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EL TECNOCENO Y EL RESTABLECIMIENTO DE UN HORIZONTE DE URGENCIA

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> **Pedro Teixeira**: On behalf of the V!RUS Editorial Committee, Henrique, thank you for accepting our invitation. Before delving into the theme of this edition, “The Digital and the South: Tensionings”, we would like to know how your interest in the digital arose and how it became an area of study for you.

Henrique Parra: Your question is interesting because I am currently taking stock. I am participating in a working group on the coalition of rights on the Internet, in which we have been reflecting on the thirty years of the Internet. So, I found myself forced to reconnect with the beginning of my career. My contact with Internet activism and my experience with the digital world began in the late 1990s. We were experiencing the rise of neoliberal policies, while within the scope of social movements with a more autonomous profile, there was an articulation around the global networks of anti-capitalist movements.

In 1999, we were hit by protests against the World Trade Organization meeting in Seattle, United States, a context in which the Indymedia network emerged. I had worked occasionally in Brazil with the Brazilian branch of the network, also called the Independent Media Center. I lived in Montreal in 2000 and 2001 as an exchange student during my master's degree in Sociology at the University of Sao Paulo, researching and working with self-managed workers' companies and organizations, recovered companies, and cooperatives. The neighboring city of Quebec was an essential reference in the social and solidarity economy field. By coincidence, in April 2001, an FTAA summit meeting took place in the city, and many demonstrations and protests were organized. I participated in the protests and collaborated in the Social Forum held simultaneously in the city. It was a remarkable experience to see how the various social movements and activist collectives that came to the town to protest used the Internet to organize themselves and communicate strategically.

It was a different time for the Internet, when the network emerged as a new possibility for communication and organization, emulating the political principles of autonomy, horizontality, and decentralization practiced by these groups. The movement resulted in political action and an effectual counter-power capacity that managed to disturb those in power. I was very impressed by the organization of groups and individuals coming from different regions of the Americas to Quebec, knowing what to do, according to an organization mainly prepared through the emerging digital communication networks. These groups and individuals produced multimedia self-publishing systems in a very critical way, connected to the movements at a time when blogs, platforms, and other similar tools did not yet exist. Until then, I engaged with independent media collectives through documentary photography with analog cameras, photographing, developing, and digitizing images. We realized that independent media triggered an organizational and communicative dynamic that gave us an incredible speed of action, allowing us to do politically exciting things.

Upon returning to Brazil and obtaining my master's degree, I worked for the Municipal Government of Sao Paulo on policies for generating employment and income and the solidarity economy, aside from my activism in these networks. I left this work to pursue my doctorate at the State University of Campinas, still very inspired by how multimedia communication via the Internet would allow us to work with other regimes of sensitivity, giving rise to other imaginaries and forms of political action. So was my connection with the digital world in the early 2000s. Therefore, my interest in the area did not emerge at university but in political activism.

> **PT**: You mentioned self-publishing, which brings us to Pimentalab[1], the laboratory you coordinate at the Federal University of Sao Paulo, UNIFESP. Pimentalab practices a strong articulation between theory and practice through a podcast and its own magazine, in addition to extensive work in different territories with other collectives. Please tell us briefly about the lab, its creation, and its methodology.

HP: We started Pimentalab in 2010 when I became a professor at the School of Philosophy, Literature, and Human Sciences at UNIFESP in the Pimentas neighborhood of Guarulhos. One of the first things I did was develop a website: I created the name, bought a domain name, and got a server to put it online. The campus opened in 2007, so the IT infrastructure still needed to be improved. It remains fragile to this day, so I prefer to maintain my infrastructure. From the beginning, I tried to encourage collective ways of taking care of our communication infrastructure and organizing the memory of our activities, seeking to make the knowledge and documentation produced as public as possible. I uploaded the course content to WordPress websites hosted on the platform of a partner collective, Milharal.org. Still, gradually,

1 Pimentalab, the UNIFESP Technology, Policy, and Knowledge Laboratory website available at https://www.pimentalab.net.

we migrated to our infrastructure, which was provided by a research and extension project. We installed a server in the EFLCH data center and made it a prototype for hosting cloud services to demonstrate that free and sovereign alternatives were possible.

We started working with undergraduate students and gradually included postgraduate students. We wanted to raise awareness among these students in the humanities field about the importance of technical learning in the digital environments and communication technologies we were using. One of our primary requirements was the use of free software, which in the 2010s coincided with a favorable macropolitical context since public universities and federal agencies were required to use open-source computer systems. The Federal Government later weakened this requirement, but even today, university classrooms and computer labs use the Ubuntu operating system, based on Linux. Although many students have followed the path of postgraduate studies in the Humanities, it is interesting to note that, from those first generations, many went into the area of technology consulting, evidencing that experience as a training process.

Another concern of ours was teacher training. Since then, I have been teaching undergraduate courses in Sociology since the Department of Social Sciences at UNIFESP is responsible for training in Social Sciences and Sociology. The extension projects involved teachers who worked in public schools in poor peripheral areas and aimed to reflect on the teaching of Sociology in these schools as a locus where science and communication are created. Pimentalab disseminated a communication practice linked to territories with a research perspective, exploring ways to produce knowledge. Therefore, the school would not only transmit knowledge but also make a kind of amateur science, in addition to reflecting on ways of communicating this production. I have been trying to resume activities with undergraduate students because they can feed a continuous process directing them toward postgraduate studies. Extension projects have always been a bridge to connect with the outside world and, at the same time, a feedback strategy for the university. Extension has always allowed us to build another type of collective with which we conduct research.

These extension actions took shape with the Common Laboratories, which emerged as a means of carrying out research based on the premise that, to investigate what interested us, we needed to create collectives with people outside the university. We understood the need to organize a collective research path with these people, in which they participated in elaborating the questions and ways of investigation. Extension actions have sheltered this political and practical collective with which we develop research.

> **PT**: A growing and engaging body of intellectual work has been discussing issues related to climate change, which makes the notion of the Anthropocene central. In the dossier that you organized with Dr. Alana Moraes de Souza for the journal Mediações (Parra & Souza, 2024), the concept of the Technocene is combined with concepts such as the Capitalocene and the Plantationocene, helping us to reflect on the Anthropocene more comprehensively. How do you see this articulation from the Global South?

HP: I first came into contact with the notion of Technocene in the early 2000s in classes given by Professor Laymert Garcia dos Santos through a book by Hermínio Martins (2018). He is a Portuguese sociologist and philosopher dedicated to the history of Science and Technology. At Pimentalab, we began to explore this term based on a theoretical and political shift caused by the COVID-19 pandemic. Since the creation of the laboratory, especially after our inclusion in the Latin American Network for Studies on Surveillance, Technology, and Society, LAVITS, we have been developing a research agenda on the relationships between digital technologies, the dynamics of knowledge production, and new forms of power and control. In the Campos Eliseos neighborhood of Sao Paulo, in 2018 and 2019, we monitored the use of digital technologies in reconfiguring militarization processes and territorial disputes. Still, we had to suspend fieldwork in 2020 with the arrival of the pandemic.

This suspension led us to launch a public call for proposals around another research question. We sought to create a collective research path to understand how people were experiencing the pandemic, observing, in particular, the effects of digital mediation on their lives during social distancing and seclusion, their new teleworking routines, and the changes in cybermediated social life. This new situation has made us perceive the COVID-19 pandemic as the first technopolitical event of the Anthropocene, experienced synchronously on a planetary scale. The world has already experienced other pandemics, and all of them were in some way related to modes of domination and ecological simplification resulting from processes of internationalization of production chains. However, the COVID-19 pandemic was, in fact, an event that helped to make visible how global socio-technical entanglements were involved in its production.

Before the pandemic, people were already talking about the Anthropocene. This concept and its literature have circulated in academia since the early 2000s. However, in our research, the pandemic constituted a turning point for us to introduce the dimension of anthropogenic effects on the planet more immanently into our research agenda. Considering that our research interest in the humanities is to observe technological phenomena and their economic, political, and cultural aspects, we began to define more precisely what we wanted to observe and the topics we wanted to highlight in our analytical process.

We do not use the notion of Technocene to challenge the precision of other concepts, such as the Anthropocene and the Plantationocene, but to highlight the participation and agency of technological arrangements in these processes. Taking the Technocene perspective reinforces some positions. For instance, we recognize that, in contemporary societies, we are increasingly entangled in long-term socio-technical arrangements, capable of organizing and structuring our lives on a multi-scale basis. The scales intersect, from the daily production of data on intimate aspects of our existence through the smartphones in our pockets to transnational platformed systems. Our lives are increasingly technologically mediated, but we have not expanded our capacity for deliberation and democratic intervention in the design of this mediation at the same speed. We can recognize a technopolitical order of organization of the world: the more this power is concentrated, the more it acquires a technoauthoritarian contour. We are interested in problematizing this dimension of the phenomenon.

We are dependent on and involved in technological formations that produce a form of life. When we turn on the light switch in our home, we turn on the turbines of the Belo Monte hydroelectric plant; we make food choices that set transnational food production chains in motion. We took a look at these long chains based on digital technologies. Still, we also became interested in other technological expressions of the world organization, realizing how they connect to digitalization processes. However, how does the Technocene relate to capitalism or the Capitalocene? I speak of this relationship because we are interested in thinking, within the Technocene, about the relationship between technopolitics and democracy. Are the technologies we currently have at our disposal the only ones – or the best ones – we could have? Of course not. Consequently, how can we think of alternative forms of technological production that would infrastructure other forms of life that we want to persist? What other technological formations could support and produce other worlds?

The pandemic introduced this transformation into our research agenda, forcing us to incorporate the Anthropocene dimension. How can we relate Artificial Intelligence to the issue of energy consumption? Previously, we were concerned about the geolocation of data centers due to problems in the information economy, privacy, or geopolitics. But what else is involved in the geographic distribution of data centers? I am referring not only to the territorial conflicts that they engender when they are located in conflict-ridden territories, where there is, for example, a dispute over water, protected areas, or traditional populations. A more vertical cut pushes us towards another discussion, inspired by the Terran perspective, as elaborated by Bruno Latour (2020), in which we shift technopolitical conflicts to be thought according to the logic of Terran technopolitics. From this shift, what would technological sovereignty be? How can we study the problems of sovereignty in a world where climate change calls into question fundamental concepts that organized the classic definition of the Nation-State? The problem is getting more complicated. Technocene is not intended to be rigorous regarding a specific delimitation compared to other geohistorical concepts, such as the Capitalocene and the Anthropocene, but highlights the technological phenomenon within these processes.

We can also invoke a historical perspective since this is not just any technology but modern technologies that participate in the formation of colonial states. When we speak of the Technocene in our work, we refer to the emergence of the so-called technoscience of the 20th century when, with the Second World War, we began to perceive a synergy between scientific production, technological development, capitalist race, and militarization. As Hermínio Martins points out, digitalization and its articulation with the economy, politics, and culture produce a basic technomorphism that transforms other processes. This time was also when information and cybernetic theories produced an epistemic field linked to the new technological formation – a material-semiotic arrangement, as Haraway would say. With digitalization, technologies oriented toward coding, extraction, and control gained strength. Argentinean author Flávia Costa (2021) relates the beginning of the Technocene to the launch of WWII nuclear bombs, a techno-scientific artifact resulting from the convergence of science, capitalism, geopolitics, and militarization. This technology has produced and will continue to produce effects beyond human existence, such as the traces of radiation already left on Earth.

> **PT**: You study the effects of the pandemic up to the present day, beyond the period between 2020 and 2022, and you approach it not only as an ecological crisis but as a "technopolitical laboratory of cybernetic-extractive capitalism." In an article about Google Suite for Education, you analyze the effects of introducing corporate technologies into the university environment, with connections

to a particular legacy of the pandemic. Could you discuss this issue, especially regarding the three pillars on which the university is based – research, teaching, and extension – and consider the inequalities, asymmetries, and specificities between the Global North and the Global South?

HP: I will start at the end, addressing geopolitical asymmetries and how this scenario we have entered in recent years has updated our vocabulary. We go back to using big words, like colonialism and coloniality. Around 2016, we were already globally recognizing the rise of the far right and, more broadly, a conservative rise in global politics, which continues to occur and gain consistency. In addition to the 2016 coup d'état, Brazil was surprised by the result of the 2018 presidential election, and since then, we have not stopped being surprised. We return to talk, for example, about neoliberalism, a term quite common in the late 1990s and early 2000s but which left-wing parties and some movements curiously stopped talking about directly during that Latin American cycle of so-called progressive governments in the next two decades. Those governments maintained a series of structural conditions for the continuity and expansion of many elements characteristic of neoliberal policies, both from the point of view of macroeconomic policies and the reorganization of labor, as well as an extractive relationship with nature. It seems that only at the end of the second decade did we once again encounter the rise of the conservative movement, and, from a critical point of view, we began to enunciate it as a broader political formation. Why did we return to using these big words? Perhaps this arrangement of forces has become more visible and enunciable due to the current international conflicts, the geopolitical redesign, and the pandemic.

Let us consider the pandemic as a time of ecological crisis produced by our civilizational model. The book *Big Farms Make Big Flu: Dispatches on Influenza, Agribusiness, and the Nature of Science* by Rob Wallace (2015) is crucial to understanding this notion because it deals specifically with the capitalist mode of production of epidemics, allowing us to see how techno-scientific production also participates in this model of technological development and, therefore, in the capitalist model of food production. At the beginning of the pandemic, there was a hypothesis that it would slow down capitalism and make its mode of functioning and its limits visible. But the opposite happened. In urban societies, the logistics systems for supply, delivery, and remote work were quickly reorganized, demonstrating that the machinery of work and the production and circulation of goods, merchandise, and services had already worked very well with digital technology. The pandemic also represents what Naomi Klein (2020) calls the Screen New Deal[2], a model of opportunity for big techs that have been providing infrastructure for universities and education departments in Latin America since the 2010s. These corporations found a considerable window of opportunity to advance quickly, delivering technologies that responded to the institutions' needs. They had already done it before, but the pandemic made this machinery more interconnected and adjusted.

In the field of Education, the expansion of teleworking did something that no conservative or technocratic reform had managed to do: it introduced a set of management devices – of measurement and organization – in the pedagogical relationship between student and teacher in the previously protected space of the classroom, now virtualized. If we had – and still have – in the physical space of the classroom a certain autonomy in the teacher-student relationship and the activities developed there, escaping from the powers of management, a new organization of these activities was created when they started being mediated by digital-cybernetic technologies, in an environment that instituted new forms of measurement and quantification and, therefore, new indicators that codify and colonize the pedagogical relationship. From this perspective, the pandemic accelerated and intensified a metamorphosis of the world of work and affective relationships, which began to be developed, above all, through infrastructures, technologies, environments, and corporate applications in their almost entirety.

Most of the tools we use in digital environments are corporate. It is no small matter that we are using North Atlantic infrastructures – from submarine cables to satellite networks, servers, operating systems, and corporate applications – that bring specific inscriptions, rationalities, normativity, and sensitivity regimes. All dimensions of our constitution as humans are now composed of these environments, and given that they are conceived and managed by these sociotechnical dispositions, they produce and strengthen specific configurations of the world. The pandemic has, therefore, intensified this precedent process. The platformization, the forms of deregulation, and the disintermediation of work are brutal transformations accelerated by the pandemic.

In the Brazilian case, big tech tools and communication infrastructures were first adopted at the state universities of Sao Paulo and were later introduced at federal universities. This happened for various reasons. One of them is the growing underfunding of universities'

2 See the full Screen New Deal repport, available at https://theintercept.com/2020/05/08/andrew-cuomo-eric-schmidt-coronavirus-tech-shock-doctrine/

technological infrastructures. At federal universities, this underfunding was brutal in the period after the coup against President Dilma Rousseff. The technological park of these institutions is now completely disinvested, making it very difficult to maintain the functioning of technological infrastructures. Another reason is that many of the employees in university IT departments often have degrees in courses that encourage the adoption of corporate technological solutions. And it is these people who, to a large extent, decide on the institutions' infrastructures.

Whenever maintaining these infrastructures becomes difficult, the demand for corporate systems grows, both by IT managers and teachers and students, who have already been educated and trained in their everyday lives in using proprietary software. Teachers and students use Gmail and other applications daily without question due to a widespread, uncritical technical culture in which the difference between individual (private) use and institutional (public) adoption is not perceived. This form of domination spreads through reticulation, offering us practical solutions that operate in tune with the economy and the mode of political subjectivation promoted by these technologies. Everything that appears more helpful or efficient in such systems embodies functional coupling to the dominant rationality. Frictionlessness means precisely that. The gradual offering of quickly adopted infrastructures, which simultaneously smuggle in other rationalities and normativity, strengthens the hegemonic mode of social organization.

Since information and communication technologies are technologies of thought, knowledge, memory, and culture, when almost all Brazilian and Latin American public universities hand over their communication infrastructures to transnational corporations, the already existing asymmetry of epistemic and geopolitical power between the North and the South widens. Therefore, it is no exaggeration to say this is a new colonization. In addition to the coloniality of knowledge, there are new dynamics of cognitive extraction – digital colonialism – of material and energy resources and asymmetric production of economic and political value. Under these conditions, talking about creating Innovation, Science, and Technology policies guided by the intellectual property model and generating patents in Brazilian universities is a joke. How can we develop and compete with patents, such as pharmaceuticals or petroleum engineering, when big techs manage the university communications infrastructure? Snowden's[3] revelations in 2014 – which led to the approval of the Brazilian Internet Civil Rights Framework – were nothing new to those who were already critically involved with issues of surveillance, data collection, and the like.

Yet, Snowden's revelations were crucial in making visible worldwide how technology companies and nation-states cooperate in the production, analysis, and collection of data. Supposing the university is where science and technology are produced, the lack of capacity for self-government over our communication infrastructures presupposes delegating this production to third parties. This risk does not only concern research activities but also the technological environments we use for teaching and outreach activities. The current system of organizing our work is stretching into a condition of increasingly subordinate dependence, in which asymmetries become more radical. Regarding information technologies, we need to observe how this dependence translates into a regime of knowledge, an epistemic regime. We are using not only the categories and words of the other but their form of organizing knowledge, memory, and a specific regime of the sensitive.

These infrastructures involve an informational economy, an epistemic regime, and a regime of sensitivity, placing us under subordination, dependence, and exploitation. This is why the notions of techno-scientific monoculture, which we discussed in a 2021 text (Parra & Moraes, 2021), and of global synchronization, discussed by Stiegler (2006), can be articulated. We have two proprietary operating systems installed on the smartphones of almost the entire global population. There has never been a cognitive infrastructure in history that has been shared so homogeneously. Again, this is not trivial. How can we discuss technological and scientific autonomy if we already participate in specific arrangements by depending on these technologies? How can we discuss the possibility of developing alternative artificial intelligence models in our public universities? Do we have the computational capacity to train new artificial intelligence models that constitute alternatives to the available Long Language Models? And why do we need these models? Which models do we desire? These are some of the questions we have been asking ourselves.

> **Mario Vallejo**[4]: You spoke about the neoliberal reorganization of the social structure based on technology, which presupposes a great demand for natural and mineral resources, in addition to converting subjectivity into a commodity, transforming human

3 Editor's note.: Edward Joseph Snowden is a former employee of the United States National Security Agency (NSA).
4 PhD candidate at IAU-USP and researcher at Nomads.usp.

> experience into something to be exploited economically. Your work demonstrates that techno-extractivism has environmental and social effects in several human and non-human senses. Furthermore, in work with Alana Moraes, you introduced the idea of technologies of incompleteness, which refer to modes of social organization and knowledge production that challenge dominant structures. Could you explain how you see these technologies of incompleteness in the context of platforms, infrastructures, projects, and other initiatives linked to digital and collective media in the Global South? What would be the potential and limitations of these applications, bearing in mind the notion of incompleteness?

HP: You touched on two points that I consider necessary to mention again to understand how the multi-scalar dimension of the digital world introduces a problematic field that calls into question modern legal and political frameworks that organize our society. We used the idea of technologies of incompleteness in the text you cited, borrowed from Moten and Harney (2023), to refer to what escapes the code, what is not guided by the logic of codification, which is a condition for capture, extraction, and control. But we can also approach this problem in terms of technologies of interdependence or technologies of the Commons. Techno-extractivism presupposes the existence of new techno-mediated forms of codification and production of subjectivity. This is another dimension that involves the intensification and continuity processes of the exploitation of nature and the production of energy. Although challenging, it is essential to connect these dimensions.

Resuming the idea of a non-subordinate development of the Global South requires formulating policies that do not intensify models of extraction and domination concerning nature, allowing us to imagine other technological scenarios. It isn't easy, but we need to trigger this movement of research and political imagination. We need to approach the digital from an environmental perspective. Not just in the well-known sense of the environment but of an ambiance that connects everything, from production regimes of modes of subjectivation to their relationship with the production of ore, energy, and agriculture. Understanding the issues of the digital as an ambiance means recognizing that digital mediation has become ubiquitous in our lives. Few activities in our daily lives are not mediated by some digital technology in cybernetic networks. Indeed, increasing digitalization produces an ambiance that constitutes a different nature.

Reflecting on this ambiance from a regulatory perspective requires us to consider that what were once attributes of ownership, accountability, or motivation of the agent have become more complex, bringing us closer to a discussion in the field of Law about diffuse or related rights. How can we discuss environmental pollution or the border issue? How can we discuss these issues regarding the capacity for deliberation and political community? And what about the notion of the subject of rights? The problem of privacy, for example, in the context of individual rights, is part of a discussion about the capacity to regulate the boundaries between the intimate, the private, and the public. Privacy, in liberal Law, is considered an attribute of the individual. The personal data protection legislation that we have today in Brazil works very well to provide legal security to the economic model according to which large corporations operate. These same corporations continue to swim hard in extracting economic, political, and cognitive value, exploring the relational layer of metadata. In other words, a pre-individual and transindividual dimension becomes codifiable by the digital, and the modern conception of the individual does not cover that.

Reflecting on this digital ambiance requires us to include new elements in the legal and political order because the idea of incompleteness is also related to the discussion on the technopolitics of the common. Thinking about the technopolitics of incompleteness and the technopolitics of the common requires moving from the idea of sovereignty to that of interdependence, from the individual scale to the transindividual dimension. It is crucial to understand that we are not dealing with constituted entities – individual, nation, property – as they have an unfinished dimension. From this point of view, the common is constructed in relations of complication and interdependence, and consequently, the subject is not autonomous, finished, and sovereign of itself.

An immunological perspective on health considers the individual a well-defined subject in an exclusive relationship with the other. However, from a collective health perspective or a policy of care, the subject is always incomplete, always in relation to another, always open to the other. The idea of incompleteness contains the relationship between actants, not as finished entities or closed monads, but in a permanent co-production relationship. To this end, it is essential to find ways to provide infrastructure to strengthen this relational dimension, which is precisely what is most hijacked from us today: our capacity to do common, to exist in co-dependence and co-determination, to strengthen the bond that sustains our ways of life.

We have difficulty working with the political dimension of these concepts. How does this idea of incompleteness, interdependence, and the Commons call into question the modern notion of sovereignty? How can we deliberate sovereignly on climate change? We have to accept

and give political consistency to the fact that our destinies are tightly entangled with the destinies of other entities, other human and non-human beings. For example, discussing the subject's agency at a time when life is increasingly algorithmic – and discussing what algorithmic responsibility is – poses new problems for fundamental elements of modern law: questions of decision-making autonomy, free will, and the subject's responsibility.

> **PT**: We have noticed in universities that a movement resulting from public policies and civil society organizations is seeking to connect with traditional knowledge and ancestral wisdom. In digital media studies, we have understood the importance of dialoguing with this knowledge and wisdom, not only aiming to articulate them but also to contribute to the construction of new ways of knowing-how. What are your perceptions? Is the university more open to this dialogue?

HP: Most of the faculty at Brazilian federal universities comprises professors who graduated in the mid-1990s when science and technology policies and the Brazilian postgraduate system were undergoing restructuring. It is enough to remember that the Lattes Curriculum digital platform dates back to 1999 and helped materialize the process of professionalization and organization of our postgraduate programs. Over time, the reorganization of postgraduate programs strongly influenced the restructuring of undergraduate programs.

UNIFESP, and more specifically the School of Philosophy, Literature, and Human Sciences, located on the Guarulhos campus, has an interesting history, as it lies at the confluence of two distinct processes that occurred within Brazilian higher education, which meet here in stark contrast, creating tensions but also new possibilities. The research paths of many professors trained during that period of restructuring of graduate studies are guided by models of specialization, internationalization, productivity, and high competitiveness. This previous process of training researcher-teachers meets with new policies for expanding and democratizing access to higher education: internalization of campuses, permanence policies, the ENEM/SISU system[5], and affirmative action policies. When this encounter occurs in colleges or universities just being created, tensions and conflicts are more visible and assertive, generating possibilities for opening up and transforming educational curricula and the university itself. This field is still under construction and disputed.

We, teachers who graduated and have worked in this field for twenty or thirty years, often tend to maintain theoretical and epistemological choices that come from our training. Our generation now finds a student body that is bringing many new things: not only a diversity of bodies and experiences now inhabiting the university, but an entire theoretical-political repertoire related to the constitution of collectives, cultural and political movements, reinforcing the need for curricular updating and transformation in the ways of teaching and producing knowledge. Much of this renewal, which includes the incorporation of new authors in our disciplines, happens thanks to the contribution of student collectives, who strain and put pressure on the repertoire of references in the human sciences, which is, to a large extent, white, European or North American, patriarchal, colonial.

This transformation occurs at different levels. At UNIFESP, a movement is still underway to open up and expand lines of research that connect with perspectives based on epistemic plurality, investigative practices, and knowledge. This process only occurs thanks to student pressure. Little by little, other gaps are emerging as professors introduce research agendas incorporating different themes, problems, and ways of doing research. In addition, UNIFESP's university outreach is robust and positively influences our teaching activities. An exciting recent initiative was the creation of an indigenous degree program. I teach a course on digital technologies and education in this degree program, working with indigenous teachers from the state of Sao Paulo who teach at indigenous schools.

I believe the university must be multiple and diverse. It does not need to have a single model of knowledge production, mainly because the institutional place it used to occupy in certifying professional knowledge and skills is undergoing a profound transformation. The correspondence between this certified knowledge and positions in the job market is also changing. And we need to add a new factor to these changes, which is the unregulated expansion of the Distance Learning modality in private universities and colleges in recent years. All these transformations create new tensions regarding the university's place in society in teaching, research, and extension.

However, in this process of restructuring scientific and technological policy guided by models of techno-scientific innovation, it is also necessary to understand that some forms of scientific knowledge production in universities are currently co-participants in the production of

5 Translator’s note: SISU is a Brazilian online system through which public universities offer places to candidates participating in the ENEM or National High School Exam.

the social and climate collapse we are experiencing. When we critically discuss strategic choices about lines of research in certain given scientific areas, it isn't easy to debate other models of technological development that could place us on other paths of societal transition. The hegemonic techno-scientific production model, increasingly intertwined with the dynamics of intercapitalist competition and geopolitical dispute, strongly influences the structuring of the university. In order to imagine other models that can coexist in the university, we must face the urgent issue of the university's place in society, given the crisis of the Anthropocene. That is an uncomfortable question. Will we continue to train people to keep the hegemonic gears turning? How can we create lines of technological bifurcation? Bifurcation is an interesting term because it refers to something that cannot be described before it occurs, that is, it cannot be projected with precision. It is only possible to recognize a bifurcation a posteriori as the emergence of a new constellation of factors that acquires a structuring property. Nevertheless, we can think of more open and indeterminate environments where emergent processes can grow together with other properties, relationships, and knowledge.

Mario asked me what these alternative technologies would be and how to strengthen them. I see at least two dimensions here. On the one hand, it is a process of desertion and subtraction from these agencies' dominant modes of operation. On the other hand, it is a process that concerns how we gradually build infrastructure and strengthen another ecosystem. I am referring here to technodiversity, or cosmotechnical diversity, which means recognizing that all technological development is situated and contextual, has the inscription of specific cultures, and is traversed by values and worldviews. In this crisis of the Anthropocene, we are being challenged to dialogue more symmetrically with other worldviews, capable of relating differently to technology, constituting other cosmotechnics. However, we are in a war of worlds at different speeds and must do everything simultaneously. We have to be able to disarm at least and slow down this efficient death machine in operation while simultaneously building and defending other worlds. Dialoguing with other knowledge, which is gradually being introduced into the university and questioning specific established models of authority, is essential to challenge the dominant scientific fields. But it is not enough. We have to strengthen scientific reflexivity, introduce other ethical and political references beyond anthropocentric perspectives, and act against the damaging effects that certain scientific practices produce in the world.

We are at a crossroads. Our technopolitical practices are somewhat exhausted, and we have difficulty imagining other technological formations. It is urgent to activate our imagination and think about what these experimental laboratories that give rise to other sociotechnical arrangements could be. The university can be an essential meeting place for communities of practice and new epistemopolitical actors that stimulate the creative and experimental dimension of knowledge and forms of political life. We talk about anti-racist technopolitics, anti-colonial technopolitics, and anti-colonial artificial intelligence, but what would this mean in practice? At Pimentalab, we are revisiting the idea of fostering a new community of practices to welcome these questions and find people with whom we can ask them. I feel that the concept of a research group or a laboratory involves how we constitute a collective capable of sustaining an investigative practice, affective bonds, and mutual support based on ethical-political and poetic principles.

We are constantly on the edge of the abyss. At each Brazilian election, we think: "It can't be just that". In the last twenty-odd years, we have experienced a profound metamorphosis in our knowledge production and communication ecosystem. In the early 2000s, our biggest problem was the oligopoly of communication systems, and suddenly, anyone could produce content online and disseminate it widely. What happened to make us switch from that system of self-publishing to the erosion of regimes of truth, the post-truth crisis, and the fake news industry? Perhaps the most significant underlying phenomenon is the digitalization of our lives, a process decided by large corporations. We are facing a new epistemic regime, a new regime of truth, a different sensitivity.

It turns out that our institutions have a different time. I have insisted that we are facing a triple crisis: the crisis of our democratic institutions, the crisis of our epistemic regimes – or the erosion of the principle of the real and true – and the so-called socio-environmental crisis. Returning to the idea of the Technocene, we are dealing with a phenomenon, which is the following: we have produced a world whose direction and modes of functioning escape our capacity for collective deliberation. This world is the megamachine to which Lewis Mumford (1967; 1970) refers, and we have no capacity for a democratic collective government over it. The Technocene is also a way of re-establishing a horizon of urgency, seeking ways to democratize these processes and forms of deliberation on the design of future technologies that will profoundly affect our lives – and that today arrive without asking permission. The university can be a place of creation, experimentation, and formation of other worlds to come, and its defense is a critical field of political action. It requires re-establishing another state of presence, another time, another sensitivity, and other affects in tension with the hegemonic mode of formation.

PT: To conclude, Henrique, does the future seem promising to you?

HP: We may be the first generation – and here I dialogue with Franco Berardi Bifo – collectively experiencing the idea that the future will not be better and that we will have challenging and uncertain times ahead. The COVID-19 pandemic was a defining moment in my personal and teaching experience. It was a turning point in my perception of the Anthropocene, introducing new understandings about the present and the future. However, in recent months, I have sought to connect with another kind of affection, seeking to resume the production of life and joy and collectively stimulate an affection that increases our power to act, think, and imagine.

My short answer to your question, therefore, would be: despite the perception that we are facing very unstable future scenarios, which pose challenges on an unimaginable and often incomprehensible scale – such as the images of the dry rivers of the Amazon or the fires of recent months in our country –, I feel called to reposition myself, to seek other ways of continuing to inhabit this world, to reflect on the possibility of producing other worlds to come, on the alliances that I want and need to establish to do this. This is an existential condition, and as the father of a child, I have no other choice. If we want to believe in other possible worlds again, we need a creative and imaginative disposition.

Even within the left-wing camp – with many quotation marks – there seems to be a greater understanding of the Anthropocene crisis and a clearer perception of the limits of our civilizational model. Yet, there remains a strong belief that developmental and extractive projects are inexorable. This understanding has been accompanied by an apocalyptic stance, which generates a lack of involvement with the world. Some versions of the end of the world are being disseminated in such a way as to produce a lack of responsibility, a cynical and uninvolved attitude toward the world.

Affirming the notion of Terran technologies is insisting on co-implication with the world. Gilles Deleuze (1994), in an interview with Antonio Negri, said that our ability to believe in the world has been hijacked. We need to believe in the world again from an inhabitation perspective, as Amador Fernandez-Savater suggested (2017). An interesting political shift is moving from the governing paradigm to the inhabiting paradigm. In other words, consider the situation's potential and what we can boost. Instead of starting from a preconceived project of the future that we seek to achieve, trying to shape reality to the project, we need to experiment with acting through the middle, a mesopolitics, an action of mutual contagion that engenders new multiplications and structurings.

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