

# Creative Activity and the Development of Consciousness: A Discussion With Piaget and Rudolf Steiner

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This study aims to discuss the possibility of becoming conscious of certain aspects of one's own existence through creative activity. The discussion involves Piagetian constructivism and Steiner's ideas about human development and is justified by the contribution of creative activity to the development of autonomy, according to Piaget, and to the development of an ethical individuality, according to Steiner. The participation of adults in sessions of creative process, as well as the questions posed after this activity, asking for the relationships between what they created and their life, is evidence of practices favourable to increasing the grasping of consciousness of self and of the process of developing an ethical individuality.

**Keywords:** Piaget, Rudolf Steiner, consciousness, creative process

## Piaget and Rudolf Steiner

The approaches of the German scholar Rudolf Steiner and of the Swiss educational psychologist Jean Piaget to education and development have important things in common and the current enquiry set out to explore how both these approaches relate to and inform each other. Two key aspects can be seen as the starting point in the dialogue between Piaget and Steiner: the rejection of the myth of the sensorial origin of scientific knowledge and knowledge being made possible by the subject's activity. Alongside these and other points of agreement exist others which diverge. What is, therefore, the sense of establishing a debate between Piaget and Steiner? Piaget develops an

*epistemology*, as a theory of scientific knowledge, studies its genesis up to its most basic levels in childhood and shows that there is no discontinuity in the constructive mechanisms. The epistemology that began by being referred to only in the

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restricted domain of scientific knowledge takes a leap forward—which in my view it is not an exaggeration to consider to be revolutionary—and becomes a *general theory of knowledge*. (Garcia, 2002, pp. 22-23)

For Piaget the process of knowledge construction considers two processes that follow parallels and are constructed dialectically: that of the construction of reality and that of the construction of the structures of knowledge. There is no knowledge prior to the interaction between subject and object and this is the same as saying that there is no knowledge prior to the existence of the individual, this being a major difference between Piaget and Kant. Affectivity accompanies the entire process of cognitive development. It represents energy or the driving force of action. There is an evolution of affectivity in terms of the construction of values by which the subject fights and remains loyal (Stoltz, 2007).

In his book *Insights and Illusions of Philosophy*, Piaget does not believe that a separation between science and philosophy can be made. Piaget values activity that concerns itself with much broader issues such as the meaning of life and the position of man in the face of his existence and society. According to Piaget (1966), this is a case of decisions, obligations, taking sides, which require attitudes and commitment, *sagesse*, which surpass knowledge. Garcia (2002) notes that

Piaget does not respond sufficiently to the calls for epistemological pertinence made both by Goodman and Putnam in relation to their respective delineations in the field of values (art in the case of Goodman, and ethics in the case of Putnam). The challenge made by both requires a reformulation based on constructivist epistemology. (...) Constructivist epistemology, the most general theory of knowledge, has as its reference not isolated individuals, but the society of which they are part. (Garcia, 2002, pp. 28-29)

According to Piaget (1932/1977) cognitive development should lead to moral and intellectual autonomy, to a determination of the paths of self formation, in a dynamic movement throughout a person's entire existence. Autonomy depends on the subject becoming conscious of parts of its existence, and this is where we find a possibility of dialogue with Steiner.

Steiner's epistemological conception regarding human knowledge also emphasizes the process of construction based on the concept of the self as an agent. In a manner similar to Piaget, Steiner observes the relationship between reality and theory.

The facts of science, on the one hand, and nature and history, on the other, should be connected. What is the significance of the reflection of the outside world on human consciousness, what relationship exists between what we think about the objects of reality and they themselves? (Steiner, 2004a, p. 30)

The process of establishing knowledge, according to Steiner, occurs through the interrelationship between body, soul, and spirit.

Through his body man can momentarily relate to things; through his soul he keeps within himself the impressions that things produce in him; and through his spirit he is shown what things themselves represent. Only by considering man through these three aspects is it possible to have the hope of elucidating his nature—since these three faces reveal man related in a threefold manner with the rest of the world. (Steiner, 2004b, p. 28)

Steiner observes a spiritual process of man's self-creation in the development of his destination in a moral form. Steiner calls this ethical individualism, which reconnects us to the universe.

Thinking and feeling correspond to the dual nature of our entity (...). Thinking is the element through which we participate in the general universe; feeling is the way by which we retreat into our own world. (...) Within the universe as a whole, my feelings will only have value when what I perceive of them through self-perception is integrated by means of a

concept with the cosmos. Our life is a constant oscillation between living universal transformation and our individual self. (Steiner, 2000, p. 80)

The evolution of self is experienced in the building of our scientific knowledge about nature. However, erudition and scientific training are not essential to the unfolding of this superior sense, and what today is recognized as the only science may even be an obstacle in defining a standard of what is necessary to the human being. "... Superior knowledge must be preceded by an evolution of man's cognitive forces. What transcends the limits of knowledge before this evolution is situated, following the awakening of latent abilities in each person, entirely within the cognitive sphere" (Steiner, 2004b, p. 23). One of the most important and original aspects in Steiner's epistemology is that all knowledge transforms the one who holds it. "Philosophy becomes involved in the process of knowledge—and in no way does it become involved in a higher *ex post facto* level of reflection about results already verified" (Welburn, 2005, p. 63).

Steiner's perspective in his anthroposophy (...) is anti-metaphysical. Indeed, he thinks about the spiritual experience in ways that are far more modern, scientific, evolutionary and critical than the ones currently more familiar in areas such as biology and physics. But he did not limit science to its success, and took its particular limitations (...) to other domains. (Welburn, 2005, p. 20)

For Steiner (2000), the pursuit of knowledge is not submission to a supposed order of things, but rather the quest for the human relationship with the world around us, changing it and being changed by it. This condition develops within each individual. Knowledge that is never free of values confronts us with our freedom.

It is considered that the sense of the debate between Piaget and Steiner is absolutely productive for both of them. It is productive for Piaget, above all by clarifying the place of art and ethics based on a constructivist epistemology. It is productive for Steiner by deepening understanding of the process that builds knowledge based on an epistemology that claims to be a general theory of knowledge. Concern about education is more expressive in Steiner, who has even proposed a Pedagogy. Piaget wrote on education in very concrete and pragmatic ways, including direct advice to teachers—even art teachers—as part of his work at the Jean Jacques Rousseau Institute, typically with a pedagogic aim of generating morally and intellectually superior students (more spiritually developed, one might say). Both Piaget and Steiner consider the process of the development of knowledge in each individual as evolving towards integration in a system of knowledge that is universal and that evolves based on history. Steiner also notes an evolution of human possibilities through the development of new sensorial organs. For Piaget, based on formal structures constructions become subordinated to infinite possibilities, which in turn require certain necessary relations. It can be said that there is no incompatibility between the two theoretical constructs, but rather complementarity. Both understand evolution as stemming from an integration that has not been thought (imitation through observation and perception) or from indifferentiation, in the Piagetian sense, undergoing the necessary differentiation (manner or establishment of its own language as it is created) and evolving towards an integration (style or knowledge, understanding of the essence), following in broad lines the cognitive method of Goethe, although this is not mentioned by Piaget. Both Piaget and Steiner agree with the maxim that any system of analysis of nature must face two types of facts: change and permanence.

Another approximation between Piaget and Steiner is linked to spiritual themes. More expressive in Steiner's work (1998; 1996a; 2004b; 2010 among others) spiritual themes are also present and little known in Piaget's life and work (Vidal, 1994; Dale, 2014; Ferrer, 2015). Dale (2014, p. 97) unfolds arguments that characterize Piaget as a "transpersonalist and mystic as well as a psychologist and epistemologist." For Piaget

spiritual development defines Good. Good is a form of equilibrium immanent in the mind and is related to reason expressed in science and moral or religious development. Dale (2014) concludes that following an evolutionary nature, Piaget's

cultural and individual development flowed into an awareness of the Good, Spirit, or Immanence. This view did not entirely disappear from his formal academic writing in work published in the 1960s, 1970s, and 1980s, but continued to appear in short, isolated passages, and the ongoing relevance of the mystical experience of immanence was confirmed in autobiographical writings and dialogues of the 1960s and 1970s. (Dale, 2014, pp. 114-115)

For Piaget moral development requires both individual and societal development towards Good. In the case of Piaget, and following Dale (2014, p. 108) "God and ethics became immanent in the world, and changed as the world evolved". This comprehension of the spiritual brings Piaget closer to Steiner when he speaks about ethical individuality or ethical spirituality. On the other hand, Steiner has a view of stages of personal development and spiritual hierarchies that is very esoteric, or mytho-poetic, whilst Piaget's theory of the stages of cognitive development is based on scientific research with children and adolescents in accordance with modern science.

### **Steiner: Art and Science in the Cognitive Process**

For Steiner (2004a), reality consists of a unity, which is both material and spiritual. A human being both perceives and produces phenomena at one and the same time. The cognitive process needs proximity both to the sensory world and also to the ideal essence of things. Cognitive activity should lead to proximity between these two aspects of reality (sensory and ideal) by means of a creative process.

Taking this assumption into account, the cognitive process, in Steiner's view, involves the need to work jointly with art and science. With regard to education, Steiner's proposal (1980; 1996c; 1996b; 2003; 2009; 2013; 2014; 2015) is one of integral educations that involve the body (wanting), the soul (feeling), and the spirit (thinking) and which aim to develop autonomy and citizenship. This form of education is a prerequisite for the development of freedom, which can be understood as the development of humanity. Each human being needs to achieve its humanity. Man is part of an evolving cycle, which involves everything around him. Nature enables the emergence of man and culture takes him further forward. Notwithstanding, it is only man himself who can achieve freedom (Schiller, 1990).

Steiner's proposal is based on Goethe and Schiller and is critical of positivism. For Goethe (1981), art enables man to rise from creature to creator without distancing himself from nature and this requires superior knowledge. Goethe emphasizes the need to see things from different angles. Each angle reveals and conceals aspects of reality. We can find the synthesis of countless aspects in art.

For Schiller (1990), man is basically dominated by two opposing impulses: the material impulse and the formal impulse. The former impulse is characterized by passion and by diversity, whilst the latter impulse is characterized by reason and by the need for rules. With these impulses acting in a unilateral manner, man is subjugated in countless ways, as in the case of the savage dominated by material impulse and passions, and as in the case of the barbarian dominated by formal impulse, the imposition of principles, and passionless norms. The synthesis between these two aspects is made possible by the play impulse, which represents integration between passion and reason, between sensitive and rational. Achieving it depends on performing creative activities. The development of humanity thus involves the relationship between these two impulses: the sensitive or material impulse and the rational or formal impulse. On the other hand, it also depends on forming new skills as consciousness evolves.

Taking into account the importance of developing the play impulse, Schiller defends that aesthetic education leads to the development of ethical freedom, established through a process. Aesthetic education enables the cultural evolution of man. Ethical freedom points to evolution of consciousness in the sense of man's morality and spontaneity, as well as highlighting the meaning of reason and wisdom in human attitudes. In this case, achieving morality does not mean blindly following a rational norm. It depends on the person's involvement with the world and knowledge of specific situations.

Steiner, based on Goethe and Schiller, sees human existence as a work of art, which encompasses a cultural heritage and a being in evolution. In his Waldorf education, he proposes education as an art, which emerges from the exchange between human beings. Art leads to the importance of meaning, beyond liking or not liking, and thought leads to experiencing the ideal connection. "Our spirit makes the combination of the blocks of thought only in accordance with their content. Therefore, when thinking we apply the principle of experience in its most rudimentary form" (Steiner, 2004a, pp. 49-50). "We should imagine two things: first, that it is *through activity* that we lead the world of ideas to manifest itself and, simultaneously, that what we actively call to existence *reports to its own laws*" (Steiner, 2004a, p. 53). Thinking enables one to reach concept, the universal aspect of thought. The field of thought is that of human consciousness itself, which is between experience and concept (Steiner, 2004a, p. 51). In this sense, education as proposed by Steiner involves knowledge and commitment to action that transforms (Stoltz, Veiga, & Romanelli, 2015). It is an education that responds to the needs of the human being and which prepares for the development of an ethical individualism (Stoltz & Weger, 2012; 2015; Veiga, 2014; 2015; Veiga & Stoltz, 2014; Stoltz & Wiehl, 2021).

### **The Process of the Construction of Self-knowledge According to Piaget**

The process of the construction of one's self-knowledge through others is now discussed taking Piaget as a reference (Piaget, 1977; 1974a; 1974b; 1981b; 1983). Piaget did not specifically discuss the process of the construction of self. In this segment, elements of the Piagetian theory are presented that may contribute to the understanding thereof.

We start our discussion with the work: *The equilibration of cognitive structures* (Piaget, 1975) in which Piaget presents the dialectical synthesis of the process of the development of the subject's knowledge. The relation between results achieved by the movement that starts with the observables pertaining to the object and goes on to the observables pertaining to the subject corresponds to the grasp of consciousness, while the movement that is processed between the coordinations of the subject's actions (operations) towards the coordinations between the objects themselves corresponds to causal explanation. The system is in equilibrium if causal explanation is in agreement with the movement that starts with the observables pertaining to the object and goes on to the towards observables pertaining to the subject. Otherwise, the contradictions between facts and their conceptualization need to be reviewed in the sense of achieving a new re-equilibration. This dialectical synthesis could represent the process of the construction of self through interaction with the other.

The works *La prise de conscience* and *R áussir et comprendre* are related to the new model of equilibration proposed by Piaget in 1975 (Stoltz, 2008; 2018). They deal with the equilibration of the observables upon action itself and upon the object, distinguishing in relation to these the characters that refer to the content (based on empirical abstraction) and those that the subject introduces as forms of a subject's coordinated actions. They then deal with the equilibrium of the inferential coordinations constructed by the subject through its own actions and those coordinations attributed to objects during the course of causal explanation trials. Here equilibration between

observables and coordinations can be seen. The relation between action and conceptualization established in *La prise de conscience* (Piaget, 1974a) reveals the need for a reconstruction of practical action at the conceptual level. *Réussir et comprendre* (Piaget, 1974b) establishes analogies and differences between knowing how to do and understanding, characteristic of comprehension. These works could be used to explain the dynamics of the interactive process between the subject and the other. The comprehension of difference first starts on the level of interactive action and then, through reflection, goes beyond it, in the sense of comprehension.

The grasp of consciousness involves the problem of cognitive functioning starting with the actions of the subject and moving towards the construction of novelties. The work *Le possible et le nécessaire: l'évolution des possibles chez l'enfant* (Piaget, 1981b) deals with the production of novelties as centred on the formation of that which is possible. The possible is not an observable, but rather a product of a construction of the subject in interaction with the properties of the object, giving them interpretations of what they are due to the activities of the subject that open the way to increasingly numerous new possibilities and from which increasingly rich interpretations arise. On the one hand, schemas of assimilation are nourished, regardless of their content. On the other, there are the demands or problems of accommodation, which lead to procedures and to possible or compelled changes of the forms themselves. Both possibility in general and the virtual field of possibilities constitute a permanent source of re-equilibrations that are in turn constructive and compensatory. Every possibility and every procedural schema result in presentative schemas and, finally, in structures. Structural generalizations themselves result in procedures. It can be inferred that the dialectical circle, in the work of Piaget, between possible and necessary establishes differentiated levels of consciousness of the construction of the subject through the other. New possibilities of self-understanding are linked, initially, to interactions with different others and these new possibilities, in turn, lead to necessary constructions, which will be used for new interpretations and significations of reality.

In the work *Le possible et le nécessaire: l'évolution du nécessaire chez l'enfant* (Piaget, 1983) Piaget analyses the contribution of the necessary in cognitive development. That which is necessary constitutes integration, in the same way that the possible expresses the richness of differentiation. Both evolutions are mutually related. Without necessities, thought continually contradicts itself. Similarities give place to assimilations and differences give place to accommodations. Necessity consists in self-organization and not in a real observable. It results from systems of compositions and implies dynamics of need processes without reducing itself to states. There are necessities relative to functional stages and others relative to their structural strength. The possible and the necessary are a product of the subject's activities. The genesis of operations must be sought in their union. To summarize, one of the three main sources of cognitive structure equilibration is that of interactions between differentiations and integrations and hence the interdependence of possibilities and necessary connections. The possible constitutes the source of openings and the necessary constitutes the source of closures. The constant alternation between closures and new openings constitutes one of the main characters of the combined process. In summary, the possible and the necessary are relative to the subject and not given in the object. The real encompasses the subject, as its organism is a physical object and a centre of continuing material actions, sources of knowledge. In turn, the subject encompasses the real through the possible and the necessary, due to the actions that it can accomplish and the compositions that produce the necessary.

A work that is particularly interesting for our study is *The Moral Judgement of the Child* (Piaget, 1977). This book discusses the development of morality, starting at anomy, going through heteronomy towards autonomy, which is never complete. What is important in this work for our study is cooperative interaction or

co-operation as an essential factor for the development of moral and intellectual autonomy. When the subject has the opportunity to experience reciprocity in argumentation, in participation with the other or co-operating, it is provided with a propitious context for the development of both intellectual and moral autonomy.

### **Grasp of Consciousness, the Possible, and the Necessary in Creative Activity**

Piaget considers the dialectics between conservation and transformation in the construction of the subject (Stoltz, 2013; 2018; Stoltz et al, 2015). It can be said that the process of identity construction is developed throughout the subject's entire life and is related to the grasps of consciousness that the subject achieves about different dimensions of its existence. These grasps of consciousness can be understood as involving an opening to new possibilities, true creations arising from the knowledge of differentiations and new integrations undertaken by the subject. By acting upon objects (physical and social) the subject gets to know itself and, in the same way, the objects only become known owing to the actions carried out upon them. There is, therefore, a circular relation between the subject and the objects in the construction of self.

This study proposes the possibility of grasping consciousness of aspects of one's existence by exercising creative activity and by questionings raised by performing the activity. The presupposition is that the subject expresses in a significant creative activity much more than it is conscious of. Social interaction must lead the subject to reflect on the relation between the different elements present in its work and its sense in the production of a given moment of its existence. This study is based on the theoretical principle that the grasp of consciousness involves the movements of externalization, or physical and causal, and the movements of internalization, or logico-mathematical, that are correlated in producing the grasp of consciousness regarding an action. Verbal interaction must occur regarding the way in which a given aspect expressed creatively has to do with the existence of the subject. In this case, coordination between the means used and the results obtained allows a constant exchange between two reciprocal processes, but in opposite directions: from the periphery to the central regions of the object and from the periphery to the central regions of the action. With regard to the construction of self, one leads to grasp of consciousness and the other leads to production of physical explanations, which are therefore causal to the subject object and its transformations. All progress in one field leads sooner or later to progress in another field. They are interdependent processes and, in this sense, absolutely necessary for the development of knowledge and also for self-knowledge. Creative activity is especially propitious to the interrelation between these two domains because it represents the subject's knowledge in a spontaneous and unique way. The fact of having been represented does not mean that the subject is conscious of all the elements contained in its creative representation. This is the reason why verbal interaction becomes important.

According to Piaget (1974a; 1974b) there are degrees of consciousness that result from different levels of integration. The mechanism of the grasping of consciousness appears as a process of conceptualization, reconstructing, and then surpassing, on the level of semiotization and representation, that which was obtained in the action schemas. Under this perspective there is no difference in nature between the grasping of consciousness of the action itself and the grasping of consciousness of the schemas external to the subject. Both lead to a gradual elaboration of notions based on one piece of data, whether this data consists of material aspects of the action performed by the subject (logico-mathematical domain) or of actions taking place between the physical and social objects (physical and causal domain). We can therefore say that creative activity shows itself to be a privileged means for stimulating the grasp of consciousness of the action and the grasp of consciousness of the object, especially when this is the subject itself. Both in the case of action and also in its conceptualization, the forming

mechanism is both retrospective, elaborating its elements from previous sources, and also constructive, creating new links.

According to Piaget (1974b), grasp of consciousness is the passage from action to its representation and always involves a relevant reconstitution of conceptualization. That which is observable about the creative object clarifies that which is observable about the subject, in the form of a grasp of consciousness of particular actions, while the coordination of these as a whole leads to the inferential coordinations that clarify, in turn, the causal coordinations linking the objects. It is a matter of isomorphism between causality and implication in the grasp of consciousness of self and this isomorphism uses the movement between conservation and transformation. The premise adopted is through creative activity and verbal interaction producing questionings and reflection about this activity, it is possible to perceive the process of grasp of consciousness.

The first level described by Piaget (1974a) is that of practical action. Action constitutes an autonomous knowledge (*savoir faire*). At the elementary levels there is a delay of conceptualization in relation to the action. At a second level there is the analysis of the means used in directing the general coordinations. At this level there is the quick and systematic use of mediators. There are also constant exchanges between knowledge (*savoir faire*) and automatic regulations and the inferences of conceptualization. At the third level there is a complete and progressive inversion of the relations between conceptualization and action. Conceptualization provides action with the possibility of practice based on theory (Stoltz, 2018).

### Material and Methods

This is a phenomenological qualitative study (Creswell, 2014). It discusses the possibility of becoming conscious of certain aspects of one's own existence through creative activity. The study context involves people of disadvantaged socio-economic status. Our analysis was performed on 10 adult subjects of both sexes, aged between 32 and 54, living in a poor community in Curitiba, Brazil. Through close contact with the leader of the community's neighborhood association, the development of a series of creative process sessions with adults was proposed. 10 adults came forward voluntarily. Each one of the analysed subjects took part in an initial interview, five sessions involving creative activity, interviews after the sessions, and a final interview. Based on what was significant for them, the subjects planned the creative process sessions in their entirety. Different materials were available at the sessions: dyes for textiles, diverse papers and magazines, scrap metal, pencils, colouring pencils, wax crayons, glue, wood and tools for working with wood, textiles, modelling clay. The participants could use the material freely for creative representation (it could not be a copy of something they had already made) about: *What is really important and meaningful in my life*. Activities could be undertaken individually or in groups. During the initial and final interviews, as well as during the interviews that followed the creative process sessions, the subjects' needs, consciousness about their existential situation, and consciousness of the context in which they live were investigated. Interpretative Phenomenological Analysis was performed (Creswell, 2014). The qualitative data from each subject in particular and from the group as a whole were analysed. The interview transcriptions were read several times in order to obtain an overall feeling about them. The interviews were included on a descriptive spreadsheet differentiating between three moments in time: before, during, and after the creative process sessions. First, a list was drawn up with significant aspects of the creative process, participants' needs during the process, and their consciousness experience during the three moments of the study (before, during, and after the creative process sessions). These aspects were then aggregated into categories. The analysis looked for regularities in significations in the three moments of the study and resulted in the

establishment of categories indicative of the relationship between the creative process, the needs, and the consciousness of the participant. The results were incorporated into a discussion on creative activity and consciousness based on Piaget and Steiner. The findings were validated with the participants. The originality of this study consists of its analysis and discussion based on Piaget and Rudolf Steiner.

## Results

The subjects of the study opted for four individual creation sessions and one collective creation session. The themes chosen for the creative process exercise were entirely the responsibility of the subjects. Each of the creative process sessions lasted around three hours, as decided by the participants. Initially the adults showed extreme difficulty in creating anything significant. Slowly, as the sessions evolved, greater courage in creating was observed.

In the initial interviews consciousness of self and context could be seen to be related to the subjects' necessities and to their interactive activity with the physical and social environment. This activity originates from necessities and by being performed it can lead to new necessities.

During the creative process sessions, the post-session interviews and the final interview, the relation between creative process and consciousness of self and context appears more clearly. This relationship appears in different forms. Consciousness of self and of the context that surrounds the subject is based on the subject's necessities and its interactive activity with the physical and social environment, as in the following examples (f = female; m = male):

E(f) ... we're poor, aren't we? (...) we're ashamed to talk to other people. (...) Ah, when I lived in a slum, (...) Couldn't tell anyone I lived in a slum, could I? If I did I wouldn't get a job (...) If someone knew that we live in a slum, we'd be, er, rejected by them. So we feel, like, you know, like someone virtually hidden, without deserving this, er, even without being in debt, without killing anybody, even so you have to be hidden ... (Initial interview)

Is there any relationship between this chair you've made and your life? B(f): -Er ... I think there is, you see, because when I was at home, in my mother's home, when I was a child, we didn't even have a small chair like this, what we had was a bench, you know. But we always thought like this, you know, what if we had a chair, you know ... (Third session)

The creative process appears to contribute to increasing the consciousness of necessities, abilities, and potentialities, so as to have a more efficient perception of the reality of the subjects and the people around them. There is a reciprocal relationship between the subjects' consciousness of self and their consciousness in relation to the people around them. Below are some examples.

J(f): Er, I think, it's like this, that the people are fine, er, like, happy, glad (...) I think they're all happy. (...) I think I'm sad because my husband is unwell, you know, (...) and we feel like this, you know, sad. Really sad. (J(f) can be seen to be holding back her tears.) (First session)

-Is there any relation between what you have made (a cross with a heart at the intersection of the bar and post) and your life? C(m): -It's got to do with our life because Jesus carried a cross, died on it, and through his death Christ became a reason for holiness, and no longer a reason for scandal as was the case before. And we're also always carrying the cross. This difficulty we have (in doing things) it too is a cross we bear. Our financial situation is a cross we bear. The struggle we live through in order to do good and avoid evil is a cross we bear. (First session)

E(f): -I discovered, er, that through drawing... like this, we can make something, er, we can do something, er, do ... I don't know, er, do something creative, er, of own. (...) Through this here, we can make even more things, can't we? (...) The fact is that we can't even have a job, can we, (her husband does not allow her to have a job) we can only work at home. (First session)

-Did you discover anything while you were doing this activity? F(f): We thought that we wouldn't be able to make anything, you know, but if we try I think we can make some little thing, can't we? (...) I thought I wouldn't be able to make anything. (First session)

C(m): -... difficulty in having initiative, in doing things ... There are times I even feel ashamed of myself. Ashamed of myself. (...) I don't think so much about changing (...) my financial... situation (...) but it's what's inside me that I want to change. (Third session)

There are signs during the creative process sessions and post-session interviews that the creative process is governed by the subject's necessities and that as the process unfolds and during the verbal interaction about the work that has been created, it leads to new possibilities and necessities. Some examples are presented below.

E(f): -(through it we are) discovering something, discovering ourselves, aren't we? (...) We have never done it before, we come here and do it, so we are discovering ourselves, aren't we? (...) Discovering that thing that we don't know we have. (Fourth session)

C(m): -During the play, we learned that we should act the way we did, questioning, asking, doubting, being impertinent, er, so the person (politician) has to take their mask off. (Fifth session-collective creation)

H(m): -A demonstration of the way we have to organize ourselves, isn't it? (...) The politicians have used us a lot, er, and they still are using us, aren't they? But we, the poor, we get used more than the people from outside, the rich. They're always coming to our neighbourhood to use us some more. (Fifth session-collective creation)

G(f): We should learn to have the courage to talk with these people or to demand what we need, er, and not let ourselves be deceived by them (...) We should always have a new idea, er, to learn from each other, er, and gain courage, because on our own we're nothing, we need to act as a group, don't we? (Fifth session-collective creation)

The above examples suggest that the way the creative work took place, individually or in group, is directly related to the course taken by the grasping of the subject's consciousness, the potential of individual action if the creative process is performed individually, or the potential of the people together if the process is carried out by the group. The way the subject's consciousness manifests itself clearly differs in the two sessions presented. As such, we have elements to suppose that the creative process, whether conducted individually or in a group, is a powerful means of constructing the person or the group.

### Discussion

The results are remarkably close to Steiner's proposition regarding the process of the evolution of human consciousness. There is a slow and gradual evolution of the consciousness of human possibilities arising from the significant creative activity and from the questioning regarding the relationship between what each person made in the activity and their life. This proposition could become a regular practice within the dynamics of Waldorf Education, given that it is closely related to its fundamental objective: the development of freedom based on ethical individualism. This freedom is not available in advance. It is the result of a slow and gradual increase in the consciousness of human possibilities arising through thinking and observation about specific aspects of individual existence. The participants' utterances triggered by the creative activities indicate integrative syntheses between passion and reason, culminating in consciousness processes that require the action of the knower. Knowledge changing the knower and morality intrinsic to the process can be seen in the creative activities described. During follow-up on the participants of the study six months after the creative sessions, the taking of attitudes was observed, especially in some of the participants, regarding life itself and relating to their needs materialized in their creations and verbalized in the interviews. Such attitudes included starting personal enterprises linked to the material chosen for creative self expression, as in the case of A(m), who became a carpenter. The start of marital separation processes was also observed, as in the case of E(f) who expressed in almost all of her creations the oppression that she suffered from her husband. Others had started to seek more intensively what they really feel is missing and what they had not perceived prior to the creative activities.

Creative activity starts triggering new and previously unknown necessities in the subject. The materialization in creative activity and the grasp of consciousness, especially when the participants of the study were asked to reflect upon their creative action, begin to show evidence of their relation with the process of humanization of each person, as proposed by Steiner. This contains, succinctly, sensations and feelings related to each participant's process of life, but this is not all. There is evidence of an integrative movement observed not only in the works created in each session, but also in what each participant expressed when relating what they created to their life. From the study it can be seen that, very often, it is only with effect from this moment that the creator fully identifies with their work and perceives it as a part of their existence.

The fact that all knowledge changes the knower can also be observed in the way in which consciousness of self and consciousness of the other people surrounding the study participants are related. As the understanding of self progresses, so does the understanding of the possibilities of the other persons with whom the subject interacts. This presents signs of the proximity between each person's increased consciousness and a consciousness of the universal human being. On the other hand, it is possible to see how dedication to an activity without a questioning reflection regarding it distances man both from the consciousness of his existential process and also from the development of human possibilities. It is not without purpose that Goethe, Schiller, and Steiner, consequently, presented the central proposal of education as art in Waldorf Education. The need for creation is present in this pedagogy both in the view of art in education, and also in the defence of an education for art and through art.

In opposition to education as a promoter of savagery or barbarity, education that combines feeling and thinking in meaningful creative activity, as well as observation and reflection on this process, leads to the individual's unexpected encounter with himself and, at the same time, with humanity. Creative activity, triggering experienced thinking, modifies the subject who, in turn, feels ethically committed to humanity, adopting a system of values that is not external to him, but rather the result of his involvement with reality.

In Steiner's view (2004a), science and art represent two movements that are complementary and absolutely necessary in human evolution. The participants of the study have limited access to scientific knowledge. Knowledge of reality implies access to science, which "unveils in nature the laws that govern it; art no less so, but art also implants them in the raw material" (Steiner, 2004a, p. 112). It can be seen that the gap left by the impossibility of accessing scientific knowledge restricts development in regard to one of the premises of Waldorf Education, according to Kiersch (2006), which is frequently neglected even in Waldorf schools: the consciousness and commitment to social issues and contemporary policies.

In what way are the results indicated related to Piagetian theory? Piaget (1981a) considers the origin of creativity to be a mystery, and is interested in the process of its evolution in parallel to cognitive development. The creation of novelties is related to that which is possible. Piaget stated that the creative physicist is successful when he retains the creative curiosity that is characteristic of children, before being blocked by the adult world. Among the subjects analysed, the presence of a context can be observed that prevents the development of the subject's creative and intellectual potential. What can be seen is dedication to the performance of mechanical activities, involving little reflection. According to Piaget (1965a) two barriers are raised against the subject in the development of autonomy, one is individual and the other is social: egocentrism and sociocentrism. Egocentrism represents the inability to consider the position of the other as divergent to one's own. Sociocentrism is expressed by the prevalence of a rigid system of ideas, which obstructs disagreement. An authoritarian and heteronomous

relationship, as well as unilateral respect, is characteristic of sociocentric contexts. The democratic relationship of cooperation presupposes reciprocal respect and a relationship of equality (Piaget, 1932/1977). This study found that these participants, impelled by the satisfaction of basic needs, devote themselves to repetitive activities with a reduced presence of situations that involve cooperation. This situation was observed through the subjects' extreme difficulty in creating and unwillingness work as a group. Their everyday activities are more involved with knowing how to do and have only a reduced level of the reflection that would lead to comprehension. The possibility of participating in activities that requested the subject to do something creatively, as well as the intervention by the researcher leading to a reflection about the relationship between what they created and their lives seems to be related to an increase in the consciousness of the possibilities of their existence which in turn is linked to new integrations.

The general levels of the evolution of grasp of consciousness that precede the evolution from knowing how to do towards comprehending (practical action, action, and comprehension on the same level, and comprehension guiding action) were observed during the activity with the adults and lead us to think that the evolutionary sequence of the process begins again at each new analysis of the participants' creative actions. In this way the opening towards new possibilities can be observed, as well as the necessary integrations being favoured in the processes of grasping consciousness of self impelled by creative activities. The possible and the necessary are always relative to the activity of a subject and are not pre-formed in that which is real. At the higher levels of the grasping of consciousness, that which is real is subordinated to the world of possibilities. There is no absolute beginning in relation to the genesis of possibilities, nor does one reach the end in cognitive development. In this study, creation was requested based on the participants' needs and on what was meaningful to them. Through reflection about the subject's creative process, its meanings, and senses, unleashed above all by questioning verbal interaction after the session, it was possible to observe consciousness not only of what was represented in the subject's creation, but also consciousness of new possibilities of being, a result of differentiations and new integrations.

Piagetian theory offers an explanatory theoretical framework for understanding the process of self-construction. The subject only knows itself to the extent that it exercises its activity over the object (physical and social). This action allows the parallel construction of the object and of self (Stoltz, 2018). All progress with this knowledge depends primarily on grasping consciousness of the actions exercised over the object.

### **Conclusion**

The participation of adults in sessions of creative process, as well as the questions posed after this activity, asking for the relationships between what they created and their life, was evidenced as practices favourable to increasing the grasping of consciousness of self and of the process of developing an ethical individuality. It can be seen that, during creation, a large part of the relationships between what is represented and the life of the participant remains unconscious. The questioning of these relationships can lead the subject to reflection and increased consciousness of self. In this reflection, the participant uses the dialectic movement of subject-object and object-subject. The subject itself considers itself as an object materialized in the creation and, as a subject, it considers itself as the reflective self that distances itself from its work. It was possible to perceive the levels of development of the grasping of consciousness proposed by Piaget happening in each session: a consciousness limited to knowing how to do; this knowing how to do alternating itself with understanding and, on a third level, comprehension beyond knowing how to initiate the action. In relation to Steiner, emphasis is given to the ethical

commitment of the one who knows. All knowledge changes the knower and it is in this sense that art and science should become a part of the educative process aimed at man's freedom, or his commitment to his evolutive process, which is linked to the evolutive process of humanity. Education that combines science and art allows the reconnection of man to the universal whole through thinking and feeling (Stoltz, Weger, & Veiga, 2017; Stoltz & Wiehl, 2019a; 2019b; 2021).

Based on the study, two contributions appear to be essential: the stimulation of the capacity of spontaneous creation culminating in the production of a new and meaningful whole for the subject; and the verbal interaction revisiting what was done based on reflection about what the subjects created and their own lives. The movement of the grasping of consciousness can be seen as evolving from knowing how to do something towards comprehension and leading to new possibilities of being. The constant creation of self is related to reflection about action and this, in turn, establishes itself in the dialectic relationship between differentiations and new integrations, between possibilities and necessities, between transformation and conservation of self.

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