Pedagogy and mobile devices: between Thumbelinas and Prosumers

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Abstract: This article seeks to think about the ways of thinking and positioning oneself before the changes in educational institutions with the integration of mobile devices. We have established a critical reading of the works of Paula Sibilia, Redes ou paredes [Networks or Walls], and Michel Serres, Thumbelina, especially reflecting about the influence of these devices, connected to the internet and inserted into the classroom, on the pedagogical communication issues between students, teachers, and media. Think about pedagogy and mobile devices based on such authors allows us a double perspective, speculative and recursive. From an urgent debate, we establish considerations, analyses, and hypotheses.

Keywords: pedagogy; mobile devices; school institutions; Paula Sibilia; Michel Serres.

Resumo: Este artigo busca refletir sobre as formas de pensar e posicionar-se diante das transformações nas instituições escolares com a inserção dos dispositivos móveis. Estabelecemos uma leitura crítica das obras de Paula Sibilia, Redes ou paredes, e de Michel Serres, Polegarzinha, conjecturando, sobretudo, a respeito do uso desses dispositivos, conectados à internet e inseridos em sala de aula, na problemática da comunicação pedagógica entre aluno, professor e mídias. Pensar a pedagogia e os dispositivos móveis com base em tais autores nos permite uma dupla perspectiva, indagativa e recursiva. A partir de um debate premente, estabelecemos considerações, análises e hipóteses.

Palavras-chave: pedagogia; dispositivos móveis; instituições escolares; Paula Sibilia; Michel Serres.

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1. INTRODUCTION

Thinking about education and, more specifically, about pedagogy at a time when digital technologies are at their peak, evolving and expanding to the point of being present in all environments, including educational spaces and processes, is something delicate, troubling, and worthy of special attention. The individual who attends an educational institution – place, par excellence, of the temporality aimed at dialogue and access to information and experimentation of knowledge – is today the same individual who, anywhere with internet, has the possibility to access such information and experience from mobile technological devices¹. As is stated, these devices offer, to those who can access them, the whole world in front of their eyes, in fractions of seconds, in any space.

Before the hypothesis that the environment of educational institutions ceased to be unique or essential for the access to information and knowledge experiences, carrying out a reflection, following the positions of two significant works on the subject, *Redes ou paredes: a escola em tempo de dispersão*² [Networks or Walls: School in Times of Dispersion] and *A Polegarzinha: uma nova forma de viver em harmonia, de pensar as instituições, de ser e de saber*³ [Thumbelina: The Culture and Technology of Millenials], allows us, firstly, an exercise of accurate characterization of an urgent debate and, therefore, of establishment of considerations, analyses, and hypotheses. Well, the topic "education and mobile technologies" brings into debate the nature and function of educational institutions, making us reflect, in particular, about the pedagogical changes in the performance of professionals and students.

The literature on this topic indicates three possible "culprits": (1) pedagogy – the academics –, which would have, in modernity, a history of denial of the social and technological transformations, confirming its anachronism and crisis; (2) the position of the new subjects – the students –, who would not know or even dissent from the virtuous habits consecrated to the temporality of educational institutions; and (3) the size and situation of digital devices – the technologies –, especially the mobile ones, which would be co-opted by the logic of the society of control, ensuring the relegation of subjectivities to the life habits of capitalist production and consumption.

This article will seek to avoid, however, a scatological theater of "culprits". The dispute is historic and demands, above all, an understanding of the environment in which the so-called "culprits" manifest themselves. Where would have come from and where would have arrived the educational institution?

The modern educational institution emerged to meet, in its origin, in the 18th century, a need of that time: instructing, moralizing, and, mainly, disciplining subjects – "lack of discipline is an evil worse than the lack of culture"⁴ –, transforming them into autonomous citizens fit to the moral and civic convivality in the new "free" bourgeois society (with the end of court society).

The current "student" subject, living the connection age, is increasingly antagonistic to the process of disciplining, instructing, and moralizing in 1. Tablet, smartphone, laptop, netbook, among other mobile devices that promote ubiquitous access to the internet.

2. SIBILIA, Paula. **Redes ou paredes**: a escola em tempos de dispersão. Rio de Janeiro: Contraponto, 2012.

3. SERRES, Michel. **Polegarzinha:** uma nova forma de viver em harmonia, de pensar as instituições, de ser e de saber. Translation to Portuguese by Jorge Bastos. 2. ed. Rio de Janeiro: Bertrand Brasil, 2015.

4. KANT, Immanuel. **Sobre a pedagogia**. Translation to Portuguese by Francisco Cock Foantanella. 2. ed. Piracicaba: Editora Unimep, 1999. p. 16.

terms of the "modern Paideia," concisely preached by Kant⁵. Such a subject would be located within a new way of living and thinking, not adjusting to the anachronisms of schools. The figure of the teacher, as a source of information and knowledge, would not have the same prominence before the unlimited supply of virtual spaces, since what is witnessed today are the *media*, ubiquitous and irrevocable, transiting in the spaces of the structures and of the organizing mechanisms of individuals (institutions).

What would then be the new possible dialogue between students, teachers, and media? The question is closely tied, lacking in reflections. The environment gestates new codes, cognitions, and expressions of life – and this, too, does not occur without the gestation of subjectivities by new types of capitalist volition.

For our purposes, a humanist and critical premise remains certain: how to reaffirm and rebuild the privileged public spaces and times of access to information and knowledge experimentation, the educational institutions?

At the end of the 18th century, Kant proposed that the goal of the modern school would be to "educate the subject," i.e., establish private teachings and unite them to the public ones to "solidify the moral"⁶ of children, teaching them to care for themselves and for the others.

In the last decades of the 20th century, with the school already instituted and supposedly meeting the Kantian modern Paideia, Foucault⁷ develops perhaps the most significant criticism on the subject, addressing the price paid by the aspirations and practices of the modern. In his vision, the school would have transformed, in fact, in a means to severely tame and control subjects; a means to meet a rationality that invests in its shortages of docility and productivity. Thus, Foucault establishes a strong *suspicion* about the real intentions of educational institutions.

This article continues with the introductory plot above, bringing with it the central terms of a debate about the trajectory of schools, to then address the effects of the current changes, as analyzed by Sibilia and Serres – authors put into evaluative reflections and into debate.

2. IMMANUEL KANT

Thinking about the education of individuals in modernity, Kant proposes a teaching model applied since the nuclear family and accompanying the development of the human being, "the only person who needs to be disciplined and instructed"⁸. From this arises, in particular, the demand for the "good teacher": the scholar, the enlightenment culture transmitter, subject who will serve as an example to the pupil throughout the educational process, centered in the transmission of knowledge from one generation to another.

Men cannot become real men if not by education, he is what education makes of him. It should be noted that he can only receive such education from another man, who also received it from others. Thus, the lack of discipline and education in certain men makes them very bad masters to their students⁹.

5. Ibidem.

6. "It is not enough that the man is capable of all sorts of purposes; he must also be able to choose only the good purposes" (Ibidem, p. 26).

7. FOUCAULT, Michel. **Vigiar e punir**. Translation to Portuguese by Raquel Ramalhete. 20. ed. Petrópolis: Vozes, 1987.

8. KANT, op. cit., p. 11.

9. Ibidem, p. 15.

Kant argues for an education that represses the "negative impulses" and guide the *small* individual (minority) through ways that lead him to be a *big* individual of honor (majority). Repressing impulses denotes avoiding the tantrums¹⁰ of children and teaching there are polite ways to reach their goals, from permanent "good examples."

The education of children would start at home and would continue at school, establishing the *disciplines* initially inculcated in the *small* ones: "posture and obedience," notably. Such training would lead, by essence, to the improvement of subjects, distancing them from animality. Future generations would thus always be more perfected.

The parents, who have already received a certain education, are examples by which the children are governed. But, if they should become better, pedagogy must become a study; otherwise, nothing could be expected from it and education would be entrusted to people not properly educated. One must put science in place of mechanicism, when it comes to the art of education; otherwise, it will not become a consistent effort; and one generation could destroy everything the previous one had built¹¹.

Without proper discipline and instruction, the individual will be unable to move in the correct modes of thinking and acting of the time, and may even regress if those are not well applied. Modern institutions cannot *govern* a "rude man," which increases the first need to "educate to conduct."

A good education is precisely the source of all good in this world. The germs that are deposited in men must be increasingly developed. In fact, there is no principle of evil in the natural human dispositions. The only cause of evil is not submitting nature to rules. There are no germs but for good¹².

This pedagogical model proposed by Kant aims to secure to the individual the imperatives for life in modern civilization, conducted by the virtues of being disciplined, educated, skilled, wise, and moralized. For these virtues to be apprehended, education cannot be mechanical, but must be reasoned¹³, preventing the "excessive zeal" and "bad habits" that affect the individual and all those around him¹⁴.

Family education would support the individual. However, it is by the contact with institutional public education that the city experiences appear and build themselves, shaping the actions of individuals according to the use of their learning. Corrections and punishments are adopted, when necessary. Individuals need, in short, the junction of teachings in the family environment, of "good examples," and of literary and scientific school education for the cosmopolitan know-how, conquering their autonomy, the *government of oneself*, in a modernity made up of liberal and secular States, with civil and political rights.

3. MICHEL FOUCAULT

Within a perspective of critical evaluation, which frankly includes the legacy of Kantian pedagogy, Foucault writes about the disciplinary knowledge-power 10. Kant orients the suppression of the involuntary impulses of children. "If, on the contrary, we do not worry about their cries, they end up not crying any more. Since no creature seeks for oneself a useless suffering. If we accustom babies to see all their whims satisfied, then it will be too late to change their will" (Ibidem, p. 43).

11. Ibidem, p. 21-22.

12. Ibidem, p. 23.

as an event of modernity, which values the progress of scientific and technical knowledge and wants to build a civilizational organization from that.

Discipline, Foucault writes, "decouples the power from the body; makes it on one hand an 'aptitude,' an 'ability' that it seeks to increase; and reverses on the other hand the energy, the power that could result from this, and makes it a relation of strict subjection"¹⁵. *Disciplining*, therefore, is not restricted to "educating subjects" to govern themselves. These are special techniques that "define a certain mode of political and detailed investment of the body, a new 'microphysics' of power"¹⁶.

The subject, under such disciplinary education of modernity, far from reaching autonomy, as Kant proposed, would derive from a disguised potentiation: a subject-object (submissiveness) compressed to the utilitarian cultural form of knowledge-power, of cognitive enhancement, and of rationalization of life, adjusted to the industrial capitalist technical and scientific frameworks. A repressed autonomy in the "age of social control"¹⁷.

Foucault relies on Montesquieu's thinking to understand the fragmentation and categorization of institutions, identifying them as aimed at surveillance and correction:

police for surveillance; psychological, psychiatric, criminological, medical, pedagogical institutions for correction. This is how, in the 19th century, a huge number of institutions – educational ones such as schools, psychological or psychiatric ones such as hospitals, asylum, police –, which incorporate individuals throughout their existence, was developed around the judicial institution to enable it to take control of individuals at the level of their dangerousness. All this power network that is not judiciary must have one of the functions that justice assigns itself: functions of no longer punishing the infractions of individuals, but fixing their virtualities¹⁸.

Schools start to be understood as an elementary institution of docilization and domestication, as a preventive work: they teach and educate subjects, along the lines of submissiveness, preventing them from promoting actions that go against social or political norms; or, above all, preventing them to provoke "social chaos." To inhibit or even contain the social breakdown, one must establish rules that guide and circumscribe time and space, among other risk factors for individual and collective conduct, inserting in this context the formation of queues, the use of uniforms for identification, the demarcation of places, as well as an archetype of gestures and behaviors. Spaces are delimited. Bodies are distributed, and a certain model of modern subjectivity is extolled: state, moral, and labor. "Docile and useful bodies" are produced, and several explicit and implicit knowledge-power networks – juridical, economic, and scientific – are managed for this, structuring and preserving a double political and cultural planning: *freeing* individuals from feudal-aristocratic ways; but *imprisoning* them in the modern state-capitalist way.

At school, the disciplinary procedures of delimitation, distribution, and production proclaim the negativity of idleness and of the indeterminacy of places and bodies.

13. Terms used by Kant. "Mechanical" as something automated, without improvement. "Reasoned" as something thought, programmed, designed, and improved.

14. Only the "good examples" would not be sufficient for the education of the individual. "The art of education or pedagogy must be, therefore, *reasoned*, if it should develop human nature so that it can achieve its destiny" (KANT, op. cit., p. 21).

15. FOUCAULT, op. cit., p. 120.

16. lbidem, p. 121.

17. lbidem, p. 86.

18. Ibidem, p. 86.

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Determining individual places [the organization of a serial space] made it possible to control each one and the simultaneous work of everyone. It organized a new economy of learning time. It made the school space work as a teaching machine, but also a watching, ranking, rewarding machine¹⁹.

4. PAULA SIBILIA AND MICHEL SERRES

One could say, according to the critical perspective of Foucault, that the "educational crisis" is far from being a contemporary fact. It is something that has been dragging itself since the origin of this institution.

The school, while technology of a time²⁰, would use its technological devices, involving students and teachers in the school environment, with a single and sole negative purpose: the formation of a disciplined body, i.e., an apolitical and proletarianized body to the microphysical level. In contemporary times, with technological advances, especially mobile devices, the triad student, teacher, and school environment would face a new problem.

Mobile devices, equipment with decentralized and ubiquitous functions, that enable connection not only with the outside of the school walls, but with a whole universe visible and accessible by the networks, would be inescapable agents of the current "time of dispersion" – dispersion that would imply changes not only in the school institution, but, above all, in the very constitution of the subjects involved.

It is not very hard to verify that, gradually, this apparatus [of the traditional school] becomes *incompatible* with the bodies and subjectivities of children today. The school would then be an old-fashioned machine. Both its components as its modes of operation are no longer in tune with the young people of the 21st century²¹.

Now, the students, through mobile technology devices, have the *media* at their disposal, and these are, in one way or another, decisively integrated into the school, being, in many ways, more "interesting" than the teacher, so that a contemporary educational dilemma stands out – in a negative and intentional way –: would the electronic media be a third unexpected element, no longer organic and implicit, but considered inconvenient and thus subject to purging? Would student and teacher be forcibly *united* at the school, but truly *dissociated* in the gestation, interaction, and socialization of knowledge?

New subjects have new subjectivities. The culture of extensive and dense readings, that constitutes inwardness and introspection, is increasingly replaced by other, of exhaustive digressions from images and opinions, directed to the other and extroverted. We would have distinct characterizations between student and teacher, generating perspectives and debates to be equated. Let's see.

On one hand, we would have the character-student, an angelic postmodern "new generation" unbound from the humanistic space format of the book,

19. Ibidem, p. 126.

20. Sibilia highlights the school as an apparatus or device, subject to adjustments and changes in the course of human history. She describes the school as technology of a time: "When we look at it in its historiographical prism, this institution [the school] acquires the contours of a technology: we can think of it as a device, a tool, or an intricate artifact meant to produce something" (SIBILIA, op. cit., p. 13).

21. Ibidem, p. 13.

the page, with their power from inventive and serendipity-based thinking and intelligence; soft, transparent beings, capable of casual movements, in the fertile paths of the decentered chaos – of multiple, fast, and free *voices* – of virtual machines. Characters driven by themselves, in their processes of *thoughts*, not *knowledge* – the latter outsourced today on the machine, which formerly required the modern *spokespersons*, the "old generation," which appears on the other side: the character-teacher, previously "sovereign and magistral," now considered a partisan, formatted, "critical" subject, with slow and heavy steps, subject to references, ratings, memory, abstract and deductive concepts²².

Such character-student is the Thumbelina²³, as Serres states: the new students of contemporary times who, when grabbing their computer, have their own head in their hands, diving in multiple accesses to information and to knowledge experimentation. A head consecutively "well-built," directed by a search engine.

Until the morning of today, professors, in the classroom or in the University Auditorium, transmitted a knowledge that, in part, already rested in the books. They verbalized the written word, a base page. When they invent, which is rare, they then write a page-compilation. Their chair made people listen to that spokesperson. For this speech, silence was required. But they cannot anymore²⁴.

Or, otherwise, we have the character-student *Prosumer*²⁵, "hyperkinetic," with more than conscientious performing perceptions and actions, capable of inhabiting the world from weaving networks, contacts, and interactions in the current society of control²⁶, with ravenous, entrepreneur, eager, flexible, hedonistic, connected, and useful bodies. On the other side, the character-teacher, the non-angelic "old generation," born in the disciplinary society, but today also inserted in the processes that generate new subjectivities, having intricate head and mission, seeking to meet the requirements and educational needs of students, who no longer fit "between the walls."

There is, therefore, something unexpected: given the changes in the subjectivity of students – and teachers – in the increasing contact with digital tools, the fluidity of the possibilities of connection may be more beneficial to the learning process than the rigidity of confinement²⁷.

Thumbelina or Prosumer? According to Serres, the new generation is under a new paradigm. Since its origin, the educational model has undergone a series of transformations. In its early days, in oral societies, educators were the "owners of knowledge"²⁸: their own bodies were used as support for messages. With the improvement of material culture, disruptions occur. The first takes place with the emergence of writing and the use of paper. The second, with the emergence of the press²⁹, in the 15th and 16th centuries. The third great transformation, with the arrival of information technologies, provided the exteriorization of memorization, imagination, and reason. All wisdom, in its formats, and all the knowledge, in its methods, can be found in the "electronic

22. SERRES, op. cit., 2015.

23. Thumbelina is the teenager who "send SMS with her thumbs" and "inhabits the virtual space." The use of the feminine is not random, but takes place by the confirmation that, contrary to what occurred in the 18th and 19th centuries, today most subjects attending schools are female (Ibidem).

24. Ibidem, p. 44.

25. "Contemporary children would have abandoned their condition of inept to be protected and educated, to become a consumer to be conquered and with which one must learn. We could say that they are no longer students, mere recipients of a knowledge that would nurture and illuminate their future citizen trajectory, to embody an active prosumer or produser, [...] neologisms arising from the confluence between the terms producers. users. and consumers. which have been expanding to other fields" (SIBILIA, op. cit., p. 123).

26. DELEUZE, Gilles. Postscriptum sobre as sociedades de controle. *In*: DELEUZE, Gilles. **Conver**sações: 1972-1990. Translation to Portuguese by Peter Pál Pelbart. Rio de Janeiro: Editora 34, 1992. p. 219-226.

27. SIBILIA, op. cit., p. 195.

28. "Knowledge was supported by the body of the scholar, the *aoidos*, the storyteller. Live libraries: this was the faculty of the pedagogue" (SERRES, op. cit., p. 25).

29. "Rolls, vellums, or scrolls, writing support. And then, from the Renaissance, in paper books, press support" (Ibidem, p. 25). box," which was once restricted to the internal part of the brain, being until then the only cognitive structure endowed with the ability to store, organize, and select information and knowledge.

Sibilia, as an anthropologist, gives us a warning: a situation that turned students in Prosumers asks for urgent consideration; to the teaching professionals, she asks: think about and seek the change appropriate to the imminent situation; the subject-student "lives under the threat to be diluted in the turmoil and 'become a nothing'"³⁰. In such a situation of excess and dilution, new issues are raised, the worst of them being the "total saturation," which "prevents one from thinking and acting"³¹. The school, no longer organized to receive and provide the subjects-students with the old subjectivity and introspection, has become supplied by a heterogeneous audience, which brings with it a need for visibility and connection. The walled silence of schools contrasts with the sound fluidity of networks.

Sibilia also highlights that one must know how to handle the arrival of novelty and the changes in subjectivities.

The bodies and subjectivities that became necessary are now different. Thus, now and everywhere, it is not surprising that other types of subjects reverberate: new ways of being in the world that emerge and develop in response to the requirements of contemporary times, at the same time contributing to generate and strengthen such features³².

However, in the diagnosis of the passage from the disciplinary society to the society of control, the author develops a speech of sorrow regarding contemporaneity.

A schooling that no longer subscribes to the disciplinary logic, allowing greater freedom for students, refuses to teach what Kantian pedagogy considered so valuable and that can be summarized as "self-government" [...]. Despite the authoritarianism and rudeness inherent to the disciplinary apparatus, the new panorama can be much more cruel to those who must inhabit them: without state paternity nor institutional fraternity, desolation thrives³³.

Serres, while propositional philosopher – and optimistic – see the possibilities of an institution with open doors to novelty, this being the moment, too, of greater understanding of young people and of learning from them. The author constantly praises the subjectivities of the new students. If previously such students had a formatted "head full of content," now this head, consecutively "well-built," is entitled to the diversity of external knowledge and processing.

Now, the decapitated head of Thumbelina differs from the old ones, more wellbuilt. Not having to strive so hard anymore to store knowledge, because it is extended in front of her, objective, collected, collective, connected, fully accessible, ten times revised and controlled; she can turn her attention to the absence that stands above the cut neck. There circulates the air, the wind or, better still, that little light painted by Bonnat, the *pompier* painter, when drawing the miracle

30. SIBILIA, op. cit., p. 91.
 31. Ibidem, p. 91.
 32. Ibidem, p. 47.
 33. Ibidem, p. 94-101.

of Saint Denis on the walls of the Panthéon of Paris. It is there that lives the new genius, the inventive intelligence, the authentic cognitive subjectivity. The originality of our young girl takes refuge in this translucent emptiness, under the nice breeze. Knowledge with near-zero cost and, however, difficult to grasp³⁴.

The new possibility of living, thinking the institutions, of being and knowing, delights and motivates the author. The opportunity to access and experiment "one click away" would promote thoughts and creations in the new subjects, forming thinkers in the most various levels. Silence, content, layout, knowledge accumulation, and enclosure would give rise to the disordered, fluid, and soft processes of invention.

I think: my thought is distinguished from wisdom, from knowledge processesmemory, imagination, deductive reason, subtlety, and geometry... externalized, by synapses and neurons, on the computer. Better said I think and invent when I step outside this wisdom and this knowledge, when I move away³⁵.

In this scenario, we understand: teacher and student no longer fit on the same page, so that the changes that transformed children in Thumbelina/Prosumer are still far from conquering a pedagogical activation response in schools.

5. WHAT IS THE PEDAGOGICAL PERSPECTIVE TO CONTEMPORANEITY?

It is clear that educational institutions live under the legacy, today unfortunate, of their pedagogy of origin, currently being in the challenging situation of creating an effective philosophy and method to restructure the school ideas, purposes, and actions. Addressing specifically mobile devices and their inclusion in schools, there is a concern, still naïve and conservative, concerning preserving or not the unfortunate legacy, dictated by a debate over the "misuse or not" of these devices at school.

As we have seen, Serres opens up a whole provocative and propositional philosophical discourse, highlighting how mobile devices are welcome and bring good news. Sibilia, in turn, opens an essayistic and critical discussion, proposing reflections from the horizon of the Foucaultian *suspicion* about contemporaneity. Both of them do not run away from an appropriate historical contextualization of education; however, they reach antagonistic contemporary considerations: of a "New Paideia"³⁶; and of a society of control³⁷.

Thinking about education in its entirety, since elementary education, in which students and teachers are already under the implications of digital technologies, and proceeding to the admission in higher education, when young people and adolescents do not disconnect for a second, it is possible to note specific phases with distinct needs. For each phase, different levels of face-to-face experience, of maternal and humanistic care are categorically required. Having said that, Sibilia gives us an important warning regarding the uncontrolled

34. SERRES, op. cit., p. 37-38.
35. Ibidem, p. 42.
36. Ibidem, p. 28.
37. DELEUZE, op. cit.

insertion of digital devices in the school curriculum, particularly at an early age; at the same time, she also praises distance learning (thinking about in higher education), believing it is a plausible and feasible solution, which gives autonomy and freedom to students, as well as space, credible support, and safety to professors, both inside and outside the school institution, not limited by walls, but always united by the network³⁸. However, the author does not discuss real contexts, such as distance education in Brazil, aimed at being the only college access for millions of poor people, who are submitted, since an early age, to a precarious classroom education.

It seems obvious, therefore, that we should think about a tinting regarding the educational discourses not directed from digital technologies, as well as pay special attention to children in early education – they need, necessarily, in this moment of socialization, a face-to-face teaching, with special dedication from teachers and with social experiences. Another obvious urgency is the discussion of pedagogy curricula that reflect and propose pedagogies compatible with digital technologies. There is not an exclusive formula.

The "presumption of competence" of Thumbelinas, as Serres advocates³⁹ – perhaps the most expressive paradigmatic disruption of contemporary pedagogy –, which releases us from Socratic pedagogy and would meet the "conditions for a Western spring"⁴⁰, considers that children "already know," that knowledge "is already there" to be experienced, a click away, and that the role of pedagogy would be to maximize these creative energies.

The noise, the voices, the excitement and speed of Thumbelinas, for example, do *not* need to be seen necessarily as problems. Therefore, rehearsing distinctions, as Sibilia does, between interaction and dialogue⁴¹, between knowledge and information⁴², between chaos and order⁴³, between craft and performance⁴⁴, between informational subjectivity and conscious subjectivity⁴⁵, turns out to establish a critical discourse that seems to still want to navigate through clear water, beyond the "inauthenticity" of actions and environments, tarnished, dirty... Thus, the danger is the creation of distinctions that separate dichotomous and derogatory discourses, which ultimately contribute little to think about a pedagogical perspective for contemporary times. Today, are or are not interaction, knowledge, order, craft, and consciousness complementary, correlative, interdependent of information, of performance, of chaos and interaction? Undoubtedly, for Sibilia, the insufficiency of a transindividual discourse in this respect is notable.

However, other passages of the author seem to be much more productive, from the reference to Cristina Corea, approaching the two authors of the philosophers Serres and Jacques Rancière in the issue that for us is decisive:

"We may have to learn to teach without educating, to think without knowing" [...]. To do this, we would need to enunciate – and negotiate –, always in an autonomous way, the rules of the game required in each situation, thus constructing the possibility of dialogue that avoids falling into the assumptions of the old scheme whose effectiveness collapsed [...]. This difficult challenge of teaching

38. SIBILIA, op. cit., p. 195.
 39. SERRES, op. cit., p. 77.

40. lbidem, p. 78.

41. "In contemporary practices there would be no communication nor dialogue, but contact or interaction, i.e., what we usually call connection" (SIBILIA, op. cit., p. 187).

42. "Knowledge is cumulative and is based on writing, whereas its circulation is produced thanks to the transmission between two differentiated poles: one that emits and another that receives, being both roles defined in advance in a fixed and stable way. Information, on the other hand, is instantaneous and multiple, does not respond to preestablished hierarchical organizations and its privileged support is usually the media; in addition, it does not depend on the one-way transmission to circulate, but disseminates forming networks. Therefore, both modalities require and produce differentiated subjectivities" (Ibidem, p. 115-116).

43. "When time and space become chaotic, one must develop active strategies to intervene in this disorder in search of cohesion and thought: a permanent work to prevent everything from being dissolved" (Ibidem, p. 188).

44. "Away from the line of 'performing arts,' reading and writing are activities related with craftwork, such as carving or working with clay, such as sewing or weaving. To carry them out, one needs to exert some pressure against the current rhythms" (Ibidem, p. 73).

45. "The informational subjectivity is constituted at the expense of consciousness" (Ibidem, p. 89). without educating and thinking without knowing resonates certain echoes of the philosophical proposal developed by Jacques Rancière in the book *O mestre ignorante*⁴⁶ [The Ignorant Schoolmaster].

Rancière narrates and interprets the radical and paradoxical pedagogy of French master Jacotot, who lived in the 19th century and did not seek to discipline and transmit knowledge, focusing entirely on the "presumption of competence" of the students, motivating them to emancipate themselves.

The self-government capacity of Thumbelina, which makes her, at the same time, driver and passenger, becomes key to an urgent and challenging contemporary "liberation." Believing, however, as does Serres, that the "new generation," immaculate, brings the redemption to the problems caused by the "old generation" is a certainly forced scapegoating and discursive resolution of problems, unreal and simplistic, but that traverses the entire book⁴⁷; an easy and stereotyped image of generations. Well, it was the same Thumbelinas, exemplarily inhabiting the Silicon Valley, who have also built the most innovative and subtle forms of marketing, corporations, spectacles, algorithmic governability, disruptively overcoming the "old generation." Thus, certain criticisms in Sibilia's book make perfect sense: these young students are today, paradoxically, invested by both positive and negative positions from the pedagogical point of view: they are "producers," proactive, but also continually surrounded by a consuming volition, increasingly under the influence of algorithmic designs and governabilities, which want them passive; or which want them intelligent only for the technicist pedagogical reductions, of instruction and coaching.

Thinking about pedagogy and mobile devices *from* the discussions of Sibilia and Serres allows viewing the two ends of the same line: the one that questions and the recursive one.

Curiously, when the "crisis of/in school" about the new tools of information and communication technologies emerges, pedagogy becomes essential in contemporary times: the pedagogical essence of school, which we understand as temporality of creative leisure, of the collective experience, and of ethical construction, disadvantaged today, has never been so indispensable. The spatiality and disciplinary thinking of school are dismantled. We crucially need *paidagogós*; however, from its roots *paidos* ("child") and *agein* ("leading"), it is the meaning of the latter term that must be reconsidered today.

46. Ibidem, p. 118.

47. Let us cite two excerpts, only: "We, adults, did not invent any social bond" (SERRES, op. cit., p. 23); while young people are "formatted by the media, propagated by adults who meticulously destroyed their faculty of attention" (Ibidem, p. 17).

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