



Determination and Freedom in Creation Mediated by Sign Systems

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ABSTRACT – Determination and Freedom in Creation Mediated by Sign Systems – This article examines the relationship between determination and freedom in the human act of creation mediated by the use of sign systems. To this end, an approximation is made between György Lukács' philosophical-ontological reflection on the dialectic between teleology and causality in work activity and analysis carried out by Lev Vigotski on the importance of sign systems for human psychic development. It is concluded that creation involves complex relations between the freedom of the subjects and the socio-cultural determinations.

Keywords: **Creation. Creativity. Freedom. György Lukács. Lev Vigotsky.**

RÉSUMÉ – Détermination et Liberté dans la Création Médiée par les Systèmes de Signes – Cet article examine la relation entre la détermination et la liberté dans l'acte humain de création médiée par l'utilisation des systèmes de signes. À cette fin, une approximation est faite entre la réflexion philosophique-ontologique de György Lukács sur la dialectique entre la téléologie et la causalité dans l'activité de travail et les analyses développées par Lev Vigotski sur l'importance des systèmes de signes pour le développement psychique humain. On en conclut que la création implique des relations complexes entre la liberté des sujets et les déterminations socioculturelles.

Mots-clés: **Création. Créativité. Liberté. György Lukács. Lev Vigotski.**

RESUMO – Determinação e Liberdade na Criação Mediada por Sistemas de Signos – Este artigo analisa a relação entre determinação e liberdade no ato humano de criação mediado pelo uso de sistemas de signos. Para tanto, o artigo faz uma aproximação entre a reflexão filosófico-ontológica de György Lukács sobre a dialética entre teleologia e causalidade na atividade de trabalho e as análises desenvolvidas por Lev Vigotski sobre a importância dos sistemas de signos para o desenvolvimento psíquico humano. Conclui-se que a criação envolve complexas relações entre a liberdade dos sujeitos e as determinações socioculturais.

Palavras-chave: **Criação. Criatividade. Liberdade. György Lukács. Lev Vigotski.**

Introduction

Among the many contradictions that mark contemporary society is the one between, on the one hand, the widespread demand that people be creative – synthesized in the motto *be creative or die* – and, on the other, the neoliberal prohibition of any creative search for forms of social organization that are not subordinated to capital. This contradiction is resolved, in the scope of neoliberal indoctrination, by restricting creation to the limits of its instrumental character to meet the demands placed by the market. This is the case, for example, with the ideology of entrepreneurship, according to which unemployment is far more a matter of mentality than a problem generated by the capitalist economy. According to this ideology, this problem can be overcome if individuals change their mentality and, instead of continuing to look for a job, use their creativity to find their *place in the sun* in terms of market, becoming micro-entrepreneurs. Harvie (2013, p. 65) shows, for example, how neoliberal capitalism forces artists to transform themselves into entrepreneurs:

How is the artist entrepreneurial? Basic connections between the artist and the entrepreneur are not difficult to find. [...] an entrepreneur is someone who sets up a business and takes on financial risk in the hope of profit [...]. Economists highlight the necessity for the entrepreneur to be risk-taking, while sociologists tend to define the entrepreneur as a creative innovator in the business sphere, differentiated from the conventional business-person, who conforms more often to established procedures and objectives. [...] Entrepreneurs and artists can generally be seen to share special capacities for risk-taking and innovation, or what economist Jason Potts calls the human capital of creativity, novelty generation, new interpretations and meanings and ‘the creative skills and abilities that enable humans to continually change and adapt.

This creativity adapted to market logic places on the shoulders of individuals the responsibility for their success or failure. The mentality that society is divided into successful and failed individuals is becoming more and more widespread. Lack of creativity is one of the personality traits pointed out to explain the fact that many people are not successful as entrepreneurs.

In this cultural and ideological neoliberal context, not being very creative is regarded almost as pathological and a moral failure.

From this perspective, we would be condemned to eternal subordination to market logic, namely, to a society ruled by capital. We may be supporters of the most conservative neoliberalism or advocates of policies for greater income distribution; culturally reactionary or progressive; well-behaved or rebellious; as long as we reject any idea of revolutionary social transformation that has as its horizon a rupture with capitalist *societal* logic.

Kinas (2018) demonstrates that in capitalism, creativity is subordinated to the process of merchandise valorization and the performance of value:

[...] my creativity must let itself be appropriated by the notion of value to exist socially. Otherwise, it will not be recognized as such. It is creative only if it renders service, or if it produces things; if not, it becomes gratuitous. The creative economy is a good example of these attempts to reinvent value devices. Such value can only be expressed by its competition, by a comparative structuring with other values. The market price will determine whether my device is creative enough. Its creativity must be performant in relation to the value, so that the creativity of the performative devices follows a system of competitive collaboration. Social relationships, the way people practice their exchanges, are integral parts of these devices. This performance of value corresponds to the manner in which we correlate. Here we see the value paradigm and its ontological ambiguity. Because value is not a property of objects, it is not conceived in specific social relations. However, when we exchange, we continuously make references – and reverences – to value, in a voluntary and practically unconscious adherence. Value is the fruit of general social relations organized in a political market economy. The issue is no longer what we produce, but how our means of production and its products have shaped us to their image and behavior. The wishes of the market clearly show us how this automaton subject can engender, conceive and submit to human relations (Kinas, 2018, p. 108-109).

In this society commanded by the capitalist logic of valorization, the social character of human existence becomes an abstraction reduced to exchange value. The concreteness and diversity of human relations are reduced to the common denominator of sale on the market. Human capacities such as that of creating, from what exists, ideas and previously non-existent materialities are explained by perspectives in which individualistic focus predominates. One such explanation is based on the idea there has

been an immutable human nature evident throughout history with traits inherent to that nature, such as egoism, which liberal ideology believes to be universal. Another explanation for personality traits is that some people are blessed by genetics or divine will with talents that provide them with superior conditions to compete for socioeconomic success. Finally, a third explanation is that each individual acquires skills and abilities that are more or less intuitively and subjectively formed from personal experiences. It seems that neoliberal common sense does not tend to consider the ability to create as a universal characteristic, unlike egoism, as mentioned above. The idea that creativity is an innate talent of a few individuals or an ability that some people develop in their successful practices is more compatible with logic and meritocratic ethics. In any case, the individualistic treatment of the ability to create serves as a legitimizing argument for the social division between success and failure.

This text will take an opposite path. Without disregarding individuality and the formation of individual creative capacity, we shall seek a perspective to analyze creation that is founded on a fundamentally historical and social conception of the human being. With this goal in mind, the specific issue that we will address as analysis object is the relation between determination and freedom in creation mediated by the use of sign systems. Are human beings totally free when they create something or are they determined, to some extent, by objective and subjective factors previously existing in social practice? In search of answers to this question, we will make an approximation between the philosophical-ontological discussion of the relation between teleology and causality by György Lukács (1885-1971) and the psychological study undertaken by Lev Vigotski¹ (1896-1934) on sign systems and their importance in the psychic development of individuals.

Teleology and Causality in the Creative Act

The online Aulete Portuguese dictionary provides seventeen definitions for the verb *criar* [create], among which, loosely translated, are *bring into existence, from nothing; formulate in the mind, conceive, invent; provoke the appearance of; provide for the education of; breed animals; make emerge, be the cause of; establish (something), found, institute*². These meanings are not necessarily compatible with each other, in the sense that they refer to quite

distinct situations. The first of these, namely, *bring into existence from nothing*, can only exist in mythical situations in which some omnipotent God creates something from nothing, as in the act of creating the universe in the Bible's book of Genesis. In human reality creation cannot exist from nothing. The creation of any new material object must use already existing matter, just as the creation of new ideas is always the act of thinking humans who, ergo, think based on previously existing actions and thoughts. Creation from nothing presumes an absolute beginning, or rather, a complete absence of history. This mythical act of creation bereft of history therefore contrasts with human creative acts in which people, individually or collectively, transform what already exists to produce something that does not yet exist.

It is interesting that in Portuguese we routinely use the verb *criar* [*translator's note: literally meaning 'create' but which equates to the expression *raise a child* in English] as a synonym for *educating and caring for a child*. In the case of *educate*, there are a set of actions that start with what a child is in order to reach what he/she is not yet, but may become. It is similarly significant that the same verb is used in Portuguese for animal husbandry, signifying the emergence of new individual members of that species. It is also worth highlighting in these meanings the fact that the act of creating implies an inventive mental activity, which sets goals and drives the action that makes something emerge. As such, it is evident that the creative act, both in its mental aspect and its practical realization, is carried out by a subject with a certain degree of consciousness in relation to part of the reality upon which his/her transformative action intervenes and, equally, with regard to the desired result.

In philosophy, it is not a novel idea that the origin of the creative act lies in the human activity of work, understood as the intentional transformation of nature. The English philosopher Sean Sayers explains that this idea is present both in Georg W. F. Hegel (1770-1831) and Karl Marx (1818-1883):

Hence for Marx, as for Hegel, work is not only a means to satisfy material needs, it is also a fundamental part of the human process of self-development and self-realisation. This process occurs not only in economic labour but in all forms of practical activity through which we deliberately

make changes in the world, even in play. Its highest expression is in the free creative activity of art (Sayers, 2011, p. 21).

In the chapter dedicated to the category of labor, in the essay *The Ontology of Social Being*, Lukács (2013) analyzes the creative act as a dialectic unit between two principles: causality and teleology. This analysis is founded on Karl Marx, especially in *The Labour Process*, from *Capital* (Marx, 1996, p. 297-304). The following is a well-known passage in which Marx differentiates human work from those activities performed by other animals, given that humans guide their actions teleologically:

A spider conducts operations which resemble those of the weaver, and a bee would put many a human architect to shame by the construction of its honeycomb cells. But what distinguishes the worst architect from the best of bees is that the architect builds the cell in his mind before he constructs it in wax. At the end of every labour process, a result emerges which had already been conceived by the worker at the beginning, hence already existed ideally. Man not only effects a change of form in the materials of nature; he also realizes [*verwirklicht*] his own purpose in those materials. And this is a purpose he is conscious of, it determines the mode of his activity with the rigidity of a law, and he must subordinate his will to it. This subordination is no mere momentary act. Apart from the exertion of the working organs, a purposeful will is required for the entire duration of the work. This means close attention. The less he is attracted by the nature of the work and the way in which it has to be accomplished, and the less, therefore, he enjoys it as the free play of his own physical and mental powers, the closer his attention is forced to be (Marx, 1990, p. 284).

Since human activity employs means to act on objects in order to achieve the desired ends, the teleology of this activity needs to interact with the causal chains involved in the relationships between the means employed and the objects worked on. Without a minimum of practical knowledge about the objective processes they are dealing with, human beings would have little chance of success in their attempts to transform reality and satisfy their needs. It is for this reason that Lukács considers the contradictory unity between teleology and causality as a fundamental characteristic of work activity.

The action that transforms a stone into a chipped stone, which will be later employed as an instrument, requires the human being to be able to deal mentally and practically with causal processes existing in nature and, at

the same time, constitutes the achievement of an objective established by consciousness, or rather, it is a teleological act. The connections between the teleological character of the transformative activity of nature and the processes of creation are due to the fact that the human being is capable of using natural phenomena to act favorably towards the achievement of the objectives set by consciousness. In the act of creating unnatural objects, human beings produce new relationships between causal processes that already existed before the work activity. Thus, although all the elements singularly deemed of the new object already existed before, the result obtained is not a simple sum of singular characteristics, but a set of intentionally produced relationships. Lukács (2013) states that, unlike Kant's philosophy, in which teleology and causality proved irreconcilable, in Marx's conception, the work activity generates a concrete unity between these two opposing principles. The establishment of ends by the consciousness and the re-ordering of natural causalities, so that they act as means to reach those ends, lead to the emergence of new relationships between objective phenomena which, in this way, are transformed into causal chains brought into reality by human action. Lukács (2013, p. 52-53) claims that Aristotle was the first thinker to capture the existence of these relations.

Aristotle distinguishes in labour the components of thinking (*noesis*) and production (*poiesis*). The former serves to posit the goal and to investigate the means of its realization, while the latter serves to attain the realization of the goal thus posited. Now when Hartmann breaks down the former component analytically into two acts, i.e., the positing of the goal and the investigation of the means, he makes concrete in a correct and instructive manner the path-breaking character of Aristotle's idea, while altering no decisive aspect of its ontological nature. For this lies in a mental plan achieving material realization, in the positing of a desired goal bringing about a change in material reality, introducing a material change in reality which represents something qualitatively and radically new in relation to nature. Aristotle's example of the building of a house shows this very concretely. The house is just as material an existence as the stone, wood, etc., of which it is constructed. Yet the teleological positing gives rise to an objectivity which is completely different from that of its elements. The house, of course, cannot be 'derived' from the mere being-in-itself of the stone or wood, not from any kind of further development of their properties, the regularities and powers effective in them. What is necessary for the house is the power of

human thought and will, to arrange these properties materially and actually in an essentially quite new connection (Lukács, 1980, p. 10-11).

An important consequence of this fact is that the new causalities produced by human action, the *posited causalities*, establish movements of the reality that the human being also needs to make objects of his/her action, in the same way as with the causalities existing in nature before human interventions. Although Lukács considers work, in its most primitive form as a transformation of nature for the production of instruments, a model for human social practice in its various types that have emerged historically, he is very cautious not to make mechanical transpositions or precipitous generalizations regarding the characteristics of this basic form of work for the more complex social activities. The very dialectic between teleology and causality is not conducted in an identical manner in object-oriented actions and actions directed at other subjects.

However, from a historical and dialectic perspective, which is that of Lukács, one cannot rigidly separate the activities geared towards the transformation of nature from those aimed at human beings themselves. In their simplest forms, human activities are essentially social, and therefore, even when they are directed at object transformation, they directly or indirectly involve actions focused on human beings themselves. Likewise, actions primarily oriented to human beings relate, directly or indirectly, to actions directed to objects.

In the terminology employed by Lukács (2013), in *The Ontology of Social Being*, the teleological actions oriented to the transformation of objects from nature are called *primary teleological positings*, while actions aimed at consciousness and the behavior of other human beings are called *secondary teleological positings*.

Let us consider hunting in the Palaeolithic era. The size, strength and danger of the animals hunted made the cooperation of a group necessary. But if this cooperation was to function successfully, there had to be a division of functions among the individual participants (beaters and hunters). The teleological positings that follow from this have a secondary character, from the standpoint of the immediate labour itself; they must be preceded by a teleological positing that defines the character, role, function, etc., of the individual concrete and real positings that are oriented to a natural object. The object of this secondary goal positing, therefore, is no longer something

purely natural, but rather the consciousness of a human group; the posited goal is no longer designed directly to change a natural object, but rather to bring about a teleological positing that really is oriented to the natural objects. The means, likewise, are no longer directly effects on natural objects, but such as seek to induce such effects from other people (Lukács, 1980, p. 47-48).

Thus, the actions of human beings that focus on the mind and behavior of other human beings are seen by Lukács as second-degree mediations, whereas actions in which instruments for object transformation are employed are first degree mediations. It is in this sense that Lukács uses the expressions *primary teleological positings* and *secondary teleological positings*. *Primary* and *secondary* adjectives, in this situation, do not have any value connotation, merely referring to the fact that the ultimate goal of the activity is to act on objects and not on human beings. However, when we are faced with another type of activity, such as that of the actor or the teacher, the main purpose is to produce certain effects on the subjects and, to that end, actions that place objects and material phenomena at the service of the main purpose may be necessary. This will not change the fundamental social fact that the continuity of human life will always require the realization of nature transformation activities, without which basic survival needs are not satisfied. In other words, in this ontological key in which Lukácsian reflection develops, the teleological positings directed at objects are always socially primary. But, notwithstanding this ontologically primary character of nature transformation actions, it seems legitimate to us to consider that, when taken in their specificities, activities directly geared to the production of certain results in human beings themselves prioritize objectives which in other circumstances are secondary.

And it is precisely the social character of the work activity that produced the need to develop forms of communication, generating language. Therein we have the genesis of the relations of mutual influence between labor, language and conceptual thinking:

A genetic derivation of speech or conceptual thought from labour is certainly possible, since the execution of the labour process poses demands on the subject involved that can only be fulfilled simultaneously by the reconstruction of psychophysical abilities and possibilities that were already present into language and conceptual thought, whereas this cannot be understood on-

tologically without the antecedent requirements of labour, or even the conditions that gave rise to the genesis of the labour process. It goes without saying that once the needs of labour have given rise to speech and conceptual thought, their development must be an incessant and indissoluble interaction; the fact that labour continues to form the predominant moment in no way removes the permanent character of such interaction, but on the contrary strengthens and intensifies it. It necessarily follows from this that within a complex of this kind, there must be a continuous influence of labour on speech and conceptual thought, and vice versa (Lukács, 1980, p. 49-50).

Considering these reciprocal influences between work activity, language and thought, as well as the fact, already mentioned here, that the teleological action sets in motion causal series, the question must be asked: if there are *posited causal series* from the point of view of labor's strict materiality, would there also be causal series triggered by teleological actions oriented to the psychism and behavior of other human beings? In Lukácsian terms: do secondary teleological positings also generate posited causal series?

It is important to emphasize that we are in no way seeking mechanistic causal explanations for the subjectivity and behavior of human beings. Even in relation to the most immediate material processes, Lukács warns at various moments of the need not to interpret causality in a linear and mechanistic manner. In natural processes that do not undergo human action, reality, or in philosophical terms, *being*, always contains diverse possibilities in its becoming. Many are the casual factors that lead to the realization of a certain causal series while others do not come to be materialized. The same occurs with human actions. When human beings decide to act in certain ways, carry out certain work operations, employ instruments in particular ways, or use phenomena of nature in certain correlations, they make choices based on what they are able to know and predict in terms of causal chains. Some choices may be better than others in terms of intended results. Randomness can also intervene in the unfolding of facts. Faced with this development, human beings make new choices that trigger new processes of reality, which also have multiple possibilities of becoming. In this analysis framework, any simplistic interpretation of the relations between natural causalities, teleological actions and posited causalities is therefore ruled out.

If the activity possesses such complexity with regard to the relationships between human beings and purely material objects and phenomena,

even more complex are the processes when teleological actions occur in the interactions between subjects. If the action of subject A sets in motion the psychic processes of subject B, generating what we may call subjectively posited causalities, the ways in which subject B reacts to the action of subject A also possess a teleology and thus trigger psychic movements in subject A. Moreover, every human being, both subjectively and objectively, is in constant becoming and in this permanent movement of transforming into someone he/she is not yet, there are several possibilities, some of which are realized and others are not. When we choose a way to give deeply unpleasant news to a person, we imagine how he or she will react, but we are never sure that he or she will, in fact, react in the way we predicted. The same happens when we deliver some news without great care, believing it to be something of little emotional impact and, to our surprise, the person reacts in a strongly emotional way. We are always prone to errors of evaluation, whether by carelessness, inattentiveness, lack of information, insensitivity or by misguided reasoning. But no matter how careful and perspicacious a person is and no matter how much their action is based on solid knowledge and vast experience, there will never be certainty about the results that their actions will produce in other people. This is not an absolute denial of the human capacity to know another person, nor a kind of complete unknowability of an individual's personality. We do not share the theories or ideas that assert that each individual is a reality trapped within him/herself, totally unreachable in terms of knowledge by the other. What we are maintaining is that each individuality is always in movement and that in trying to act, even in a very specific way, on that movement, we produce causal chains that are intertwined with the intentions that drive that individuality, generating a becoming in which possibilities other than those we had anticipated can be realized.

Whether in relation to purely material phenomena or processes of human subjectivity, when we intentionally seek to act on them we make choices among the possibilities that seem to us to exist in their becoming. These choices may have different degrees of accuracy and error in relation to the objectives that are guiding our interventions.

Naturally, of course, mistakes can be of very different degree. They may be susceptible of correction by a subsequent act or acts, which again introduces

new alternatives in the chain of decision (and the correction may be easy or difficult, depending on its variable interpolation in an act or series of acts); or else the mistake once made may vitiate the entire work. Thus alternatives in the labour process are not all of the same kind or status. What Churchill well said for the far more complicated cases of social practice, that one single decision may lead to a whole ‘period of consequences’, already appears in the most rudimentary form of labour as a characteristic of the structure of any social practice (Lukács, 1980, p. 33).

In borrowing the expression *period of consequences* from a speech by Winston Churchill in the English parliament in 1936³, Lukács clearly indicates that he does not limit his analysis of posited causal series to purely material processes, encompassing social relations in this category. Hence, we believe it appears legitimate to also employ this category with regard to human psychic processes.

Analysis of the dialectics between causality and teleology in the activity of nature transformation by human beings is the path chosen by Lukács to try to understand, also in a dialectic way, the age-old question of how much human action is determined and how much is free. Causality, at first, would be pure determination. But the human being, as already explained here, acts on the causal series and establishes connections between objective phenomena in order to achieve the ends set by consciousness. The ends refer to teleology and, in this sense, represent pure freedom. It happens that ends remain pure daydreams while human beings do not find the forms of action and adequate means to modify reality. Causalities that were pure determination are transformed by human actions into posited causalities in which the ends set by consciousness are present, and thus, without escaping the objectivity of reality, the human being transforms determinations into means of freedom. But these posited causalities generate new circumstances, new determinations and new needs, demanding actions in which new choices will be made. Freedom also transforms itself into new determinations, the posited ends also become new causalities.

Creative acts have always been situated in human history, in social contexts and in life trajectories. Individuals make choices, partly consciously and partly driven by objective and subjective causal series that have been incorporated into their activities and lives. Creation is the continuity of what already exists and the emergence of something new, at the same time. How-

ever, it is freedom achieved by subjects who do not act in a vacuum, but in already existing cultural circumstances.

In order to understand the relations between determination and freedom in both the social and individual character of the creative act, Lev Vigotski's theory about the systems of signs and their importance for human psychic development seems to us to be particularly fruitful at this point.

Sign Systems and Creative Processes

The reference adopted by Vigotski in the elaboration of his theory on the relations between the human psyche and sign systems is the same one used by Lukács for his philosophical-ontological reflection on the social being: the human activity of labor. In the aforementioned passage from *Capital*, we saw that, for Marx, labor consists of three fundamental elements: activity oriented to an end; the objects on which subjects act; and the means employed in that activity. In the category of the means, Vigotski begins his analysis using the analogy between the function of tools in the work process and the function of signs in human activities:

The invention and use of signs as auxiliary devices for solving any psychological problem confronting man (to remember, to compare something, communicate, select, etc.) is, *from the psychological aspect, at one point* analogous to the invention and use of tools. As such an essential trait of the two concepts being compared, we consider the role of these devices in behavior to be analogous to the role of the tool in a work operation or, what is the same, *the instrumental function of the sign*. We have in mind the function of stimulus-device fulfilled by the sign with respect to any psychological operation, that it is a tool of human activity (Vygotsky, 1997b, p. 60).

But the Belarusian psychologist warns of this analogy's limits. Tools are created and developed to be used in material actions on objects. Although signs are also means for human activities, they are employed by individuals to act on the psychic processes and behavior of other people or themselves. This division of tasks between tools and signs should not, however, be construed as a rigid separation. The use of tools retroacts to the subject and transforms physical and mental capacities. The use of signs leads people to perform actions that can result in transformations of objects.

If human beings create and employ tools to achieve a greater mastery of the phenomena of nature that are external to them, they use signs to develop self-control. The interconnections between the search for dominion over external nature and the search for mastery over human nature are highlighted by both Vigotski and Lukács, both of whom consider this double mastery as something necessary to the historical process of building freedom. Lukács (2013, p. 155-156) summarizes this issue as follows:

We may even say that the path of struggle for self-mastery, from natural determination by instinct to conscious self-control, is the only real path to true human freedom. The proportions in which human decisions are based in nature and in society may be contested, and the aspect of determinacy in any particular positing of a goal, any decision between alternatives, may be assessed as high as you like; but the struggle for control over oneself, over one's own originally purely organic nature, is quite certainly an act of freedom, a foundation of freedom for human life (Lukács, 1980, p. 135).

Both in his theoretical investigations and in his experimental research in the field of developmental psychology, Vigotski showed that mastery of the human psyche is part of the larger process of mastering nature by humans and that freedom does not consist in ignoring natural processes or intending to nullify them, but in placing them at the service of the objectives laid down by the consciousness. It is in this sense that he borrows from Hegel the idea of the *Cunning of Reason* to synthesize this human capacity to set natural processes in motion in order to achieve the goals set by the consciousness:

Hegel said that the mind is as resourceful as it is powerful. In general, resourcefulness consists in mediating activity that, while it lets objects act on each other according to their nature and exhaust themselves in that activity, does not at the same time intervene in the process, but fulfills only *its own proper role* (Vygotsky, 1997, p. 61-62).

In this text, it will not be possible to analyze the contradictions – which have arisen throughout human history and which are extremely acute today – in the relations between society and nature. If, on the one hand, no form of society can exist without establishing some kind of metabolism with nature, on the other, the destructive character of the relations that capitalist production establishes with nature has reached unsustainable levels in the most varied senses. This also has implications for the theme of creation,

that is, not all creation in the relationship between human beings and nature can be considered as being positive for humanity and the rest of the planet. However, a more in-depth treatment of this theme would go beyond the limits of this text. The point that we are trying to highlight here is that humans need to deal with both external nature and human nature itself, and to do so produces mediations. Sign systems are complex mediations that human beings have produced throughout history to achieve, as far as possible, self-control, without which there is no freedom.

For Vigotski, psychic development is characterized, among other things, by the transformation of spontaneous psychic functions into psychic functions intentionally controlled by individuals, and this development is directly related to the incorporation of sign systems into the activities that people learn to perform throughout their lives. At a conference held in 1930, in which Vigotski called signs *psychological instruments*, he explained the relationships between these *instruments* and psychic development as follows:

The following may serve as examples of psychological tools and their complex systems: language, different forms of numeration and counting, mnemotechnic techniques, algebraic symbolism, works of art, writing, schemes, diagrams, maps, blueprints, all sorts of conventional signs, etc. [...] The application of psychological tools enhances and immensely extends the possibilities of behavior by making the results of the work of geniuses available to everyone (Vygotsky, 1997a, p. 85 and 87).

As human activities become more complex, so do the mediations employed in them so that, in the case of signs, they are structured in complex systems that synthesize historically developed actions, operations, processes and relationships. These dynamics of the human psyche synthesized in sign systems are of great importance to activities involving creation and are culturally transmitted through the most diverse forms of teaching and learning.

It could be argued, however, that both the self-mastery of mental processes and the accumulation and historical-cultural transmission of these processes are limited to psychic functions with regard to cognition, whereby emotions and feelings are personal, uncontrollable, and not subject to organization in systems and to learning mediated by teaching activities. This

type of argument, nevertheless, adopts a dichotomous view of reason and emotion, cognition and affections, which is not supported by Vigotskian psychology. Notwithstanding the specificities that can distinguish the control of cognitive functions, such as memory, from the control of feelings and emotions, Vigotski, meanwhile, did not in any way separate affections from intellect and vice-versa.

Psychology teaches that emotions are not an exception different from other manifestations of our mental life. Like all other mental functions, emotions do not remain in the connection in which they are given initially by virtue of the biological organization of the mind. In the process of social life, feelings develop and former connections disintegrate; emotions appear in new relations with other elements of mental life, new systems develop, new alloys of mental functions and unities of a higher order appear within which special patterns, interdependencies, special forms of connection and movement are dominant (Vygotsky, 1999, p. 244).

The constraints of this format do not allow us to further explore the various aspects of this theme in Vigotski's work as a psychologist, but it is worth highlighting that the development of the unity between the cognitive and the affective was viewed by him as a part of a greater whole, which is the formation of the unifying axis of personality that was based on social life itself.

Conclusion

While individuals need to perform daily actions in order to continue their individual existence, there are many situations in which they overstep the limits of daily life and are driven by the search to meet broader, more collective and more complex social needs than merely their own survival. This is not to deny the importance of actions aimed at continuity in the existence of individual life, but rather that this existence is not an end in itself, making it necessary for the individual to permanently build and reconstruct the meaning of this existence through what he/she accomplishes in his/her social activities. On this point, the theme of human capacity for creation is connected to the meaning of life, since this meaning is neither provided by nature nor defined when a human being is born. It will be the person him/herself who will need, through his/her creative activities, to find the ways to develop his/her personality and build a sense for his/her life.

This brings us back to the theme of teleology and causality. The sign systems that individuals employ throughout their lives, especially in childhood and adolescence, are not created by them, as they already exist in culture, being the result of social practice. By incorporating these systems into the functioning of their psyches, individuals, in a certain way, find themselves under the action of causalities subjectively posited by human activity. Yet these causalities will not determine the choices individuals make or the directions their lives will take them. Moreover, there is no pre-established teleology for this life, there is no destiny mapped out, no meaning already having been assigned. In the highly alienating conditions in which people's lives take place in contemporary capitalist society, most individuals are unable to deliberately produce a meaning to their existence, unable to create any teleology for their lives. But even in the conditions of an alienated society such as ours, it is not at all impossible to pursue creative activities in which people are able, to the extent of their possibilities, to deal with the constant movement between causality and teleology, that is, between determination and freedom.

Given the theoretical path taken in this text, the question arises: in a society commanded by capital and legitimated by neoliberal ideology, wouldn't the spirit of competition, individualism, hedonism and the reduction of meaning in human activities to the pursuit of financial return be aspects of contemporary life that indicate the exhaustion of our creative capacity? Wouldn't humanity have given up trying to recreate itself? To accept this hypothesis would be to share the neoliberal illusion of the end of times and ultimately be the denial of freedom. The authors of this text, supported by the references adopted herein, believe that the human capacity for creation can be directed to the transformation of society, of the relationships between society and nature and of human life.

Notes

- ¹ The name of this Belarusian psychologist is spelt in a variety of different manners in the editions of his works that use the Western alphabet: Vygotsky, Vygotskiy, Vygotski, Vygotskii and Vygotski. We chose to use the last of these, but we maintain the spelling from the cited edition in the references.

- ² Available at: <<http://www.aulete.com.br/criar>>. Online Portuguese dictionary. Accessed on: June 16, 2020.
- ³ Available at: <<http://www.churchill-society-london.org.uk/Locusts.html>>. Accessed on: Jan. 23, 2020.

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