groups receive tax benefits that increase their inheritors' access to quality secondary education (Bourdieu & Passeron, 1964). These young people participate in a supposedly meritocratic selection process to enter into high quality public universities with no fees or tuition. Only low quality, and paid, private higher education is left for young people from the poor majority who finance the state; those who, overcoming difficulties, can complete this phase of their education. There is, therefore, a cruel perversion in the

transition from secondary to higher education, which is crucial in defining future employability, social and economic insertion, and the concentration of cultural and political capital in the dominant ruling elite.

As analyzed elsewhere (Almeida-Filho, 2015), the dynamics of social vectors of Brazilian education can be synthesized in three perversions and two reproductions:

- Through a distorted and regressive tax structure, the poor population finances the Brazilian state proportionally much more than the middle and upper classes.
- In basic education, the poor benefit little from the constitutional duty of the state, which, on the contrary, subsidizes the richest and most able citizens through tax waivers to mobilize resources to account for this stage of education.
- In higher education, the poor often must assume debt to attend lower-quality private institutions, while the rich, on the contrary, have access to better quality courses in tuition-free public institutions that are fully financed by the public budget.
- Professional training in public universities, especially for careers of greater social prestige, generates a large amount of symbolic capital, providing differential access to positions of command, operation, and management, reproducing the economic elite of society and the political and bureaucratic frameworks of the social ill-fare state.
- Academic training in public universities, including postgraduate courses almost entirely funded by governments, with a wide scholarship program, ensures the conservation of the system of trainers and intellectual elite necessary for the ideological reproduction of the social ill-fare state.

In addition to these perversions and reproductions, we can also identify a paradox: the training of public-school teachers is predominantly carried out by private institutions, while public universities prepare teachers for private basic education and for their own reproduction. That is, the state invests enormous effort and resources to train teachers with more quality in its network of federal and state universities. And who is mass-training teachers for public education? Private institutions, spread all over the country and, nowadays, with massive use of distance learning. Several studies of professional trajectory have shown that the most talented and motivated of these teachers will work in the private sector of education, in preparatory programs or in the best private schools, or are working within the university system (Gatti et al., 2019). Thus, the Brazilian public university, owned and operated by a “social ill-fare state,” which fails to attain its constitutional mission, guarantees its own reproduction and contributes to cycles of perverse effects, allowing the continuing social production of inequalities and inequities (Almeida-Filho, 2015). This has led to a serious misunderstanding: the assumption that all malaise comes from outside the public university (e.g., from the education system, a capitalist state, a racist society, patriarchal culture, etc.). It is then necessary to face the inconvenient (and, at the limit, painful) truth that the roots of differential quality of higher education is not a managerial problem,

solvable by best practices of training human resources. However, instead of a problem, education may hopefully be the solution. Ideally a stronghold of human education in modern societies, the public university has a major role to perform to help the Brazilian people overcome the challenges depicted above (Sousa-Santos & Almeida-Filho, 2008).

A Political Agenda for the University

The idea that Education is a universal human right can be traced back to the Enlightenment, but only after the French Revolution of 1789 it came to be considered as a duty of the state. Condorcet's (1792) *Rapport et projet de décret sur l'organisation générale de l'instruction publique*, presented to the National Assembly in 1792, opens with this powerful statement:

To offer all individuals of the human race the means of providing for their needs, of assuring their welfare, of being acquainted with and exercising their rights, of understanding and fulfilling their duties; to assure to each individual the capacity of perfecting his labour, of making himself fit for the social functions to which he has the right to be called, to develop the whole extent of the talents that he has received from nature and, by this means, of establishing among citizens a de facto equality and also to make real the political equality recognized by the law; this must be the first goal of national education and, from this viewpoint, it is a duty of justice for public authorities. (p. 1)

Condorcet's position, which has still not been realized in many countries, must prevail today as a major political goal for humanity. My argument here is that Education has been recognized as a fundamental human right, equally available for all, because it is the matrix of all rights capable of promoting equity in modern societies. As such, the right to education precedes the other human rights for being a condition for the political pursuit to ensure them all. This was the main justification—philosophical, political, and ethical—for John Dewey's defense of education as an essential part of modern democracy (Bruno-Jofre, 2020). Anísio Teixeira (1936), who introduced Deweyan philosophy of education in Brazil, wrote that public schools are the “machine to make democracy” (p. 247). A corollary of this statement is that university education can foster human emancipation and must be a condition for enabling human beings to participate in social interactions exerting their fully entitled cognitive global citizenship.

The foundation of my argument is this preliminary assumption: one needs to distinguish functions of higher education from the missions of university education (Scott, 2006). The functions of higher or tertiary education are to train technical and managerial personnel to apply practical and technical knowledge, with no commitment to broader cultural and political goals. However, beyond professional training for technological applications, the missions of university education, which have been developed and cultivated since the creation of the first universities in Italy and France in

medieval times (Verger, 1992), are: (a) the promotion of academic cultures (scholastic, humanistic, ethical, technoscientific, ecological); (b) the education of intellectuals, in different forms: scientists (knowledge producers), inventors (technology developers and spreaders), social critics (voices for contested knowledge), and educators (promoters of contemporary values of civilized culture); (c) the creation and production of knowledge, meaning the generation of symbolic capital (in the Bourdieusian sense); and (d) the generation of cultural criticism towards social transformation (general education, intercultural learning, and ecology of knowledges).

As pointed out by Scott (2006), each of these missions corresponds to different eras in the history of the institution known as the University in the Western world: from medieval times, the religion-oriented scholastic university evolved into higher-education professional schools during the post-renaissance era. In modern times, the research institute, nicknamed "Humboldtian university," gradually changed and, from 1968 on, was transformed into a social and politically concerned organization that, according to Clark Kerr (1995), should better be called a multiversity instead of university.

A radical transformation of the social-institutional system for training intellectuals is doubtless coming up in the context of a new humanism, or perhaps a new encyclopedism adapted for the knowledge economy (Olsen & Peters, 2007). In this future that seems to have already arrived, where memory units have form, code, and dimension, the competence to master science-oriented methods, research protocols, validation patterns, and intervention techniques in the field of education potentially will be carried out by digital memorizing and machine learning processes. In such a world, to learn is much more than just knowing how to trigger technological mechanisms for accessing information. The question of understanding and meaning stand as the major and fundamental goal of the pedagogical endeavor, as well as the issue of critical awareness of the social and political consequences of controlling data, information, and knowledge in the cognitive era (Altbach, 2016).

Therefore, an agenda for emancipatory human development in democratic contemporary societies, affected by the cognitive era, must become a priority in our current times, full of uncertainty and instability (Menezes, 2021). The topics of such a political, social, cultural, ethical agenda are: to overcome subordinate globalization; to review the welfare state as ethical and social; to prioritize transformative and socially inclusive public policies; to regain the societal-community space; to recognize knowledge as an economic and geopolitical asset; to create and foster innovative institutions; to invest in disruptive technoscience; to promote the idea of university education; to pursue critical technological competence; and to value education for eco-social responsibility. An important part of this agenda has to do with a common core of knowledges and skills at a higher level of instruction, more specifically advanced general education which, historically, has been provided by the University (Teixeira, 1971). How to organize higher education curricula fit for this agenda remains a huge challenge, moreover for articulating interprofessional and transdisciplinary general

education, not only for training professionals but also to form concerned, creative, and participative citizens (Sousa-Santos & Almeida-Filho, 2008).

Bound to an uncertain and mutant future, the University must consider the relevance of the concept of general education. The idea of general education has been part of the academic ethos throughout the entire history of the University in the Western world (Teixeira, 1971). During medieval times, the *trivium* (logic, rhetoric, grammar) and the *quadrivium* (astronomy, geometry, music, arithmetic), united in *studia generalia*, composed the core of common knowledge for educated persons (Verger, 1992). The classical university, in its Mediterranean-Catholic version, followed the *Ratio Studiorum*, a pedagogical canon elaborated by the Jesuits (Grendler, 2016). In the faculties and schools of the modern era, with the emergence of the capitalist mode of production and liberal individualism as its ideology, so-called mechanical arts were introduced as practical knowledge: management strategies and productive techniques adjusted for vocational and specialized higher education (Weisz, 1983). By the end of the 18th century, in Europe the German romantic idea of *Bildung* implied the process (but also the outcome) of acquiring knowledge and values of individual freedom, which defined civilized culture in the Northern Hemisphere (Hofstetter, 2001). The Anglo-Saxon research university of the 20th century cultivated the idea of *liberal arts* education as a condensed version of classical, propaedeutical studies before graduate education at the university (Rothblatt, 1976).

In a process of rapid expansion within a global context of new geopolitical polarities, the Chinese university has brought about Confucian philosophy and its secular notion of *tongshi* as necessary to consolidate China's position as a major player in contemporary geopolitics (Shen, 2019). A clear and precise presentation of this notion can be found in Mei & Pan's (1941) original statement:

Tongshi prepares for one's general aspects of life, while specialism training prepares for one's specialised vocation. Tongshi aims for more than one's material flourishing, but more importantly, an integrative and comprehensive understanding of oneself. In this sense, tongshi is the ultimate purpose of university education, while specialist training is the beneficial end that university education brings. What a society needs from universities, first and foremost, is graduates who are cultivated through tongshi, who are more than skillful specialists. If specialists do not have tongshi as the foundation of their education, they will not be able to contribute to leading and modernising our nation and people, but rather, may cause chaos. (p. 78)

In sum, the University as an institution was created in the Middle Ages to form clerical cadres, and later, after the French Revolution, to train professional and corporate staff, state leaders, and organic intellectuals of the emerging bourgeoisie (Weisz, 1983). The mission to produce original knowledge was added very late in history with the mythical Humboldt Reform, initially with an emphasis upon scientific and technological issues,

and then in the humanities and the arts (Scott, 2006). Only in the last century has the university awakened to its social mission, first by outreach actions in community, regional, and national development initiatives, and then by political action, using different possibilities of social mobilization (Sousa-Santos & Almeida-Filho, 2008).¹

In today's globalized, complex, and diverse world—interconnected, increasingly accelerated, and lacking solidarity and sensitivity—the problem of general education for planetary citizenship may be unfolded in multiple questions and in different dimensions: How to build a new model of education that is not mere professional training and social adjustment? And consequently: How to transform a pattern of historically consolidated social practices that, in many ways, may be able to critically challenge hegemonic professional practices and educational models and will, in some way, transgress and overcome them?

These questions are part of a much more profound political issue that, in my opinion, needs to be dealt with as the result of institutional action in the complex sphere of public policies. Michel Foucault (2008) foresees a world in which the contradictions of the historical society, by repressing politics, tend to reduce the old social-democratic nation-state to its minimal dimension, to be eroded until it becomes tiny and irrelevant. This hidden world is what he calls *heterotopia*. It is the closed space (or a bubble, to use a term of the moment) of traditions, families, identity groups, and totalitarian worldviews, defined by the primary relationships between subjects reduced to political poverty. Heterotopia fosters micropolitical networks of domination. This happens through biopolitics, the exercise of micropowers leading to a political eschatology of societal disruption which, applied to post-colonial contexts, translates as necropolitics (Mbembe, 2003).

In an exercise of reflexivity or self-criticism, the university under siege (Delgado-Gal et al., 2013) is now demanded to analyze the role of education in the maintenance of social domination as a con-formative device ready for training the operators of a political eschatology. This may be happening under our academic eyes in a university that has been described as being in ruins (Readings, 1996), submitted to the structuring positivity of a society in permanent reconstruction and deconstruction. In fact, the school as social institution is capable of promoting symbolic violence and systemic destruction, crucial for the feasibility and functionality of ultra-neoliberal heterotopias or dystopias typical of contemporary cognitive capitalism.²

¹ Notwithstanding its political appeal, I have a critical position in relation to the classic tripod of teaching, research, and extension, first for being classic and then for being a tripod. Following Teixeira (1971) and Freire (1996), I agree that the distinction between teaching, research, and extension sounds superficial and unjustified. I propose that it is wiser to speak of “hybrid acts” of action-research, research-creation, research-training, research-trans-formation, learning-trans-formation, learning-creation, diffusion-learning, learning-innovation, and many other possible combinations, still others that we can only imagine.

² This statement is in dialogue with philosophical and sociological concepts of prestigious origins, namely Foucault's biopolitics, Althusser's ideological state apparatuses, Bourdieu's reproduction, Readings's post-modernity, Bauman's liquid modernity, and Chul-Han's burn-out society. Nevertheless, all these

Ideas (Full of Hope) for the University

Considering the process of globalization and the world's cultural diversity, the renewal of the University needs a critical theory of society and culture for sustainable political-pedagogical projects (Sousa-Santos & Almeida-Filho, 2008). Thus, another agenda for the University, one hidden until now, must therefore be pursued: understanding university education as a historical, political tool with primarily a civilizing and emancipatory task bound to promote social transformation of global, national, and regional contexts. The continuous creation, construction, and reconstruction of higher education must be an action-research endeavor, oriented by a set of key concepts: *territoriality*, *transversality*, and *ecology of knowledges*.

Territoriality

The problematic scenario of subordinate globalization previously depicted was anticipated, defined, and thoroughly analyzed by Milton Santos, a Brazilian critical geographer who studied contemporary peripheral capitalist societies. In two seminal works— *Towards a New Geography* (Santos, 1978) and *The Nature of Space* (Santos, 1996)³—Santos highlights the key theoretical elements of general symbolic and political effects that structure the relationship of the human subject with social space. His later work focuses on the advances of technosciences in contemporary global context (Santos, 2000, 2008, 2017a, 2017b). Although limited to Western cultural and epistemological territory, he provides a powerful platform for a counter-hegemonic critical theory of social formations based on technology, information, and knowledge, exploring the phenomena of globalization, multiculturalism, and ultra-neoliberalism.

Milton Santos's thought is organized around the key concept of *territory*. The most systematic account of such a concept came out for the first time in 1994 in a short essay titled "The Return of the Territory," included in a volume only recently made available for English-speaking audiences (Santos, 2017b). After revising traditional conceptions of space and territory, Santos conceptualizes *space* as an epistemological hybrid and *territory* as an object defined by its historicity, which integrates the space-time dimension as a philosophical category. He argues that, to prevent the "risk of alienation" and "the risk of renouncing the future," geographers should not approach a territory as a physical entity but rather a reconstructed historical object, the "used

relevant, consistent propositions, written by iconic contemporary intellectuals, come from European/North American academia, forming with what Aníbal Quijano (2015) defined as Eurocentrism, and Boaventura de Sousa-Santos (2018) called epistemologies of the global North.

³ Milton Santos's prolific oeuvre was written mostly in Portuguese. A series of articles in English (Santos, 1977a, 1977b, 1977c), whose contents were later included in *Towards a New Geography* (1978), was published in *Antipode*, a British radical geography journal (<https://antipodeonline.org/about-the-journal-and-foundation/a-radical-journal-of-geography/>). His last book, titled *Toward an Other Globalization*, was recently translated into English by Melgáço and Clarke (Santos, 2017).

territory” (Santos, 2017a, p. 26). According to him, the notion of used territory can be understood as resulting from both the material and social basis of human actions in reshaping nature, and of historical processes needed for the survival of the human species. The idea of a return to a territory, in the current context of growing transnationalization of spaces through digital networks, is proposed to recover the relationships between the global and the local, with priority for the latter. Santos completes his theoretical system by presenting a dialectics of happenings (*events*) which provides a three-fold typology: homologous, complementary, and hierarchical. From the basic categories of “territoriality” and “glocality,” expanded concepts like, for example, “ethnodiversity” and “epistemodiversity” can be derived to consider unsettled issues of the clash between dominant and subordinate cultures.

The conceptual context of the so-called knowledge society implies a dialectical relationship among different structural elements and contemporary macro-social processes, or, in his terms, the ideology of the modern world (Santos, 2000): (a) the emergence of a new definition of space-time, mediated by the development and availability of information and communication technology; (b) in this case segregated by social class, the expansion of telematics sets up a unique individual and institutional hype of connectivity in human history; and (c) to account for the increasing complexity of contemporary society, a new paradigm based on non-linear, complex system dynamics instead of the Cartesian paradigm, which simplifies concrete reality. On the other hand, the acceleration of the historical process and the space-time compression produces what Santos (2000) calls “empirical universalism” and, paradoxically, fosters social diversity and ethnodiversity on an unprecedented scale in human history.

In his later work, Santos became chiefly concerned with the globalizing economic logics that establish and justify oppressive forms of economic power through digital networking and telecommunications. The geographer-philosopher has called the contemporary digital era a “technical-scientific-informational ecology,” given that in this particular period, information technologies have become central to define geographical and geopolitical landscapes. He comments that “information nowadays plays a role analogous to the one played in the past by energy” to become the uniting tool of the different parts of an abstract territory which, thanks to informational coverage, has become less local and more global, allowing “the presence of absent bodies” (Santos, 1996a, pp. 132-133). Contradictorily, taking advantage of the enormous privilege of mobility and hyperconnectivity provided by the technology that defines the modern world, the ruling classes do not participate in the local world of territories and, therefore, “they just see little of the city and of the world” (Santos, 2008, p. 80). Here one can find the root of Santos’s political optimism: the perversion of globality as the ideology of the ruling elites is confronted by, and often succumb to, the singularities of locality. Therefore, socio-ethno-diversity—present, active, and effective in local territories—enables the production of new discourses, practices, and wisdoms defined by a communal solidarity constantly created by the daily contiguity of direct interpersonal relations (Santos, 2000). In sum, both the physical existence and the symbolic presence

of human subjects in their historical territories and institutional spaces is a requirement for political change to happen (Santos, 2000).

In compliance with an institutional ethos that values historical roots in central global contexts, the University occupies a prominent place to review the past, to realize the present, and to imagine the future in contemporary multicultural society (Teixeira, 1971). Unfortunately, this is not what predominantly happens in peripheral societies of the globalized world. For Santos (2007), the Brazilian university is not prepared for such a historical duty, given the authoritarian, ethnocentric, and bureaucratic models inherited from a colonized positioning of the national intelligentsia and the persistence of racist elites dominating the country. This inertia is revealed in the pedagogical production of individual subjects as researchers and professionals—“organic intellectuals,” to use the Gramscian concept—whose singularities end up submitted to social roles imposed by the increasingly objectification of contemporary society, particularly the rampant massification of obsolete technological and ideological cultural goods spread out by globalization processes upon peripheral social formations such as Brazil (Melgaco & Prouse, 2017).

Milton Santos’s approach could well dialogue with Boaventura de Sousa-Santos’s critical thought, who proposes a “sociology of absences” in reference to what has been suppressed, marginalized, disallowed, or silenced; in other words, counter-hegemonic forms of struggles and knowledges, local differences erased by hegemonic globalization. For him, “the universal and the global constructed by the sociology of absences, far from denying or eliminating the particular and the local, rather, encourages them to envision what is beyond them” (Sousa-Santos, 2001, p. 191). As developed below, this proposition can help our theoretical construction to incorporate concepts of transversality and ecology of knowledges, useful as tools to understand multiculturalism and epistemodiversity, which are crucial features of contemporary societies neglected by conventional theories of globalization.

Transversality

Above, we discussed the possibilities of educating human subjects following the classical German concept of *Bildung*, as well as the derived notion of general education adjusted to the context of contemporary cognitive capitalism. To face this challenge, renewed universities relied first upon the notions of interdisciplinarity and correlates, which have been developed in Europe and North America since the 1970s and were initially associated with the application of systems theory to educational research and policy planning (Jantsch, 1970).

There is still huge confusion about the notions of multi-, meta-, inter-, and transdisciplinarity, more pronounced in the field of education, which by the way has been interdisciplinary from the beginning (Lenoir & Sauve, 1998). For a consistent and rigorous conceptual construction, it is necessary to distinguish the meaning and scope

of each term in this conceptual semantic series. *Multidisciplinarity* (sometimes called pluridisciplinarity) is the mere coexistence among disciplines, without exchange or communication (Jantsch, 1970; Japiassu, 1976). *Metadisciplinarity* is more than that, since in this case disciplines are articulated within a communication framework provided by a meta-discipline, capable of functioning as a common language.

Interdisciplinarity, in turn, implies three directions or modes: (a) the interface between disciplines, enriching specific knowledge objects (e.g., social anthropology; legal sociology); (b) the fusion of disciplines, resulting also in fused objects of knowledge (e.g., biochemistry and astrophysics); and (c) the use of multiple approaches, coming from different disciplines to produce knowledge or to trigger action upon a concrete (and complex) problem.

In the latter case, prospects or pertinence of passage or transit across different disciplinary and interdisciplinary fields have therefore been designated as *transdisciplinarity* (Osborne, 2015). I prefer to consider transdisciplinarity from a triple perspective, regarding sciences, politics, and education. In this approach, transdisciplinarity as research refers to methods and methodological strategies that allow access to complex objects. Transdisciplinarity as transformative action comprises acts of overcoming, passing, or transiting through distinct disciplines or interdisciplinary fields to perform a given practice or application. Transdisciplinarity in education encompasses teaching-learning processes that integrate disciplines into broader fields of knowledge, or applies them for the totalized comprehension of complex problems. Pursuing Japiassu's (1976) line of inquiry further, I propose to radicalize this set of notions, to move beyond multi-inter-trans-disciplinary education, toward the more comprehensive idea of "transversality."

The concept of *transversalité* was first introduced by French philosopher and psychoanalyst Félix Guattari (1930-1992) in the context of institutional analysis, opposed to verticality (pyramidal rigid power structure) as well as to horizontality "as a certain state of affairs where things and people manage as well as they can in the situation in which they find themselves" (Guattari, 1964, p. 6). In his last seminar, in 1992, Guattari proposed to apply the concept of transversality to the problematic of ecological sustainability, and included issues of technoscientific culture and political commitment, emphasizing new forms of sensibility. In his words (Guattari, 2015):

At this point in history, humanity is for the first time responsible for its destiny as a species, and beyond that, for the all living species and the future of the biosphere. But it is worth adding a necessary protection and optimal development of incorporeal species to living species. Cultures and forms of sensibility alike are threatened. Science cannot content itself with studying these evolutions passively. [...] From a more prospectivist perspective, one may also envisage the possible evolution of transdisciplinarity in the context of the development of new technologies. (p. 134)

Later in his analysis, Guattari (2015, p. 134) advocates that “Transdisciplinarity must become transversality between science, the *socius*, aesthetics and politics.” From such a standpoint, he comments that transversality in education has more to do with the arts than with the sciences; more with politics than with policies. In his concluding words:

There is no general pedagogy relative to the constitution of a living transdisciplinarity. It is a matter here of initiative, the taste for risk, for exiting pre-established schemas, the maturing of the personality (which can concern very young people). Once again, much more will be gained in this register by referring to processes of aesthetic creation than to the standardized, planned, bureaucratized visions that reign too frequently in centres of scientific research, laboratories and universities. (p. 136)

In the field of education, the term “transversality” was first used by Canadian theorists of education Yves Lenoir and Lucie Sauvé (1998) in reference to a certain *compétence transversale* equivalent to *compétence transdisciplinaire*. In a footnote, Lenoir and Sauvé (1998) observe that:

From this perspective, the notion of transversal competence has nothing to do with the concept of interdisciplinarity since it is on the margins of the disciplinary dimensions. They are sometimes described as transdisciplinary, but then in the sense of “overcoming,” of a specificity “beyond” the disciplines.⁴ (p. 142)

Still following Mignolo’s (2011) idea of epistemic disobedience as a decolonial strategical option, I propose to adopt and adapt the concept of transversality as a practical counterpart to theoretical interdisciplinarity and methodological transdisciplinarity. Thus, transversality shall represent possibilities of achieving (and sharing by learning together) a comprehensive understanding of a given topic or problem for allowing operational building of inter-transdisciplinary knowledge-objects in educational praxis, as anticipated by Japiassu (1976). In this approach, transdisciplinarity is neither a post-disciplinary stage nor a derivative disciplinarity, but rather a general pedagogical approach that can be used at any level of the educational hierarchical structure. If, in undergraduate education, universities are not forming critical epistemic subjects open to meta-inter-trans-disciplinary knowledge at a young age, to do so in graduate school will be too late.

Among the many pedagogical strategies available in the field of education, the most used is the conventional combination of programmed teaching with content learning. Nevertheless, only teaching-learning by competences or skills, problem-based learning,

⁴ My translation of: *Dans cette optique, la notion de compétence transversale n'a rien à voir avec le concept d'interdisciplinarité puisqu'elle s'inscrit en marge des dimensions disciplinaires. Elles sont parfois qualifiées de transdisciplinaires, mais alors dans le sens de « dépassement », d'une spécificité « au-delà » des disciplines.*

and learning by projects can be considered as transversality-prone educational strategies. Transversality oriented toward educational practices must be operated by teaching collectives, with mobilization strategies for participatory planning, always aiming at co-management of pedagogical work. Instructors trained in conventional disciplinary standards, as well as interdisciplinary teachers, can potentially practice transversality in education, but only through teamwork in collective practices assisted by transdisciplinary articulators, including students as teaching-learning co-operators. The question remaining is to what extent could the contemporary university be open to epistemic disobedience.

The adoption of general education as a baseline, offering flexible, modular, convergent, and transversal learning programs for all students, is recommended to break inherited paradigms and to reaffirm a trans-epistemic vision of university education. Such a leap would involve not only forming, but trans-forming, beyond training or instruction, to overcome known forms of education that so far have been controlled by hegemonic conceptual frameworks. Therefore, we should pursue transdisciplinary education, made possible in experimental open learning environments (beyond classrooms, auditoriums, and laboratories) and oriented by central notions that have been neglected in conventional theories of education, such as epistemodiversity, ethnodiversity, demodiversity, and transversality, pursuing the *ecology of knowledges*.

Ecology of Knowledges

Ecology of knowledges is a political and epistemological approach conceived to recognize the diversity of modes of thought, worldviews, ways of knowing, forms of learning, and explanatory models present (even when made invisible) in any given territory. Such a perspective can be included in the conceptual lineage of the “ecology of mind,” started by anthropologist, philosopher, and new-age intellectual leader Gregory Bateson (1904-1980) during the 1960s. Concerned with interdisciplinary approaches to understand systems of thought, Bateson compiled essays and notes in a volume titled *Steps to an Ecology of Mind* (Bateson, 1972), wherein he proposed that analogies of form and structured patterns operate across diverse fields of sciences and different human cultures. The concept of an ecology of mind was then devised to refer to the way consciousness changes and forms such patterns of thought, both on societal and individual levels, and how they cut across cultural and disciplinary boundaries.

Elaborating further upon the notion of transversalité, Guattari proposed in his 1989 book *The Three Ecologies* (Guattari, 1989) that human ecology, both as a field of enquiry and a complex object, should be expanded to become a triplet: environmental ecology–social ecology–ecology of mind. To articulate its threefold nature, this complex network of ecologies can approach: (a) objective things and natural processes or living organisms and their environments; (b) societal structures, superstructures, and eco-

social relations; (c) ideas, thoughts, perceptions, representations, and knowledges. In other words, ecology of ecosystems, ecology of social systems, and ecology of mind. For Guattari (1989, p. 72), mental ecology and social ecology are related to symbolic machines whose flows might entrain into the mind, from the socius to surrounding environments—the micro-society of a certain delimited area, neighborhoods, localities—to diffuse terrains, vicinities, landscapes of the ubiquitous, virtual territory of globalized capitalism.

In 1985, Tunisian mathematician and pedagogue Yves Chevallard contributed to the theory of didactic transposition with a concept he called *l'écologie des savoirs*, which can be translated as ecology of knowledges.⁵ In this theoretical framework, expert knowledge or scientific evidence must be transposed into contents for teaching-learning. This process is developed within and by an ecosystem of interactive institutions: from the scientific community, which produces scholarly knowledge, to civil society, which uses different sorts of knowledge and in a certain way contributes to trivializing it, to the school, responsible for transmitting or reproducing knowledges in the form of teaching objects. For Chevallard (1985), didactic transposition is fundamental for curriculum reform to guarantee social legitimacy of new scientific and technical knowledges as “school knowledges” (*savoirs scolaires*). This transfer of academic power happens through building a temporary and relative consensus between the school and the other institutions: from experts to political authorities, from these agents to schoolteachers, and eventually to students, all together forming an ecology of knowledges.

Despite the precise homonymy of denomination due to the linguistic contiguity of French and Portuguese as Latin languages (see footnote 5), Chevallard's concept of *écologie des savoirs* does not have much in common with Sousa-Santos's notion of *ecologia de saberes*. Although proposed to deal with a central problem in the field of Education, the former is restricted to the intracultural over-regulated institutional context of contemporary Western Europe. On the other hand, Guattari (1989, p. 23) used the term “mental ecology” as equivalent to Batesonian ecology of mind in crosscultural or trans-epistemic grounds, indeed paving the way to the idea of an ecology of knowledges.

⁵ Before we get lost in translation, let me clarify a linguistic ambiguity, perhaps a crucial inconsistency. In Latin or Romance languages such as French, Italian, Spanish, and Portuguese, there are different terms for *savoir*, *sapere*, *saber*, and for *connaissance*, *conoscenza*, *conocimiento*, *conhecimento*. The first set of significant (*savoirs*, *saberes* etc.) means any kind of knowledge, from popular, traditional, practical, and pedagogical knowledge to technical, professional, and scientific knowledge. The latter set of significant (*connaissances*, *conhecimentos* etc.) refer to systematic, formalized knowledge in the technoscientific domain. The terms *saber* and *conhecimento* are translated both as ‘knowledge’ in English. In sum, to translate Sousa-Santos's notion of *ecologias de saberes* in Portuguese and *ecologies des savoirs* in French as “ecologies of knowledges” does not do the job, missing the not-so-subtle distinction in meaning between *saber* and *conhecimento* which is precisely the main implication of the present conceptual effort.

In a landmark work titled *A Critique of Lazy Reason: Against the Waste of Experience*, Boaventura de Sousa-Santos (2000) first proposed the notion of *ecologias de saberes* as a development of his sociology of absences in the framework of the epistemologies of the Global South.⁶ According to Sousa-Santos (2009, p. 118), the ecology of knowledges comprises a conceptual and analytical approach devised to value knowledges, thoughts, representations, and cognitive references that have been denied, submitted, or made invisible, absent, or repressed by hegemonic paradigms, which are often translated (and perverted) as racism, respecting the epistemodiversity and demodiversity of oppressed cosmologies, and considering the ethnodiversity of a given territory.

In sum, the ecology of knowledges is an attempt to bring light to the epistemic-methodological debate on decolonial paradigms as a baseline to dialogue with subordinate and oppressed cultures, respecting their knowledges, practices, and values. Therefore, an ecology of knowledges is always open to careful listening to the other, seeking to incorporate roots and matrices of dominated worldviews into the learning processes. Ecologies of knowledges are radically non-hierarchical because “the superiority of a given way of knowing is no longer assessed by its level of institutionalization and professionalization, but rather by its pragmatic contribution to a given practice” (Sousa-Santos, 2009, p. 118). This approach emerges overtly in opposition to the conventional divide of knowledges as scientific versus traditional or popular, rather indicating post-disciplinary, decolonial approaches beyond the framework of multi-inter-transdisciplinarity, converging to the notion of transversality, with a trans-epistemic transgressive perspective, which indeed reinforces epistemodiversity (Clavo, 2016).

From Pentavium to Nago Thinking

The urgent challenge for universities across the world is how to promote deep changes in the academic sphere, departing from inter-transdisciplinary science and moving towards transversality models for human development through education. In this sense, beyond rhetorical concerns, intellectual leaders of higher education institutions need to overcome the fragmentation produced by linear disciplinary approaches, since many projects have failed to translate this reductionist epistemological option into emancipatory educational practices. Demands related to higher education proposals should not prioritize immediate economic, scientific, and technological development, and not be only referred to employability, technical competence, and entrepreneurship, but rather should seek interculturality, sustainability, democratic values, social integration, and cultural critique (Readings, 1996).

⁶ This paper was later translated into English (Sousa-Santos, 2004). The specific references to the new concept can be found on pages 168-171.

How to make the university meta-inter-transdisciplinary, innovative, critical, active, responsible, light, fast, accurate, visible, mutant, consistent, sustainable, open to transversality, respecting diversity, and, above all, culturally sensitive? How to achieve such an adjusted model, full of possibilities, within a conservative, inertial institutional context which, at the limit, is hostile to innovation and refractory to change? How to theoretically overcome transdisciplinarity and problematize transversality in education, promoting ecologies of knowledges? Until recently, such questions were silenced or excluded from the Brazilian educational debate. To take the ecology of knowledges seriously and to put this approach into practice, the Brazilian university can move in two directions. On the one hand, where appropriate and feasible, it must integrate masters of popular knowledges (artisans, shamans, traditional healers, religious leaders, and persons of wisdom recognized by their communities) as leaders in learning programs; on the other hand, it must open and share its academic governance with legitimate political representatives of the population groups excluded from accessing university education (Sousa-Santos & Almeida-Filho, 2008).

Beyond regional and national borders, a political-pedagogical conception of the University as a social and cultural institution for advanced education and political emancipation of people, and to promote profound, sustainable, critical changes in society, implies that curricular matrices should include cultural diversity, political dissent, and social equity to promote the construction of new forms of knowledge. In this spirit, in different occasions (Almeida-Filho, 2019; Almeida-Filho & Coutinho, 2020; Almeida-Filho, 2021), I have proposed to name a set of five core competencies to be developed in higher education as “pentavium”: (a) linguistic competency; (b) training in research/creation/invention; (c) pedagogical competency; (d) critical technological competency; and (e) eco-social sensibility. Language skills or linguistic competency means the domain of the vernacular and of at least one foreign language, defined according to the area of professional activity. Training in research/creation/ invention implies analytical reasoning, interpretation skills, creativity, and imagination to produce philosophical and scientific knowledge, and humanistic and artistic products. Pedagogical competency includes the development and use of didactic skills necessary to share knowledges and practices. Critical technological competency refers to mastery of the means of practice and its implications, as well as understanding its principles and mechanisms.

The idea of critical technological competency implies an understanding of logics and mechanisms, and the effects of the techniques and tools of practice to master and control the processes of generating technologies developed for interventions upon individual and collective bodies (Almeida-Filho, 2018). Also, it means ability to apply technologies at maximum efficacy, creating efficiency (cost-benefit), concrete effectiveness (quality-equity), and sustainable social transformation. It also implies capacity for using expertise, practices, and techniques based on critical assessment of their operational aspects, mainly the potential for sustainability and social integration. Development of these values, competencies, and skills requires training models

mediated by integrated knowledge and sensible practices, guided by quality-equity values and using active pedagogical processes, and intensive use of information and communication technologies through interprofessional, inter-transdisciplinary education.

In my opinion, the most important prospect for the historical future of the University, beyond its Eurocentric roots, is the notion of eco-social sensibility. Eco-social sensibility incorporates empathy, and the ability to listen sensibly and to reject and fight against social inequalities and environmental destruction with ethics and respect for human diversity. This broad notion is manyfold, composed by planetary consciousness (territory-world; local-global), systemic responsibility (part-whole; network integrity), openness to change (ethics and respect for human diversity), solidarity and empathy (to overcome self-centered individualism and to replace it with generosity and sincere collective action), and transepistemic thinking (the ecology of knowledges discussed above). As discussed, the idea of ecologies of knowledges is therefore crucial to recognize, promote, and enhance the epistemodiversity of a given territory and its societal organization (Sousa-Santos & Almeida-Filho, 2008).

Currently, on a global scale, the university requires that all who wish to access it become part of a game in which the rules of competition follow features convergent to the school system that, in turn, coincide with the social reproduction system of the ruling elites. Equality, among students, is formal but not real because the school system finds its method in competition, “which fully ensures the formal equality of the candidates but throwing into anonymity real inequalities before the culture” (Bourdieu & Passeron, 1964, p. 92). Once in the university, students from a popular background are forced to learn a new culture; that is, to affiliate to a different and somewhat hostile environment (Coulon, 1997). This new culture—with rules and codes that are often not explicit and naturalized—acts as a promoter of “failures” in that students who have not received certain elements of the dominant culture in their family and at school arrive at the university doubly as foreigners: either because the university environment is different from the school environment, or because the university reproduces the hegemonic culture and has historically neglected other forms of knowledge, skills, and practices (Coulon, 1997).

To face and confront market and external political forces, a true public university needs to be creative and efficient while maintaining quality and excellence, and not only to the inheritors. “The inheritors” is how Bourdieu, not without fine irony, referred to wealthy students who manage to enter elite educational institutions, which in Brazil may be public but do not belong to the people (Bourdieu & Passeron, 1964). For Bourdieu & Passeron, the “elected few” are chosen from the dominant social group at an early age, and their social destiny is claimed to be a result of individual actions carried out throughout their life-course. The feeling of individual responsibility for success or failure is fostered by the ideological game played to convey the idea that the school is not responsible for giving the extra support inherited by those who come from the dominant hegemonic culture, even as a minority, conforming to a white, bourgeois, male,

Eurocentric way of life, and hence making invisible other agents who do not share these characteristics.

To host the mass of excluded ones and to guarantee the social integration of these subjects, to produce local-regional knowledge, and to acquire relevance in national development projects, the University needs to recreate itself as a true popular university. Here is the biggest challenge faced by this proposal for a critical university of a new kind: How is it possible to consider and promote cultural diversity and new counter-hegemonic epistemologies with personnel formed within a conservative hegemonic and eventually neocolonial paradigm? This question is crucial, as foreseen by Milton Santos as early as 1981:

In Brazil, universities have reorganized themselves within the Trilateral doctrine, according to which we are not supposed to be knowledge producers. Brazil is, therefore, a country where academic work does not bring intellectual rewards. And universities, in turn, reduce the possibilities of creation, to the extent that they were built upon an authoritarian and bureaucratic scheme. (Santos, 1981/2007, p. 77)

Final Remarks

In the Introduction, I posed the question of whether the University would now be ready to become an institutional model of creative thinking, political action, and social binding needed for the cognitive era. British-Canadian writer and philosopher Bill Readings (1960-1994) in his classical *The University in Ruins* (1996), gives us some clues for seeking an answer:

In a global economy, the University can no longer be called upon to provide a model of community. And the appeal to the University as a model of community no longer serves as the answer to the question of the social function of the university. Rather, the University will have to become one place, among others, where the attempt is made to think the social bond without recourse to a unifying idea, whether of culture or of state. (p. 191)

By the time a disillusioned Bill Readings wrote such melancholic words, the environmental crisis was not yet as dramatic and the defense of democracy so urgent as it is now; nor was the antiracist fight so crucial as of today, when violence and extreme inequalities are at the forefront worldwide. Besides, the late Readings was a fine representative of Eurocentric academic culture, ambivalent about science, but on the side of Enlightenment rationalism, therefore skeptical vis à vis the value of communal ties and solidarity bonds. Nevertheless, although being politically correct and socially concerned, critical thinking from Northern epistemologies at most can appreciate sensitivity, but not sensibility.

Of course, we have the duty to disagree with such bitter, sad views of both Readings and Bourdieu, to disobey this imposed destiny and to fight against the structural racism and elitism of Brazilian universities, as denounced by Anísio Teixeira and Milton Santos. To carry on this struggle, we cannot be naive about the role of the public university in a social context, such as Brazil, where education is a strong factor in promoting inequality and reproducing the domination of ruling classes. Therefore, we must endeavor to recover the university as a house of culture—that is, the space for a dialogical, critical, and productive encounter among the arts, sciences, and humanities. Converging with this proposal, instead of becoming an institution that is co-opted by political forces whose strategies and tactics are used for higher education, the university should rather be a kind of academic branch of social movements. Despite being European in its early historical roots—to be radical and critical; subversive but not submissive—a new kind of university shall emerge out of its ruins, inspired by a counter-colonial Southern-hemisphere perspective.

Muniz Sodré (2012, 2016, 2019) is a remarkable Afro-Brazilian intellectual who has a personal, yet collectively developed approach that can support theoretically the idea of ecologies of knowledges. Mastering Western classical and modern philosophy, and contemporary cultural theory, he criticizes scientism, a perversion of scientific rationality, understood as an “effect of social class upon subordinate knowledges and of the coloniality that seeks downgrading the Other’s culture by interpretive monism” (Sodré, 2012, p. 51). Such a biased perspective is representative of a “pan-European knowledge,” which many times operates as a sort of structural “doctrinaire racism” (Sodré, 2012, p. 51). Commenting on Sousa-Santos’s notion of epistemologies of the Global South, Sodré (2012, p. 44) proposes that the ecology of knowledges must be transformed into a *neodecolonizing* perspective, at the same time epistemological and political, and eventually pedagogical. This can be achieved in the context of face-to-face relationships by means of what he calls “sensible strategies” in relation to the cultural industry and the mass media. In education, it would require a pedagogy that sensitizes students to racial-ethnic differences (and thus racism) both at the cognitive and affective level (reason and emotion) from childhood to adulthood (Sodré, 2016, p. 25).

According to Sodré (2019), to radically embrace eco-social responsibility and human sensibility is to *think Nago* (“Pensar Nagô”).⁷ According to Udo (2020, p. 30), “the foundation of Yoruba epistemology and cosmogony aided in building a common identity among the Nago people, [resulting in] a uniquely diasporic belief system” among Afro-Brazilian people, particularly in Bahia. To disguise their religion, the enslaved Nago syncretized Catholic beliefs with an African pantheon for the worship of orishas, which

⁷ The Yoruba people were one of the many African ethnic groups that were brought across the Atlantic as slaves, mostly to the US, Cuba, and Santo-Domingo, as well as to Bahia, a province of Brazil’s northeast. In Bahia, almost half a million *Yorubans* were introduced as slaves in colonial times and after Brazilian independence until 1850, mostly from ethnic sub-groups *Ifê*, *Ketu*, and *Anãgô*, or *Nago* (Udo, 2020).

would come to be known as “Candomblé.” From Bahia, the cult of orishas and its many variations spread all over the country. Yoruba remains the language of communication for rituals and ceremonies, and the Nago philosophy, epistemology, and ethics, rooted in Yoruba sensibilities, is practiced and taught at the *terreiros de Candomblé* and in the remaining *quilombos*.⁸

Regarding education (and higher education in particular), Muniz Sodré (2019) thinks that a Nago pedagogy based on Nago thinking is what we need. Converging with the Miltonian analysis, he therefore advocates that, on the periphery of the global world, not only the University but all social institutions devoted to education in sciences, humanities, arts, and cultures must go Nago. Concerned with the spiritual and human formation of operators of collective strategies in ecologies of knowledges, Nago pedagogy is here to help protect the natural environment and to promote communal links for peace and solidarity, meaning, politically, to fight against all forms of systemic racism, inequity, oppression, and intolerance; not with the same weapons of violence and death, but with deep, tender engagement using affective strategies. More specifically, it is time for Brazil's formal education to face the crucial question, “whether or not education, as a double bottom of history, can open the possibility of circumventing mono-culturalist claims of universal truth” (Sodré, 2012, p. 14).

This approach fully agrees with the position that I have defended since Boaventura de Sousa-Santos and I wrote *The University of the XXI Century – For a New University* (Sousa-Santos & Almeida-Filho, 2008). Does it seem utopian? Originally, the term *utopia* implied the allegorical conception of a place that does not exist: wonderful and fabulous, but fanciful and located nowhere. That is why, to go beyond utopia, I prefer the term *protopia*, a neologism previously proposed (Almeida-Filho, 2007). Recovering ancient, forgotten propositions and thinking Nago, protopia means a proactive movement to execute radically creative proposals. or to profoundly transform a given reality with non-violent, careful, clever, delicate, sensible strategies.

In a sense, protopia refers to realistic and viable projects aimed at achieving a utopia, such as the plea for the public university to become an ecosocially sensitive institution, politically responsible, and committed with equitable human development and social justice to provide creative critical education, open for all people. To be counter-hegemonic, post-colonial, anti-racist, and truly democratic, the Brazilian university must invite society into its campuses, halls, classrooms, laboratories, schools, and faculties for open discussion, eventually sharing planning processes and a common governance platform to comply with its historical missions. In this way, the public university will contribute to societal development by educating teachers for the public system of

⁸ *Terreiro* is the sacred place of *Candomblé* ceremonies and celebrations and festivals. *Quilombos* are old settlements, usually in remote and hard-to-reach territories, formed by ex-slaves who ran away from plantations. The Quilombo de Palmares, in the province of Alagoas, was the largest, best organized and long-lasting of all *quilombos*, massacred by a series of military campaigns carried out during the shameful Portuguese colonial history (Anderson, 1996).

education, in equal priority with forming professionals, scientists, intellectuals, and citizens for political responsibility and eco-social sensibility.

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