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INSTRUMENTAL REASON AND EDUCATION: REFLECTIONS ON SCHOOL AND NEW TECHNOLOGIES [1][2]

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ABSTRACT: The reflections of Critical Social Theory on instrumental reason are the heart of critical analyses of the 20th-century catastrophes represented by Auschwitz. The ethical imperative expressed by Adorno for education, that Auschwitz not happen again, remains vital as the historical changes that took place in the 21st century did not alter the fundamental characteristics of instrumental reason. In this article, we point out the current tendency to propose school adjustment to the demands created by digital technologies as a symptom of the persistence of the predominance of instrumental reason in education. This article aims to criticize how the insertion of new technologies in the school has been proposed, failing to consider both the ethical dimension of education and the relationship between form and content in the new apparatus. The criticism of the concept of instrumental reason remains fundamental for recovering the ethical discussion in education.

Keywords: school education, critical theory of society, digital technologies.

RAZÃO INSTRUMENTAL E EDUCAÇÃO: REFLEXÕES SOBRE A ESCOLA E AS NOVAS TECNOLOGIAS

RESUMO: As reflexões da Teoria Crítica da Sociedade sobre a razão instrumental estão no cerne das análises críticas às catástrofes do século XX, representadas por Auschwitz. O imperativo ético expresso

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por Adorno para a educação, de que Auschwiz não se repita, segue sendo importante na medida em que as mudanças históricas ocorridas no século XXI não alteraram as características fundamentais da razão instrumental. A atual tendência de propor o ajustamento da escola às demandas criadas pelas tecnologias digitais é apontada neste artigo como um sintoma da persistência do predomínio da razão instrumental na educação. O objetivo deste artigo é criticar a forma como vem sendo proposta a inserção de novas tecnologias na escola por deixar de considerar tanto a dimensão ética da educação como as relações entre forma e conteúdo nos novos aparatos. Conclui-se que a crítica realizada ao conceito de razão instrumental continua sendo fundamental para a recuperação da discussão ética na educação.

Palavras-chave: educação escolar, teoria crítica da sociedade, tecnologias digitais.

RAZÓN INSTRUMENTAL Y EDUCACIÓN: REFLEXIONES SOBRE LA ESCUELA Y LAS NUEVAS TECNOLOGÍAS

RESUMEN: Las reflexiones de la Teoría Crítica de la Sociedad sobre la razón instrumental están en el centro de los análisis críticos de las catástrofes del siglo XX, representadas por Auschwitz. El imperativo ético expresado por Adorno para la educación, que no se repita Auschwitz, sigue siendo importante en la medida en que los cambios históricos que se produjeron en el siglo XXI no alteraron las características fundamentales de la razón instrumental. La tendencia actual a proponer la adecuación de la escuela a las exigencias creadas por las tecnologías digitales se señala en este artículo como síntoma de la persistencia del predominio de la razón instrumental en la educación. El objetivo de este artículo es criticar la forma como ha sido propuesta la inserción de las nuevas tecnologías en la escuela por no considerar tanto la dimensión ética de la educación como la relación entre forma y contenido en los nuevos aparatos. Se concluye que la crítica realizada al concepto de razón instrumental sigue siendo fundamental para la recuperación de la discusión ética en la educación.

Palabras clave: educación escolar, teoría crítica de la sociedade, tecnologías digitales.

INTRODUCTION

The analysis of any educational issue could not be done without the premise announced by Adorno (2003, p. 119) that the most fundamental requirement for education is that Auschwitz not be repeated: "But this is not a threat, as Auschwitz was the regression; Barbarism will continue to exist as long as the fundamental conditions that generate this regression persist." In other words, the premise remains valid because the social, cultural, and psychological conditions that allowed Auschwitz to exist are still present. The word Auschwitz, in the cited text, not only refers to a place with a German name in Poland but to one of the largest extermination camps designed by Nazism for what they called the final solution: annihilating the Jews of Europe. Auschwitz represents the use of science in its most advanced means to produce death; metonymically, it also refers to the dissemination of a kind of logic – to the predominance of what Horkheimer and Adorno (1985) called instrumental reason. The fatal convergence of rationality and destruction, which persisted operating after the Second World War under the banner of democracy and the Welfare State, becomes a problem that challenges us, something that

needs to be understood in its multiple manifestations, and which needs to find expression despite the ineffable nature of the catastrophe that occurred in Poland under German rule.

Also, another element that denounces the persistence of Auschwitz is the so-called cultural industry, in its new and old facets (Antunes; Maia, 2018). The current facets relate to new digital technologies, algorithms that produce both targeted propaganda, constantly mobilizing subjects to an action that seems free to them, and that ubiquitously exploit users' capabilities, taking them as raw material to generate value. Even in its traditional configuration, the culture industry covers Auschwitz with a layer of sentimentality and moves the problem somewhere in the past. As Claussen (2012) argues, it is through its visibility linked to mass products that the ineffable reality of horror is covered up and simultaneously exposed, while the rationality of annihilation persists. The terrible element, which defies the possibility of narration, which is beyond understanding, insofar as it is a rationalized order whose purpose is to systematically produce death, is denied and replaced by sentimentality and the illusion that what happened has been overcome. Agamben (2008) indicates that Auschwitz challenges all ethics that are based on the idea of human dignity and compliance with standards. The ethical meaning of what happened remains without being sufficiently analyzed, as there is a difficult distance to travel between observation and understanding.

According to Claussen (2012, p. 47), "Mass culture assimilated Auschwitz. Conceptualizing what is not conceptualizable has been transformed into a trivial banality, from which humanity must extract lessons, the importance of which is difficult to hide". The need to deal with guilt and the meaninglessness of what happened is replaced by banal sentimentality, the incommensurability of destruction is made commensurable by the accounting of violence, and agreement on the culprits, who are no longer among us, dismisses us to think about what continues to be reproduced in so-called democratic societies: the conditions that legitimize blind destructiveness. If Auschwitz is not merely a place, but also a logos, a reason instrumentalized to produce destruction, its proximity should be taken seriously because it is not just something that would have had an end but something that perpetuated itself despite the historical changes.

To deal with the need to reflect on Auschwitz, it would be necessary to take seriously the dialectic between culture and barbarism, that is, the dialectic of enlightenment (Adorno; Horkheimer, 1985) as the starting point of every educational act to do justice to the Adornian imperative. Or perhaps, it would be necessary to consider that among the presuppositions of Auschwitz, there is a certain process of rationalization, or rather, the development of an instrumental reason whose criticism is at the heart of the Frankfurtians' reflections and which separated its ethical element from knowledge; the bourgeois coldness (Gruschka, 2014) without something like annihilation on an industrial basis would not be legitimized; anti-Semitic prejudice and its like, which ideologically justify extermination; the annihilation of the individual and his capacity for critical reflection on society and himself.

All of these elements are in force and, in many ways, have been deepened or reconfigured since Horkheimer and Adorno criticized instrumental reason. The COVID-19 pandemic offered us explicit examples of the mentality that justifies Auschwitz: the risk of death was ignored, the means to avoid contagion were ridiculed and new digital technologies were mobilized to spread fake news that led to countless people dying. Many people died because of instrumental reason operating through death, not by an element of nature, a virus, which means that one of the urgent tasks for any educator is to identify the new ways in which this type of rationality manifests itself. Instrumental reason identifies the mathematization of knowledge; the predominance of the quantitative element over qualities; the

suppression of the ethical dimension of knowledge; the bureaucratization of society that makes Kafka's writings faithful portraits of the tendencies to destroy subjectivity and individual freedom; the generalization of the logic of commercial exchange to all human relationships, among other characteristics.

If Auschwitz is both a constellation of meanings that are difficult to encompass, constantly trivialized and repressed by exposure in the cultural industry, and a metonymy of forms of rationality whose most complete expression is a set of extermination camps, reflecting on the purposes of education based on this imperative has something desperate, not only because of the content of what we must have in mind but because it becomes clear that we have to consider the problem as something very close and that contains elements that we usually identify with civilization. Furthermore, no less important is the question: what local forms represent Auschwitz? In other words, everyday occurrences, as well as our prejudices, social practices of discrimination, and perpetuation of domination, also need to be put on the agenda.

Thus, if we take the ethical premise for education proposed by Adorno (2003) as a starting and ending point, as a necessary foundation for critical educational action, analyzing the contradictions that structure our training processes, we will continue in the movement of studying education not just observing the practices that create and sustain the school in its daily life, but mainly the logic, the rationality that builds it, as well as the social forms of discrimination, prejudice and instrumentalization of reason present in the school. Critically analyzing instrumental rationality in education is one of the relevant dimensions, not the only one necessary for criticism, but at a time when educational training is thought to be aimed at the job market, without any concern with the radical dilemmas imposed by the Adornian imperative, becomes crucial.

In this sense, this text proposes to bring elements for an analysis of instrumental reason, as conceived by the Critical Theory of Society, especially from Horkheimer (2015), in the work *Eclipse of Reason*, as a basis for the discussion on the conformations between instrumental rationality and education, in such a way that the premise about Auschwitz is not lost in our training actions. Our discussion is also supported by the works of Adorno (2003), Horkheimer (2015), and Adorno and Horkheimer (1985), in which we seek the philosophical and theoretical bases to understand the processes of regression of reason, of cultural (de)formation engendered by instrumental rationality, by the eclipse of objective rationality and, therefore, by the obscuring of the possibilities of thinking about training for criticism and self-criticism.

The reflections developed here are part of the post-doctoral research, *Training, and instrumental reason in pandemic times*: basic education in Maringá – PR, carried out from August 2021 to August 2022, together with the Postgraduate Program in Education School at the Universidade Estadual Paulista – UNESP, Araraquara Campus. The main purpose of this study was to investigate how the instrumental reason was embodied in the execution of the Emergency Plan for Non-In-Person Learning developed by the Municipal Department of Education of Maringá – Paraná, to maintain school activities during the COVID-19 pandemic.

The naturalization of coldness, expressed in the disregard for life during the pandemic in Brazil, showed us that annihilation and extermination are not so far away. In this sense, it becomes necessary to understand how the inadvertent adoption of technology to replace human contact, made impossible by virus containment measures, dehumanizes us or even reveals to us the deepening of how reason is operationalized in educational spaces. Therefore, in this essay, we will focus on the theoretical-

conceptual assumptions about instrumentalized rationality to analyze the relationships between technology and education.

INSTRUMENTAL REASONING AND CRITICAL THEORY

Considering the concept of Instrumental Reason as fundamental in this essay, we initially sought Horkheimer (2015) to understand the rationality underlying contemporary industrial culture. In the preface to *Eclipse of Reason*, the author analyzes:

> It seems that, while technical knowledge expands the horizon of man's thought and activity, his autonomy as an individual, his ability to resist the growing apparatus of mass manipulation, his power of imagination, and his independent judgment, are reduced. Advances in technical means of enlightenment are accompanied by a growing process of dehumanization. Thus, progress threatens to nullify the very objective it was supposed to achieve – the idea of man (Horkheimer, 2015, p. 8).

Discussing the relationships between means and ends, Horkheimer (1969) notes that for the common man, rational is equivalent to useful, and that power is identified with an ability to classify, deduce, and conclude independently of the specific content in each case. He called this modality of reason *subjective reason*. It applies to adapting certain ways of proceeding to more or less consensual ends, regardless of whether such ends are in themselves reasonable. In short, it matters little to subjective and instrumental reason to reflect on the objectivity of ends, on their real gains for the survival of humanity or the individual; Overriding such reflections is the immediate perception of a subjective gain, of an improvement in the subject's adjustment to the immediate environment, of an expansion of domination. Reason in this sense is a subjective property of the intellect, which applies to calculating probabilities and adapting means to a specific end.

According to Horkheimer (1969), in the history of Western reason, an opposite conception predominated for a long time, which affirmed reason as something inherent to the objective world as well as to individual consciousness. The great philosophical systems, from Plato to German idealism, would share this structure, in which the degree of rationality is measured by the harmony between individual actions and totality. This conception incorporated that of subjective reason, considered a partial expression of reason. The emphasis of objective reason fell on the ends, considered more important than the means. In subjective reason, the emphasis falls on the immediate relationship between means and ends, which can be considered concerning each object in question; ends are relative.

The two modes of reason described, according to Horkheimer (1969), have existed since the beginning of humanity, and the predominance of objective reason was only established to the extent that a critique of thinking was constructed as a faculty of subjective expression to encompass absolute objectivity, identified beyond the ability of individual subjects to think. Although criticizable for its claim to identify reason with a non-historical universality, objective reason provides a counterpoint to the current tendency to place the source of all forms of reason and all instrumentally established ends on subjects.

Formalized, subjective reason loses the ability to establish whether a given end is desirable in itself, and ethical and political decisions are made circumstantially, regarding taste and subjective choice. At the same time, what remains for the subjects, given the entirety of society organized according to the principle of production and exchange of goods aiming at an expanded reproduction of value, is to

adjust to the world without negotiations. The universal principle that determines the ends exists and determines life and death beyond the possibility of the action of the subjects, considered individually only so that they can be better manipulated. Subjective reason equates to adaptation without discussion.

The possibility of identifying Auschwitz as a terrible thing to be avoided is lost as the formalization of reason makes the search for an objective criterion meaningless. It should be noted, and this is not the least important thing, that neither Horkheimer nor Adorno inconsequentially affirm an adherence to rational universal principles of idealistic modality. The criticism of the Kantian categorical imperative in the second discourse of the *Dialectic of Enlightenment* (Adorno; Horkheimer, 1985), to take just one example, is radical: the formalization of good in the form of bourgeois reason justifies barbarism rather than avoiding it. Meanwhile, the Marquis de Sade, Kant's antipode, literally exposes bourgeois man and his ambitions and reasons, making it more useful to confront his terrible descriptions than to naively embrace the categorical imperative.

However, saying that Auschwitz should not be repeated does not have the abstract nature of the categorical imperative precisely because, on the one hand, it is a historical occurrence produced by the undued action of reason, one that challenges our ability to conceptualize, narrate and experience; On the other hand, beyond the formalization of reason, it is possible to think of a categorical imperative whose universality is not abstract, but determined by the observation that if we persist in reproducing the conditions that led to Auschwitz, life is constantly put at risk. In other words, the imperative that Auschwitz not be repeated is based on the memory of barbarism, the possible confrontation with the unspeakable, and the understanding that the continuity of the conditions that allowed this to occur threatens us today.

The category "progress", therefore, is no longer identifiable with the historical development of technology and the expansion of dominion over nature. These contradictions underlying progress are also analyzed by Silva (2001, p. 28) when he considers that "[...] the process of development of emancipated reason [...] caused civilizing effects contrary to its assumptions". There is no doubt that humanity has already achieved all the technical knowledge to overcome hunger, minimize pain, cure diseases, to guarantee dignity to all people during its existence, but, contradictorily, life becomes unworthy for most of those who live on this planet. Then,

> How can we explain that the progress of technology and industrial revolutions, the impressive collection of discoveries that science has accumulated over the space of four centuries, have contributed to crumbling the promises of happiness and making the future opaque in terms of achieving human purposes? Without considering these contradictions so embedded in historical life, there is no way to understand the human experience in terms of its reality and its possibilities (Silva, 2001, p. 33, authors' emphasis).

We understand that the analysis of the opacity of human purposes is not limited to one or another aspect of social life, nor is it limited to our restricted academic studies and investigations, even though we present an approach to investigate how human formation has occurred in starting from the promises of freedom and happiness that come with enlightenment. In this approach, we consider that the examination of the logic/rationality that organizes social life is a relevant piece to assemble and disassemble puzzles related to the processes of human formation. Domination, which is not only present in economic class relations but also in forms of thought, takes place as domination over the subject and others.

Based on the foundations outlined by Horkheimer (2015), we can say that both aspects of reason, the subjective and the objective, constitute the logic of organizing life, in such a way that subjective reason would be the one responsible for everyday pragmatism, such as subjective faculty of thinking, which is concerned with the adequacy of means to achieve ends. As the subject's faculty, it defines what is good, reasonable, and useful taking into account particular efforts and individual motives, such as those given in "each person's conscience". Therefore, it cannot be concerned with universal ethical values, since, individually evaluating the end of the action, there would be no common good. In this sense, subjective reason would be contradictory, since it guarantees the maintenance of the subject and his demands, even if this means the destruction of the humanity he carries.

According to Horkheimer (2015), objective reason enabled the domination of nature, destined for a supreme good, the way of achieving the ultimate ends of humanity; it is not just another psychological activity, but, as the spiritual substance of man, it is the objective basis of our knowledge capable of designating a fundamental and comprehensive structure of being. It is important to highlight that both forms of reason are linked to the historical process of expanding domination and, in this sense, participate in the dialectic between civilization and barbarism. But this dialectic has a configuration that, in history, encompasses continuities and ruptures, and it is essential to identify at each moment what predominates and the types of rationality that threaten life.

In addition to the trend towards formalization, currently, the use of new technologies by the cultural industry (Antunes; Maia, 2018) constantly mobilizes users to simultaneously explore their profiles, extracted from the analysis of the data that "browsing" generates. Valued as they circulate (Dean, 2005), the messages exchanged are emptied of political meaning due to the loss of semantic value, as they become valuable due to their ability to generate mobilization and circulation. The so-called subjective reason takes on, in its digital version, delusional contours, as the confluence of messages in "bubbles" generates factions that destroy any common sense for social coexistence (Lago, 2022). In this sense, it would be even more crucial today to defend objective reason as a source of tradition and, through its philosophical systems, maintain a claim to fundamental unity between wisdom, ethics, religion, and politics, broken in bourgeois ideology. It is not a question of simply adopting some idealistic rational system against the new cultural industry, but of realizing that the problem highlighted by Horkheimer still exists:

> The present crisis of reason consists fundamentally in the fact that, at a certain point, thought simply became incapable of conceiving such objectivity or began to deny it as an illusion. This process gradually advanced until it included the objective content of every rational concept. In the end, no particular reality can seem reasonable per se; all basic concepts, emptied of their content, became just formal shells. As reason is subjectivized, it also becomes formalized (Horkheimer, 2015, p. 15).

In the original concept of objective reason, according to the author, subjective reason was contained, as an aspect of partial and limited rationality, in such a way that subjective reason, circumscribed, could not direct social reality by not analyzing the actions of men in society. Objective reason would then be "[...] like an entity, a spiritual power living in each man. This power was considered the supreme arbiter – if not the creative force behind the ideas and things to which we should devote our lives" (Horkheimer, 2015, p. 18).

Objective reason would be an effort of dialectical thought; the requirement to think the thought; and universal vision to determine the common good and regulate actions between men. Since

human reason is finite and cannot know the absolute, the recognition of its finitude and, therefore, of human suffering, would be the condition for criticizing reason itself to maintain the purpose of seeking the universals necessary to preservation of humanity. It is, therefore, a matter of seeking a modality of objective reason linked to the body, to human suffering, to the understanding that "Everything spiritual is a modified bodily impulse" (Adorno, 2009, p. 172), aiming precisely to elaborate suffering in May it stop repeating itself blindly and uselessly.

In this way, the work of reason, thought, and philosophy would radically reflect on the contradictions of instrumental reason, to recover collective, ethical, and, therefore, human purposes. The subjective reason, as an abstract functioning of the thinking mechanism, as an individual psychological activity, pays little attention to the question of whether the purposes themselves are reasonable, materializing in the characteristic symptom of our time: translating every idea into action and disregarding each time more the relationships between circulating ideas and broader social reality. Action for action's sake then supplants thought for thought's sake and both are nullified; the idea has no value if it does not generate immediate action: "[...] the difference between thinking and acting is considered null. Thus, each thought is considered an act; each reflection is a thesis, and each thesis is a slogan" (Horkheimer, 2015, p. 31).

Science, in the subjectivization of reason, is reduced to a certain organization and classification of data, to what is useful, which can be transformed into action. The philosophical systems of objective reason, as the objective basis of knowledge, implied a comprehensive or fundamental structure of being, which presents the vision of statesmen, humanists, and scholars, who claim the power to reveal the origin, nature of things and knowledge about the correct modes of action, is liquidated as an instance of ethical, moral and religious knowledge (Horkheimer, 2015).

According to the author, by cutting the ties of every philosophical, ethical, and political idea with its historical origins, the path is opened for the instrumentalization and automation of thoughts, and the advancement that could be generated by enlightenment becomes domination. Contradictorily, the tendency of enlightenment, then, may promote superstition. By giving up its autonomy, thought, and objective reason, becomes an instrument. The more instrumentalized and automatic the ideas are, the less meaning directed towards humanity will be seen in them; self-interest replaces the motives considered essential for the functioning of society and for guaranteeing the human in each individual, governing collective decisions.

> The formalization of reason has profound practical and theoretical implications. If the subjectivist view is true, thought cannot help in determining the desirability of any goal in itself. The acceptability of ideas, the criteria for our actions and beliefs, the guiding principles of ethics and politics, all of our ultimate decisions will depend on factors other than reason. They are supposed to be a matter of choice and predilection, and it becomes meaningless to speak of the truth when making a practical, moral, or aesthetic decision (Horkheimer, 2015, p. 16).

The critique of subjectivization and the formalization of reason, according to Maia, Silva, and Bueno (2017), involves rational and conceptual references to seek a conception of the universality, of ethics, against dehumanization. If criticism is not made, we run the risk of nullifying the very idea of man, of humanity, leaving only the individual. The criticism focuses on both poles, universal and particular, since in both the logic of identity can establish a totalitarian tendency, either absolutizing universals or the individual. In the particular historical conditions of administered society, the tendency towards the primacy of individual interests, the imperative of self-preservation, already betrays its

emptiness due to the need to, like Ulysses before the song of the sirens (Adorno; Horkheimer, 1985), willingly surrender oneself to the mechanisms of social domination, while criticism of the increasingly pervasive character of instrumental reason demonstrates society's totalitarian tendencies.

In the *Dialectic of Enlightenment*, Adorno and Horkheimer (1985) announced the processes of formalization of reason given, including, the cult of science, by the identity between knowledge and power, whose essence would be technique. For the authors, men renounced the concept, replacing it with the formula; the application of the method has replaced science itself, what matters is no longer the truth, but the effective procedure. Instrumental reason, therefore, is also defined by its effects, by the practices it determines, and by its efficiency.

> Myth becomes enlightenment, and nature becomes mere objectivity. The price men pay for increasing their power is alienation from that over which they exercise power. Enlightenment behaves with things as the dictator behaves with men. He knows them to the extent that he can make them. This is how your in-itself becomes for-it. In this metamorphosis, the essence of things reveals itself as always the same, as the substrate of domination (Adorno; Horkheimer, 1985, p. 24, authors' emphasis).

As there is no disinterested scientific investigation, in this analysis we understand the technique as dependent on historical reality and linked to social processes, hence its paradoxical character: it can free men, as well as being an efficient form of domination. Starting from the premise that instrumental reason is still the dominant form of rationality, even if it has undergone updates, we also assume the loss of universals, the emptying of the content of the basic concepts of education and training in our time, that is, the predominance of the subjectivization of rationality guiding everyday pedagogical actions "[...] we are facing a ruined experience", according to Silva (2001, p. 33, authors' emphasis).

Experience training, according to Silva (2001), can only take place as critical education and this necessarily implies understanding the historical disaggregation of experience, in other words, it requires the analysis of the processes of subjectivization and formalization of reason, determined by historical and social movements. Then, critical education would subvert adaptive patterns, and reclaim possibilities for the formation of the spirit, of the intellect, for the search for universalizable and comprehensive purposes.

The formalization of reason, according to Horkheimer (2015), transfers the model of social and mechanized division of work to the life of the spirit, and this division also takes place in the realm of culture. In it, universal and all-encompassing truth becomes inherently relativistic.

> [...] such mechanization is, in fact, essential for the expansion of industry: but if it becomes the characteristic feature of minds if reason itself is instrumentalized, it assumes a certain materiality and blindness, it becomes a fetish, a magical entity that is accepted rather than experienced intellectually (Horkheimer, 2015, p. 31).

Criticism of technical training, which divides intellectual experience and the education of the spirit, only occurs with the refusal of history and as an exaltation of the present, understood as linearity and progress. In the dialectical movement of history, according to Silva (2001), possibilities are realized in their negation, and thus, everything that exists could not exist and something else could exist in its place, in such a way that another will always be possible. education, and other training. We recognize, however, the historical and social limits to breaking with adaptive processes, resulting from the

formalization of reason, which prevent intellectual experiences such as critical self-reflection, as a possibility of emancipation. Only in contradiction will we find gaps for some degree of freedom, remembering that technological development, at the same time, liberates and imprisons.

INSTRUMENTAL REASON AND EDUCATION

Adorno (2003, p. 141) defined the purpose of education as the "[...] production of a true consciousness" which is configured as a political requirement, "[...] a democracy with the duty of not only functioning but operating according to its concept requires emancipated people. An effective democracy can only be imagined as a society of those who are emancipated" (Adorno, 2003, p. 141-142). If education, as defined by the author, is a condition for emancipation, and if the progress generated by the advancement of technological rationality is also a condition for dehumanization, it becomes imperative to analyze this contradiction, if we aim to produce some resistance against the forms of instrumentalization of education.

In other words, this contradiction must be considered radically because the criticism of instrumental reason is not merely the uses of technical objects, applied science, and social devices produced by technoscience. Horkheimer's criticism of instrumental reason, according to Benhabib (1986), is internalist, that is, what is in focus are how the concepts and procedures mobilized by science produce a distorted image of society and the relationships between men and women. nature, based on domination. Instrumental reason, therefore, is a form of domination based on a logic of identity that tends to be totalitarian in that it suppresses everything that does not fit into its premises. The manifestations in education are broad: from the suppression of the ethical dimension to the decision to train for the job market, passing through the logic of stagnant content, and the contempt for non-exploitable knowledge such as art.

Lima (2016), when analyzing the theme of the cultural and ethical-political training of teachers, points out the divisions arising from the logic of instrumental reason, when the subjects of the teaching-learning processes, the contents of educational purposes and objectives are separated, when one isolates the scientific from the pedagogical, the administrative from the didactic, the political from the educational, the social contexts from the teaching methods practiced. The author also emphasizes the split between academic training and pedagogical training, both established in our social configuration as neutral or apolitical. However, education for transformation, for emancipation is a political act, emancipation as a utopia presents the political condition of education.

Based on Paulo Freire, Lima (2016) talks about the act of teaching and learning as resistance against the strictly scholastic, didactic act, or as an instrument of preparation for tests, exams, and performance assessments, to measure the efficiency of teaching methods and instruments.

> Just as education cannot be neutral, the education of professional educators inevitably asserts itself as a political-educational project within which axiological neutrality is not possible, unless it is allegedly presented as such, in which case it becomes a purely ideological project by intending to hide its options and naturalizing them, as if teacher training could be a strictly technical-rational project and, even so, without options and alternatives on that level, totally dominated by instrumental rationality and a univocal technical competence (Lima, 2016, p. 150).

When considering that education only constitutes a process of individual and collective transformation guaranteeing the freedom and emancipation of societies, the author emphasizes the

ethical-political character of education, but not as another content or knowledge to be taught in more disciplines, not through didactic methods or new technologies, but through testimonial transmission. Ethics would be incorporated into general principles, educational purposes, and the attempt to resist the rationalization of intellectual training. When analyzing the contrast between what is proposed as emancipatory training and what is presented as a social project, Lima (2016) states that we have witnessed the technical and didactic teacher training program, highlighting complex reasons:

> [...] policies aimed at producing school results in a performative and competitive environment between schools, education systems, countries, etc.; large-scale, national and international assessments with intensified use of exams and other forms of standardized assessment; the narrowing of the curriculum, either by granting centrality to the so-called "essential knowledge" or "structuring subjects", or by purging other areas and knowledge now considered superfluous from the prescribed curriculum and, in this way, hierarchizing and "rationalizing" the curriculum, reducing teaching hours , dismissing teachers who were considered surplus; greater openness to the requirements presented by companies in terms of professional training, in accordance with "vocational" requirements, employability and qualification of the workforce, with a view to modernization and economic competitiveness; the managerialist pressures on teachers, exerted by new styles of school leadership, by the scrutiny carried out through electronic platforms, by the introduction of private management modes in public schools; the trends towards the intensification and individualization of teaching work, especially for younger and precarious teachers, accompanied by a loss of capacity for collective action, particularly through the crisis and the political and social devaluation of unions and teaching associations; the ideological criticism of educational thought and the attempt to discredit pedagogical theories and research in education, especially those that are considered particularly harmful (such as the sociology of education and educational policy), or dispensable (such as, for example, history and the philosophy of education), all occupying less time and space in initial training (or having simply disappeared), however always invoked for harming scientific training in the discipline that the future teacher will teach [...] (Lima, 2016, p. 151-152).

To this long list of complex reasons that promote technical education, presented by the author, we can add the practice of homeschooling, so encouraged in Brazil, especially during the covid-19 pandemic. The claim to individualize training further contributes to the erasure of the comprehensive and universal purposes that free and conscious training could provide. This is a false individualization, insofar as the ideal of producing an integration adjusted to market demands suppresses, in the educational process, the forms of expression that could precisely manifest elements of individuality. Furthermore, given the social totality being encompassed by instrumental reason, the spheres of culture and subjectivity are increasingly mobilized by the constant crises of capitalist sociability in the expectation of expanding opportunities to obtain more value and, in this process, previously alien spheres of life to the economic imperative become integrated.

We can provide an example of this process of false individualization. At the time of writing this article, we came across the announcement of the Festival LED – Luz na Educação event, which took place between the 8th and 9th of July 2022 in the city of Rio de Janeiro. The event held by Rede Globo and Fundação Roberto Marinho, in partnership with the "Educação-360 – International Education Conference" platform, aimed to illuminate and disseminate innovative practices in education. Participating in the event as guests and debaters were artists, musicians, priests, doctors, educators, journalists, TV show presenters, football players, actors, actresses, singers, poets, education consultants, nutritionists, social entrepreneurs, YouTubers and tiktokers, among others. The wide diversity of professionals disguises the pre-established harmony of principles and purposes shared by the participants. From the program, we highlight three activities to illustrate the instrumentalization of intellectual training:

Conversation: The teacher is on!
The technological revolution has changed the way students are attracted to teaching content. As a result, teachers around the world have needed to review their teaching methods and material development, analyzing their perspectives for the future. The subject will be addressed in this meeting between a YouTube teacher and a TikTok teacher, who will exchange ideas and methodologies in the search for a lighter and more attractive form of teaching. With Professor Noslen (youtuber), Professor Simone Porfíria (tiktoker) and mediation by Laura Vicente (Multishow presenter).

Table: Digital and analog technologies: learning from the best of both worlds
In addition to digital technologies, there are many techniques and tools used in learning processes today. From analog methodologies to the application of complex technological devices, from virtual to in-person, how can you get the best of both worlds? This table aims to reframe what technology is and how we can use it to enhance learning inside and outside the classroom.
With Greiton Toledo (mathematician and teacher), Helena Singer (leader of the Latin America Youth Strategy at Ashoka), Kelly Baptista (director of the 1Bi Foundation), and mediation by Cauê Fabiano (journalist and reporter for TV Globo).

(Rede Globo, 2022).
Workshop: Transmedia Narrative
The Transmedia Narrative workshop proposes a theoretical-practical exercise about the production of audiovisual content on multiplatform. To this end, basic concepts about contemporary communication are presented and applied to the simulated creation of projects for TV and/or the Internet. In addition to exposing creative possibilities, ways to better dialogue with the desires of the contemporary public are also discussed, for which the ideas of participation and engagement are crucial. Thus, through reflection on the multiple screens and the different languages that allow the circulation of products, the workshop makes it possible to experience important aspects that work not only for those who make audiovisual, but also for those who apply this knowledge in other areas, such as On education. With Tcharly Magalhães Briglia (educator and audiovisual producer).
(Rede Globo, 2022).

During the event, three hundred thousand Brazilian reais were distributed to the winners of the LED Challenge – give me some light, "[...] The initiative opened space for university students to present creative solutions to real educational problems, experienced within schools or universities, and learn to transform them into something concrete" (Rede Globo, 2022). Educational problems are restricted to solving the instrumental question: how to adjust school to a "digital native" generation, that is, children immersed in digital devices from an early age. The assumption that the school needs to adjust – not that human beings would also need to know and know how to deal with analog technologies, obviously criticizing this knowledge – is not problematized. The idea of a political dimension in education also does not appear, as does the ethical question of why it is formed.

The proposal appears to be a great media spectacle in which the most advanced technological resources will be used to connect people from different parts of the country, and the world, and produce actions, "something concrete". The event gives the idea of breadth, bringing together various areas of knowledge and civil society interested in educational issues. But it is at the same time reductionist because its programming focuses on the search for "innovative" solutions, actions, and practices, disregarding the historical and social process that led us to the current state of affairs. There seems to be no technological resource so developed capable of emancipating us, of rescuing humanity from the human that destroyed its autonomy and keeps it distant as a training possibility, especially when it is argued that to transform education we lack "led lights".

> Technical-instrumental rationality has acquired renewed protagonism in teacher training. Nothing, moreover, that hadn't already happened, and multiple times, in the past. [...] But restricting education and pedagogical practice to questions of method and the construction and adoption of new educational technologies and teaching-learning techniques, in search of efficiency and effectiveness that legitimize themselves in formal terms, entails profound consequences for teacher training [...] The didacticization of teacher training, therefore, is as criticizable as any other insular role, and exaggerated, as would be its sociologization or psychologization, immediately transformed into pedagogisms and didacticisms of varying signs, especially when based on scientific arguments or criteria presented as exclusively technical (Lima, 2016, p. 153).

It is in the encounter between people, in the contradictions of what is proposed as a theme for debates about education, that at the same time, cracks are created in human formation and gaps to build what is not yet. Silva (2001, p. 36) shows analytical perspectives to seek autonomous and transformative formative processes, pointing to two interdependent elements: "[...] the disregard for historical responsibility and the modern disaggregation of the integrity of human experience".

FINAL CONSIDERATIONS

Cultural, scientific, political, ethical, and human training is not achieved simply because we use the most modern technical resources that, as a rule, are available to a tiny number of schools, students, and educators. Nor is it a question of leaving them aside, but of critically thinking about the place that all techniques occupy in education, whether as a means of understanding content or to make students capable of using them without fetishizing them. Furthermore, a critical analysis is essential both of the purposes inscribed in the digital devices to which the school is proposed to adapt, especially in the post-pandemic period, and of the type of social order that is being prepared with its universalization. Zuboff (2020) alerts us to the development of "Surveillance Capitalism", which explores future markets for behavioral control. Humans are not rats, whose behavior within an experimental box can be controlled with great efficiency, but neither are they immune to the latest behavioral techniques. Instead of simply including digital technologies or adjusting to them, schools should prepare their students for broad citizenship, also in the digital public sphere.

Inequality, as a historical condition constitutive of schooling in Brazil, should be the object of any training proposals that integrate the human experience. Videos from YouTubers and TikTokers, for example, are not a problem in themselves, but what do they add? Which (de)formative model do they break with? What stories do they tell? What criticisms do they present? The resource may vary, depending on the scientific and technological possibilities created and constructed in each historical period, but what does the resource communicate? Thinking about a technology that has now been surpassed by digital devices, Adorno (2003, p. 77) distinguishes issues of form and content that demand continuous reflection: "[...] to begin with, what is modern in television is certainly the technique of transmission, but whether or not the content of the transmission is modern, whether or not it corresponds to an evolved consciousness, this is precisely the question that demands critical elaboration".

What is true for television should also be true for smartphones or tablets, for computers and other technologies to come. What type of content do we want to promote through them? And, no less important: how does the specific shape of the device affect the content? The current tendency to empty the semantic dimension of content circulating through digital devices, denounced by Dean (2005), added to the tendency for the most impactful messages to circulate forming "bubbles" (Lago, 2022), leading to

a crisis of the word as a medium of communication. The school, as a place where one learns to read and write, not only depends on the word to legitimize itself but should be its greatest defender because, without some institution that minimally protects the ideal of universalizable meanings, the significant loss of content of the Communication makes only emotional reactions and political manipulation predominate.

The varied forms of technology present in educational spaces, as seen during and after the pandemic period, also need to be the object of analysis when thinking critically about the intensification of teaching work, produced by already overworked teachers. By removing the autonomy of teachers and students, the technique can be another factor in promoting violence against, in, and at school. This reflection does not want to exclude new technologies from the school context, which would be absurd because schools need to deal with what is relevant in society, but to understand how their technical codes direct users' activity against themselves, against the possibility of an undirected communication, against the development of concentrated attention, historical memory, creative thinking.

Therefore, it is not a question of simply condemning the new devices. They have immense potential. Still being "open" systems (Feenberg, 2017) structured in multiple layers and harboring multiple intentions, they can even play an important role in the formation of new generations. But for this to be viable in a sense that respects the imperative that Auschwitz not be repeated, it is essential to consider the relationships between form and content in the messages and uses that are intended to be given to them. Without this basic reflection, the adoption of any new technique in the educational field is used blindly, without criticism, and without considering the contradictions involved. The mere insertion of new technologies in schools does not solve any of the problems related to the need for Auschwitz not to be repeated.

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The authors declare that there is no conflict of interest with this article.