

LUDWIK FLECK AND THE PRODUCTION OF KNOWLEDGE ABOUT CONSCIOUSNESS

Fernanda Cabral Schweitzer

Mariana Cabral Schweitzer

RESUME: This article aims to present the epistemology of Ludwik Fleck, discuss thought styles and collectives in the production of knowledge, and to relate these with the consciousness studies, particularly those from Conscientiology. Including the parastyle in the analysis is proposed when considering the consciential paradigm, along with the thought paracollective and its approximation with conscientiological concepts.

Keywords: Ludwik Fleck, Scientific paradigms, Conscientiology.

INTRODUCTION

The scientific model constitutes the schemes of dominant explanations in industrialized societies, it is those considered more plausible and intellectually acceptable, but is by no means limited to them (MINAYO, 2004). Since science has failed to produce sufficient truths for an accelerating world, which continually lacks answers, and as absolute truths do not exist, gaps have been created in resolving problems, and crises have arisen in the contemporary world in relation to the production of knowledge (PIRES, 2005).

Thus, scientific evolution can occur in all areas of study, and in the case of health, for example, this maturation has been implemented through changes in the thinking and practice of care and management by professionals, influencing the quality of the assistance provided to users. However, these changes, although representing advances in care, are not, nor have they always been, easily incorporated by health professionals and users.

History gives us examples of the difficulty of assimilating changes into healthcare practices. It took more than 100 years for the findings on how to prevent scurvy on the high seas to be deployed as a health promotion measure. In 1601, the English captain James Lancaster discovered that adding three spoons of lemon juice to the sailor's diet completely removed the chance of getting sick from the disease. However, it was only in 1795 that the English navy adopted this practice on their vessels (ROGERS, 2004).

Several factors influence whether knowledge is incorporated into healthcare practice. In the case of Vitamin C, the direct benefits were not sufficient for this knowledge to be immediately diffused and applied. In addition to the years,

new researchers and experiences were needed to eliminate scurvy from the merchant navy (ROGERS, 2004).

For the Polish physician Ludwik Fleck all scientific knowledge is mutable, historical, and collective. Fleck (1992) proposes that advances in scientific knowledge occur through changes in the Thought Style (TS) of Thought Collective (TC). He exemplifies his theory with transformations undergone in the conception of syphilis, from the 15th until the 20th century. In this period, the initially mystical conception changed, passing from an empirical and pathogenic, to a predominantly etiological conception.

The TS consists, as in any style, of a certain attitude composed by two parts: disposition for a selective feeling and for the consequently directed action. For Fleck (1992), it is a directed perception, from the intellectual objective elaboration of the perceived, which can also be accompanied by the technical and literary style of this system of knowledge.

A research group can compose a Thought Collective by bringing together researchers, students, and technical support staff to collectively think about the production and regulation of a Thought Style. The TS is a way of seeing, understanding and conceiving from a given bio-psycho-social context (CUTOLO, 2001).

For Fleck (1992), a well-organized collective is the bearer of knowledge that far exceeds the capacity of any individual, since the social structure favors the organized effort in the division of tasks, collaboration, reciprocal exchange of ideas, controversy, etc. As a result, the TS almost always imposes a compulsory force on the thinking of the individual linked to a collective, since they are seldom, or almost never, aware of the prevailing TS (Fleck, 1992, p. 41).

In this sense, identifying how the production of knowledge can collaborate in the elaboration of strategies to study-investigate-research, even when the object is consciousness.

Conscientiology, a neuroscience proposed by Vieira (2010), qualifies consciousness as the integral personality, intelligent principle, ego, self or personality beyond the limits of the human person, that is, including parapsychic processes or extrasensorial perceptions that transcend the human senses. This neuroscience admits the existence of other bodies or vehicles of manifestation of the consciousness, beyond the physical body; researching its multidimensional manifestation, that is, the several dimensions beyond the physical dimension; and the multiexistential condition of the consciousness, encompassing the period prior to rebirth in the current human life until experiences after the discarding of the human body or biological death (VIEIRA, 2010). To study the various forms of manifestation of the consciousness allows one to understand its consequences and evolutionary needs. For methodological and epistemological reasons, Conscientiology starts from the disbelief principle, thus expressed: "Do not believe in anything that is

presented here. Experiment. Have your own personal experiences.” It, therefore, implies the study of personal experiences.

This article aims to present the epistemology of Ludwik Fleck, to discuss the thought collectives and styles in the production of knowledge, and its relationship with studies of consciousness, particularly those developed by Conscientiology.

THE EPISTEMOLOGY OF LUDWIK FLECK¹

For Fleck (1992, p. 11) “science is not a formal construction but an activity realized by research communities”. In this way, to know the researchers, their life history and remarkable experiences may help understanding the studied scientist.

Considering this proposal and contextualizing to better understand the scientific propositions of Ludwik Fleck, the following table depicts some important moments in his life trajectory.

| YEAR | HISTORY OF LUDWIK FLECK |
|-----------|---|
| 1896 | Born in Lemberg, Poland (currently Lviv, Ukraine). |
| 1921 | Completed his Ph.D. in Medicine and, at the age of 25, was invited to assist Professor Rudolph Weigl with the Biology Chair at Lemberg College. |
| 1922-1939 | Worked as a researcher and manager of national and private laboratories, contributing greatly to microbiology and immunology research. In this period, he alternated his schedules with afternoon readings on philosophy, sociology and the history of science, and produced about 40 scientific Medical works. In 1935, he published his book <i>Entstehung und Entwicklung einer wissenschaftlichen Tatsache</i> (Genesis and Development of a Scientific Fact) where he described his epistemological foundations. |
| 1941-1944 | Lemberg is invaded by Nazi Germany and in 1942 Ludwick Fleck is arrested, along with his Family, and becomes a prisoner of war, being forced to work in laboratories precariously installed in concentration camps. |
| 1945-1961 | After surviving World War II, along with his wife and son, Fleck is appointed as Director of the Institute of Microbiology of the School of Medicine of Maria Skłodowska-Curie University of Lublin (Lemberg belonged to Ukraine after the war) and continues his research on immunology. From that time, Fleck traveled around the world participating in congresses and published a total of 87 works in different countries (Poland, France, England, United States, Switzerland and Brazil) before passing away in 1961 in Ness Ziona, Israel, due to a heart attack. |

Table 01: Important periods in the life of Ludwik Fleck
(LOWY, 2004, CUTOLO, 2001, FLECK, 1992)

¹ This material has already been presented in: SCHVEITZER, M.C. Thought Styles in Nursing: an analysis of the scientific production of the North, Northeast and Central-Western Regions of Brazil [dissertation]. Florianópolis: Federal University of Santa Catarina; 2010.

Fleck's historical and epistemological writings remained virtually unknown until 1962, when his work *Genesis and Development of a Scientific Fact* was quoted by Thomas Kuhn in the preface of *The Structure of Scientific Revolutions* (LOWY, 1988).

In 1979 the first English translation of *Genesis and Development of a Scientific Fact* was published, translated by Fred Bradley and Thaddeys J. Trenn, preface by Thomas Kuhn and published by the University of Chicago Press.

According to Trenn, the decision to produce a version in English was due to the relevance of Fleck to the research done at that time in sociology, history and philosophy of science (FLECK, 1992).

In 1980, Fleck's main work was reissued by Lothar Schäfer and Thomas Schnelle, in German, sponsored by Suhrkamp Verlag, publishing house of Frankfurt, and the Volkswagen Foundation. These authors agreed when describing Fleck's thoughts as influenced by the Austro-Hungarian Empire, which valued autonomy, freedom, and philosophy (SCHÄEFER & SCHNELLE, 1986). And especially from the Polish School of Philosophy of Medicine, which developed themes later retaken by Fleck, related to the impossibility of a neutral observation, free of theoretical presuppositions; the perception of facts in the light of pre-existing knowledge and concepts; and the theoretical reflection about science in the practice of doctors and researchers (LOWY, 1994).

Already translated to other languages, in 2010 the first translation of the book into Portuguese was launched, done directly from German by Georg Otte and Mariana Camilo de Oliveira (FLECK, 2010). In an interview, the translators point out that Fleck's writings were precisely antagonistic to the neo-positivist intellectual production of the so-called Vienna Circle²: "It was certainly brave of him to have opposed the Circle, which had a great weight not only in the Empire, but also in Germany and in the scientific community as a whole" (JUNGHANS, 2011, p. 1155).

Still, Fleck's contribution to epistemology is little known, possibly due to its Jewish-Polish origin, but has been rescued by Dr. Ilana Lowy of the National Center for Health Research in France. This author relates Fleck's thoughts in their historical-social context: war, liberation, affirmation of Poland as a Catholic country in relation to the Jews, and principally, because of his medical origins linked to the Polish School of the Philosophy of Medicine (LOWY, 2004).

Fleck's ambitious goal was to develop a comparative epistemology, such as "the science of science" which could explain how modern and contemporary sciences work, that is, whether they make part of and relate to each other, and how this relation cannot be separated from the culture and the society in which they are inserted (LOWY, 2004).

² Vienna Circle was a neopositivist movement of philosophers and scientists that reunited regularly in the University of Vienna. Although the public period was considered from 1928 to 1934, its beginning can be considered since 1907, when the first meetings occurred.

Nowadays Fleck is recognized as the pioneer of sociologically oriented constructivism, being the most famous of Polish philosopher-physicians (LOWY, 2004). Fleck's ideas (1992) explain the process and production of knowledge from some of the main concepts, described in Table 02, and from the dialectical interaction between subject-object, in which the collective subject, social and historical, produces knowledge from its reality.

| CONCEPT | DESCRIPTION |
|-----------------------------|--|
| Thought Collective | Science is something done cooperatively, and can be characterized by a group of researchers and their Thought Style. |
| Thought Style | A way of seeing, understanding and conceiving a body of knowledge and its practices from a bio-psycho-socio-cultural context. |
| Change in the Thought Style | The fundamental process through which the progress of knowledge occurs, divided into three steps 1) establishment of the new thought style, 2) extension – formation of concepts, 3) transformation – construction of the scientific fact. |
| Scientific fact | Evolutionary-historical theory of knowledge. |
| Esoteric circle | Knowledge producers or scientists. |
| Exoteric circle | Source for the production of knowledge and consumers of the product. |
| Thought Coercion | A way to regulate a Thought Style. |
| Historicity of knowledge | Admits an interactionist model, between subject and object, of knowledge production and evidences the dialectical conception of truth. |
| Interdisciplinarity | Different collectives and styles of thought can interact in frontier zones – transitional spaces, for the construction of knowledge. |
| Harmony of Illusions | Adequacy of new knowledge to that previously established, aiming to maintain a Thought Style. |
| Nuances | The intermediate view of the Collective when the coexistence of different Thought Styles occurs. |

Table 2: Description of the concepts proposed by Ludwik Fleck (LOWY, 2004; CUTOLO, 2001; FLECK, 1992).

For Fleck (1992), knowledge is a social activity par excellence and cannot be understood as an individual act, it is jointly considered and composes the Thought Style of a Collective. The Styles, on their behalf, condition the knowledge of different Thought Collectives and are established by esoteric circles, formed by groups of scientists, interacting with exoteric circles, the source community which produces knowledge and consumes it.

This author also discusses the importance of the density of interactions of modern science to comprehend the stability and universality of occidental science.

This density permits the homogenization of ideas and practices, offering strong resistance to anything contradictory to it, and thus creates a harmony of illusions. This harmony firstly tries to adapt (coerce) new knowledge to a scientific fact already accepted by the collective, so that it will then be efficiently neutralized by this collective (LOWY, 2004).

Recently the representativeness of these concepts has been finding support in the healthcare area, with the aim to discuss and understand factors that can influence the praxis of a nursing curricular stage (BACKES, 2000), or the medical curriculum (CUTOLO, 2001) or the scientific production of a public health department (DA ROS, 2000). The researchers cited above were able to identify various Thought Styles in different Collectives, which helped the researchers to better understand changes that have occurred in the evolution of knowledge production.

PRODUCTION OF KNOWLEDGE

Generating or creating (BARBOSA, 2000) knowledge is the “function or act of the psychic life that has the effect of making an object be present to the senses or the intelligence” (JAPIASSÚ, 1996). For Fleck (1992), knowledge is perceived as the human capability to discuss and analyze, in the collective, the relationships of human beings, with themselves and with the environment in which they live, in theory and in practice, and results from the human social process since the beginning of civilization. No form of knowledge is an independent entity that arises separately from the subject and its sociocultural context (CESTARI, 2003).

Science is the “set of knowledge methodically acquired, more or less systematically organized and able to be transmitted through the pedagogical process of teaching” (JAPIASSÚ, 1996, p. 43). Understood as a method to guide the study and practice of disciplines, which vary in their cyclical time periods and should not go unquestioned, but should be constantly debated, particularly regarding the difficulty of observing the human being as an inseparable being.

In the early 1950's, scientific advances influenced the production of knowledge. In this period a TS adapted to scientific knowledge was created, with an emphasis on the process in relation to the content (KUHN, 1970).

However, in addition to rigid models and norms, scientificity must be thought of as a highly abstract regulating idea that connects empirical theory and reality through a method (MINAYO & SANCHEZ, 1993).

An important branch of science, university research, grew in Latin America after World War II, with the creation of National Research, Science and Technology Councils in the 50's and 60's. This growth accelerated in two distinct moments: at the end of the 70's and at the beginning of the 90's, with the growth of postgraduate courses (CARVALHO, 1998).

Along with the increase in postgraduate courses, the growth of scientific production was observed in periodicals and specific events (CASTRILLÓN, 2004).

However, scientific production in Latin America did not cause a similar impact to what was seen in European countries and the United States (GIBBS, 1995).

Thus, as a strategy to reach international academic standards, Research Groups and study centers were formed in Brazil in the 90's (CARVALHO, 1998). In this way, the Brazilian model to train scientists included the formation of Research Groups, undergraduate scientific research, cooperation and Post-Graduation courses (ERDMAN & LANZONI, 2008).

However, in Brazil there is an uneven growth of research groups and institutes, that develop different themes to a high level of excellence. In 2014, 35,424 research groups were registered in the Directory of Research Groups in Brazil: 15,549 in the Southeast, 7,938 in the South, 7,215 in the Northeast, 2,654 in the Midwest and 2,068 in the North (CNPq, 2016).

The geographical distribution of Research Groups depends on the location of Postgraduate courses. In addition, the country's scientific production is almost entirely generated by Postgraduate Programs, subordinate to the Coordination of the Personnel Improvement within Higher Education (CAPES in Portuguese), an organ within the Ministry of Education (KIMURA, 2010).

In addition to the geographical issue, other inequities are present in current scientific production, such as the instability in relation to the promotion of research, the infrastructure of universities, the production and socialization of scientific production at national and international levels, the formation of a critical mass acting within the academies and social environments, among others.

Participation in Research Groups allows the induction of new researchers and contributes to the formation of teachers, students and professionals in a specific area. In addition, a Research Group can be understood as a part of Thought Collective and also as one of the regulatory/guiding mechanisms of a particular Thought Style, since it is a space that allows the collective construction of knowledge while maintaining it.

In this sense, scientific production produced from research is fundamental for the maintenance of a Thought Style, because it allows the circulation of knowledge between an esoteric circle and an exoteric circle and the coercion of thought.

According to Fleck (1992), every scientific theory has a period of classicism, in which there are only situations that fit perfectly within it, and another of complications, where exceptions begin to appear, and in the end the exceptions outweigh the regular cases. At this moment the breakup of the harmony of illusions occurs and a new Style is established in the Thought Collective.

In addition to the university system, independent institutions seek to build and consolidate interdisciplinary bridges, such as centers for higher or advanced studies. These cherish autonomy and are privileged places for the free intellectual exercise and the experimentation of new cognitive dynamics (OLIVEIRA, 2015).

These establishments host scientists and students for periods of time, with the purpose of promoting intellectual exchange between researchers from different areas (human, biological and exact) and, in this way, contribute to the advancement of knowledge and to new epistemic paths (OLIVEIRA, 2015).

For example, the *Foundation Brocher* is a private, non-profit, Swiss foundation recognized as a public interest, which promotes symposiums and workshops that bring together different researchers, students, universities, non-governmental organizations to discuss a branch of science that is new and of extreme importance: the ethical, legal, social and economic implications of the development of medicine (FONDATION BROCHER, 2016).

The Center for Advanced Studies of Conscientiology (CEAEC) was created in 1994 in Foz do Iguaçu, Brazil, to receive, host and provide an environment for teachers, students, scientists, volunteers-researchers so that they can develop research and widen their approaches in structures such as the Holotheca, Holo-cycle, Conscientiological Laboratories and the Tertularium (OLIVEIRA, 2016).

The Holotheca is a cultural environment designed for the research and exposition of artifacts of knowledge, organized into collections or “thecas”. Among the collections is the Cognotheca, which brings together works related to knowledge or Epistemology (MENDONÇA, 2016).

The works in the Cognotheca cover the conditions that precede and predispose knowledge, its assimilation and elaboration, validity and verifiability, representation and applicability, circulation, history, sociology and the psychology of knowledge (MENDONÇA, 2016).

As examples of these works, Mendonça (2016) quotes Immanuel Kant’s “Critique of Pure Reason”, which seeks to determine the principles that govern human understanding and the limits of its application, and Charles Darwin’s “Origin of Species”, which demonstrated how species develop from each other.

Darwin’s work promoted changes in the thought style of collectives at the time, first generating rebuttal and discrediting the author and later, recognizing the validity of the proposed scientific fact and its due importance for the sciences.

The existence of interdisciplinary spaces, which promote interparadigmatic dialogues between the esoteric and exoteric circles, may favor changes in the Thought Style. The different Thought Collectives and Styles can interact in frontier zones – transitional spaces – to construct knowledge (FLECK, 1992).

CONSTRUCTION OF KNOWLEDGE ABOUT CONSCIOUSNESS

Since the famous inscription “Know Thyself”, approaching self-consciousness creates discomfort and confrontations. Mendonça (2016) points out that the basis of this statement comes from an inscription on the temple of Apollo, the celebrated oracle of Delphi in Ancient Greece. In this same temple, Socrates was declared the wisest man, to what he affirmed: “I only know that I know nothing”.

The position of questioning oneself and everything is the basis of the Socratic method or maieutics, which develops philosophical inquiry through dialogue, through simple questions, in order to promote self-reflection and the search for values and truths.

As in Ancient times, these are the fundamental bases of Conscientiology: the study of self-consciousness and the principle of disbelief: “Do not believe in anything. Have your own experiences.” Waldo Vieira, the proposer of the Science conscientiology also defended: “The intimate world of the consciousness is much more interesting than the external universe” (VIEIRA, 1994, back cover).

Application of the principle of disbelief, by the consciousness itself, invites the exercise of transposing the Thought Style of Conscientiology and, also, questioning of the thought styles the consciousness identifies with. Such action aims to break the boundaries of knowledge, in the search for new leading edge relative truths, or *verpons*.

The idea of developing *verpons* is in line with Fleck’s (1992) proposal to create new terms to define new scientific concepts, which go beyond concepts previously defined by the collective. This is the dynamic process of renewing concepts in science which conscientiology applies when including multidimensionality.

In this sense, as an example of a new term, one can understand the case of the word cosmoethics or universal ethics as an updating of the Socratic concept of virtue (MENDONÇA, 2015). Through the transformation of thought styles and understanding of the various existential dimensions, one can extend the virtue of the good above everything and everyone to the cosmic ethics, well beyond human conventions.

The same reasoning can be applied to understand the change that Mendonça (2015) verifies in updating the concept of self-consciousness: as a product of self-knowledge in the line, or style, of Socratic thought, and self-consciousness as a product of multidimensional self-research in the corpus, or collective, of conscientiology.

In this process, discordance allows the advancement and evolution of knowledge through verification of truths that are always changing (BALONA, 2015). Ambivalence, mental flexibility and avoidance of the right or wrong cleavage allows a periodic review of the personal belief system and progress in self-research.

This is the challenge of studying consciousness and in self-research: to develop the interparadigmatic dialogue necessary to dismantle self-indulgence and to seek a better science so each person can change themselves in the search for inner tranquility, fraternity and cosmoethics. The construction of knowledge, in the consciential paradigm, aims the development and evolution of the researcher themselves, in the first instance, and from there, of those who contact the research and decide to use their findings.

Among the main goals of the scientist to develop the position of consciential researcher, Ribeiro (2010) proposes: the need to increase self-confidence and

simultaneously criticality in the use of self-parapsychism; to give up trying to fit a multidimensional life in the Cartesian method; to coexist with the imprecision in the construction of reliable parameters of self and hetero-observation; and to direct the priority focus of the research to oneself, before observing the others.

Vieira (2010) understood that for most people, still very involved with the postulates of conventional, Newtonian-Cartesian, physicist science, one based on electrons and matter, conscientiology would be considered a parascience or a pseudoscience. He recognized it as just a micro-minority of common society and science, because of their perspective.

However, the scientific facts presented by the neuroscience conscientiology were capable of modifying the harmony of illusions of different thought styles and collectives. In this way, it provoked a change in the thought style and the organization of an esoteric circle of volunteer-researchers to study the consciousness in accordance with the neuroscience.

Today, innumerable people approach the conscientiology thought style, mixing the principles of conscientiology with conventional science in nuanced ways, and through personal experience, develop self-research and expand self-awareness.

Each group of people that voluntarily compose the Conscientiocentric Institutions (CIs) produce and deepen the knowledge of conscientiology by gradually differentiating themselves into their own TC by bringing together researchers, students and technical support to think collectively on the production and regulation of a TS. The same happens with invisible colleges, research groups and conscientiocentric companies, organized through a consensual bond³, exercised voluntarily, different if compared to a conventional employment bond (VIEIRA, 2013).

Each group composes an esoteric circle, formed by producers of knowledge related to a CI, and at the same time, compose an exoteric circle, a source for the production and consumption of consciousness studies.

Thus, Conscientiology, as a TS, can be understood as a social-historical construction that can change according to the changes in the TC, identified from the texts published by members of the collective, such as the scientific articles, books, and entries in the Encyclopedia of Conscientiology (VIEIRA, 2013).

Currently under development, the Encyclopedia of Conscientiology has more than 500 collaborators, who have written a total of more than 3,500 entries (MENDONÇA, 2015; ICGE, 2016).

3 “The consensual bond is an application of volunteer bonds by the man or woman, in the human life, notably in the consanguineous family, in the social circle of friendships and in the works of the company or of the Conscientiocentric Institution (CI), without the conventional employment relationship.” (Vieira, 2013, p. 7104).

A person belongs, as already pointed out by Fleck (1992), to several thought collectives at the same time. However, by expanding this assertion to the multidimensional approach proposed by Conscientiology, the quantity of TSs and TCs attuned to that person is further extended due to the accumulated experience of multiple human lives, interspersed with intermissive periods.

An opportunity to identify the consciousness' TSs and TCs are the intermissive courses, offered in the intermissive period, which is the interval between human lives. According to Mota (2016, p. 21), the intermissive course is an advanced educational model, "with the purpose of clarifying the consciousness' multidimensional reality and applying tools for evolutionary acceleration, aiming at preparing the next human life". In these courses, the consciousness is invited to face their own holobiography, with the opportunity of reviewing their manifestations and concepts, and to expand their self-awareness.

Therefore, when considering extraphysical reality, one can understand intermissivists (those who have taken an intermissive course) as a thought collective with a style that includes the principle of disbelief, multidimensionality, interassistantiality and Cosmoethics.

During the current life, the previous TS can be recalled and updated by the consciousness, or it can remain latent. In a similar way, the interpersonal relationships of a collective from the past can also be revived in the present existence. The tunings promoted in the thought collective allow a lucid consciousness to assist their groups from the past, qualified as the groupkarma, evolutionary group or family.

The set of knowledge accumulated by the consciousness, life after life, is typically called the holomemory. Lucidity of the TS and TCs experienced in the past are registered in the holomemory, allowing the self-researcher to avoid unnecessary repetitions of their experiences, and to impel their evolution.

There is a concept, in Conscientiology, of the *ancestor of oneself*, that is, that the person or consciousness living today, "unconsciously repeats everything already done and surpassed in numerous previous human lives (Seriexology) through dispensable, inconvenient, and counterproductive self-mimesis before their own consciential evolution" (VIEIRA, 2013, p. 507).

Such a consciousness can be found in any line of human knowledge, including the scientific, contributing to the sacralization of theories, removing science and themselves from any renewal. The consciousness thus loses the opportunity to recycle its intimate concepts, that is, to perform groupal and *intraconsciential recycling* (recin), characterized by the brain renewal through the creation of neosynapses, allowing the acquisition of new ideas, which configure new behaviors, more evolutionarily adjusted, with possible positive impacts for all its evolutionary group, favoring the groupal recycling.

If the thought collective to which this consciousness belongs advances in ideas, from new scientific facts or verpons that develop new styles, and the consciousness excludes themselves from the group by not admitting the changes, a minidissidence occurs. The unknown, impossible, and never are units of measure of the consciousness' evolutionary level (Vieira, 1994b).

A well-known example of minidissidence was described by Vieira (1994b) as the Swedenborg Syndrome, which relates the change of a scientific approach to a religious one, as occurred with the Swedish scientist, philosopher and parapsychic, Emanuel Swedenborg, after he had certain clairvoyant experience.

The opposite of this is the person who recycles their knowledge to the point of breaking ties with their thought collective, in a greater dissidence with the evolutionary group, or maxidissidence, as is the situation reported by former catholic priest Marcelo da Luz (2011) in his book *Where Does Religion End?*

In this context, all self-research is independent and interdependent, that is, in addition to personal motivation, the participating parascientist counts on other consciousnesses – human and extraphysical beings – as staff or a work team for the sake of their process of personal maturing (BALONA, 2015). Thus, one can expand the concept of Fleck (1992) and consider a thought *paracollective* that influences the development of a *parastyle*.

In this way, an important contribution/difference from Conscientiology to Fleck's theory (1992) lies in the admission of multidimensional reality. Such a condition will define the origin of the consciousness and its collection of knowledge beyond just this life. A consciousness is a summation of, beyond the mesology and genetics, its own paramesology and paragenetics.

The conception of an idea or thought also expands, and begins to compose a thosene: a conscientiological concept for the inseparable set of thought-sentiment-energy. The practical effect is energy, imbued with thought and emotion, exchanged between consciousnesses, generating a practical influence beyond the mental sphere of ideas.

Fleck (1992, p. 49) already admitted the inseparability between thought and emotion, as to him “the concept of thought absolutely free of emotions is meaningless. There is no free state of emotion in the same way that there is no pure rationality”.

A set of personal or group thosenes composes a holothosene (holo + tho + sen + ene), which is capable of influencing a consciousness' behavior, in most cases unconsciously, just like the influence of the TS described by Fleck (1992). A doctrinal, enticing, and repressive environment creates and maintains a holothosene that castrates creativity. On the other hand, the capacity of the consciousness to perceive and mobilize their energies reduces the unwanted effects of intrusive energies (VIEIRA, 2013, p. 3616).

As a practical effect of the approximation between Fleck (1992) and Conscientiology, the expansion of concepts occurs in a multidimensional framework,

usually obtained through the inclusion of the preposition “para” and the approximation with conscientiological related concepts (Table 3).

| FLECK’S CONCEPT | MULTIDIMENSIONAL CONCEPT | APPROXIMATION WITH A CONSCIENTIOLOGICAL CONCEPT |
|-----------------------------|--|--|
| Thought collective | Thought <i>paracol</i> lective | Evolutionary group; group-karma; evolutionary family |
| Thought Style | Thought <i>parastyle</i> | Holothosene, thosene |
| Change in the thought style | Change in the thought <i>parastyle</i> | Groupal recycling, minidis-sidence, maxidissidence |
| Scientific fact | <i>Scientific Parafact</i> | Parafact; Verpon |
| Coercion of thought | <i>Paracoercion</i> of thought | Holothosenic pressure |
| Historicity of knowledge | <i>Parahistoricity</i> of knowledge | Parahistory |

Table 3: Expansion of Fleck’s concepts (1992) in a multidimensional concept.

In Conscientiology, it is proposed that a person study themselves, through practical self-experiments. “The shortest path between theory (information) and practice (experience) is a technique” (BALONA, 2015, p. 41).

Among the various techniques proposed for this end, the consciential tabula rasa technique is one that aims to eliminate, throughout an entire day, conditionings, sociocultural repressions, sacralization, superstitions, and brainwashings in the analysis of everything that surrounds the consciousness. In a didactic way, it suggests that for one day the individual considers themselves a non-terrestrial consciousness, a new arrival on this planet (VIEIRA, 1994b).

This technique represents the complexity of performing the separation of the thought style of an individual who is part of a collective in their analysis of reality. If the style is a way of seeing, understanding and conceiving a body of knowledge, the first step is to recognize which style guides the values and decisions of a person.

The techniques and experiments offered by Conscientiology can help the consciousnesses and the TCs in which they are integrated to see beyond their own TS. Such an understanding of different styles is necessary to collaborate, and also to incorporate experiences and other strategies to comprehend the evolution of knowledge and the human being itself.

In the dynamic process of scientific renovation, the proposal is to stimulate interparadigmatic dialogue and studies that approach the consciousness in different thought styles and collectives, in order to contribute to changes and impel the construction of knowledge about consciousness.

The proposal is to develop the trinomial self-research–interassistance–evolution through the recognition of the thought *parastyles* and *paracol*lectives. For this, the following is a list of tools properly explained and clarified in verbetes of the

Encyclopedia of Conscientiology (VIEIRA, 2013), which can be used to assist in this process:

01. Basic Mobilization of Energy Technique (BME);
02. Prophylactic Vibrational State (VS) Technique;
03. Conscial tabula rasa;
04. Cosmogram;
05. Conscientiogram;
06. Retrocognitions: research of the memory of past lives “with tweezers, a brush and patience” (ALEGRETTI, 2010, back cover).
07. Parasociogram;
08. Existential inversion (invexis);
09. Existential recycling (recexis);
10. Personal Energetic Task (penta);
11. Extraphysical office or clinic (offiex);
12. Technique of the Binomial Admiration-Discordance: “understanding is not the same as agreeing” (BALONA, 2015, p. 114).
13. 10 Basic Personal Values Technique (BALONA, 2015; VIEIRA, 1994b);
14. Conditioning Breakdown Technique: shock of values provoking voluntary growth crises (BALONA, 2015);
15. 5-Hour Self-reflection Technique;
16. 10 days of Isolation Technique;
17. Conscientiologic laboratory of Thosenology;
18. Conscientiologic laboratory Serenarium.

These tools can help change the *parastyle* end the TS, a fundamental process for the progress of knowledge, both in science and in the consciousness itself. For Fleck (1992), the model of knowledge production is interactionist between the subject and the object, evidencing the dialectical conception of truth. For Conscientiology this model expands and integrates multidimensionality.

FINAL CONSIDERATIONS

Science is mutable and carried out in a cooperative way through the bio-psycho-socio-cultural context. The recognition of thought styles and collectives as presented by Ludwik Fleck (1992) can contribute to the production of knowledge, especially about consciousness.

For this, spaces that promote interparadigmatic bridges and the fraternal co-existence of different thought styles and collectives are needed, facilitating a dialogue and exchange, as is the case of research groups in post-graduate programs in universities and in the centers for advanced or higher studies, such as CEAEC.

The need to know the epistemology and tendencies of different *parastyles* and TS is fundamental so the scientist understands the scenario in which he is

inserted and tendencies of maintenance or opportunities of *status quo* rupture. With greater understanding of the context, he is qualified to renew his personal belief system, through self-research, seeking ongoing evolution to qualify its own science. His self-example, consequently, may inspire others to personal and scientific renewal.

In this way, science can approach the fundamental objective of improving the living conditions of each individual, through the trinomial self-research–interassistance–evolution, and encourage the development of an increasingly fraternal and cosmoethic society.

REFERENCES

- ALEGRETTI W. *Retecognições: pesquisa da memória de vivências passadas*. Foz do Iguaçu: Associação Internacional Editares, 2010.
- BACKES, V.M.S. *Estilos de pensamento e práxis na enfermagem: a contribuição do estágio pré-profissional*. Ijuí: Ed. UNIJUÍ, 2000.
- BALONA, M. *Autocura através da reconciliação: estudo prático sobre afetividade*. Foz do Iguaçu: Associação Internacional Editares, 2015.
- BARBOSA, O. *Grande dicionário de sinônimos e antônimos*. 16ª ed. Rio de Janeiro: Ediouro, 2000.
- CARVALHO, E.C. A produção do conhecimento em enfermagem. *Revista Latino-Americana Enfermagem*, vol. 6, n.1, p. 119-122, 1998.
- CASTRILLÓN, M.C. Trends and Priorities in Nursing Research. *Revista Latino-Americana Enfermagem*, vol. 12, n.4, p. 853-8, 2004.
- CESTARI ME. Padrões de conhecimento da enfermagem e suas implicações no ensino. *Revista Gaúcha Enfermagem*, vol. 24, n.1, p. 34-32, 2003.
- CNPq. Conselho Nacional de Desenvolvimento Científico e Tecnológico. *Grupos de Pesquisa*. Disponível em: <http://lattes.cnpq.br/web/dgp/por-regiao>. Acesso em: 14 maio 2016.
- CUTOLO, L.R.A. *Estilo de pensamento em educação médica – um estudo do currículo do curso de graduação em medicina da UFSC*. Florianópolis, 2001. 227 f. Tese (Doutorado em Educação) – Centro de Ciências da Educação, Universidade Federal de Santa Catarina.
- DA ROS, M.A. *Estilos de pensamento em Saúde Pública – um estudo da produção da FSPUSP e ENSP-FIOCRUZ, entre 1948 e 1994, a partir da epistemologia de Ludwik Fleck*. Florianópolis, 2000. 207 f. Tese (Doutorado em Educação), Centro de Ciências da Educação, Universidade Federal de Santa Catarina.
- ERDMANN, A.L.; LANZONI, G.M.M. Características dos grupos de pesquisa da enfermagem brasileira certificados pelo CNPq de 2005 a 2007. *Esc Anna Nery*, vol. 12, n.2, p.316-22, 2008.
- FLECK, L. *Genesis and Development of a Scientific Fact*. Chicago: The University of Chicago Press, 1992. 203p.
- FLECK, L. *Gênese e Desenvolvimento de um Fato Científico*. Editora Fabrefactum, 2010, 205p.
- FONDATION BROCHER. *Overview of the Brocher Foundation*. Disponível em: <http://www.brocher.ch/en/brocher-foundation-in-brief/> Acesso em: 14 maio 2016.

- GIBBS, W. Lost science in the Third World. *Scientific American*, p. 92-99, 1995.
- ICGE. *Instituto Cognopolitano de Geografia e Estatística*. Acessado em 24/04/16. Disponível em: www.icge.org.br
- JAPIASSÚ, H. *Dicionário Básico de Filosofia*. 3ª ed. Rio de Janeiro: Jorge Zahar Ed., 1996.
- KIMURA, E.T. O dilema das revistas científicas brasileiras na divulgação da produção científica nacional. *Arq Bras Endocrinol Metab*. Vol. 54, n.1, 2010.
- LÖWY, I. Quantification in Science and Cognition Circa 1937: A Newly Discovered Text of Ludwik Fleck. *Cience in Context*. Vol. 2, n. 2, p. 345-355, 1988.
- LÖWY, I. Introduction: Ludwik Fleck's epistemology of medicine and biomedical sciences. *Stud. Hist. Phil. Biol. & Biomed. Sci*. Vol. 35, p. 437-445, 2004.
- LUZ, M. *Onde a religião termina?*. Foz do Iguaçu: Associação Internacional Editares, 2011.
- MINAYO, M.C.S. *O Desafio do Conhecimento: pesquisa qualitativa em saúde*. 8ª. Edição, São Paulo: HUCITEC, 2004.
- MINAYO, M.C.S.; SANCHEZ, O. Quantitativo-Qualitativo: oposição ou complementaridade? *Cad. Saúde Pública*, Vol. 9, n. 3, 1993.
- MENDONÇA, O. Cognoteca. *Holotecologia - Revista do Megacentro Cultural Holoteca*. Vol. 2, p.15-21, 2015.
- MOTA, T. *Curso Intermissivo: você se preparou para os desafios da vida humana?*. Foz do Iguaçu: Editares, 2016.
- JUNGHANS, M. Traduzindo Fleck: entrevista com Georg Otte e Mariana Camilo de Oliveira. *História, Ciências, Saúde – Manguinhos*, Rio de Janeiro, v.18, n.4, out.-dez. 2011, p.1151-1158
- OLIVEIRA, N. Altos Estudos ou Estudos Avançados. *Holotecologia Revista do Megacentro Cultural Holoteca*. Vol. 2, p. 82, 2015.
- PIRES, D.E.P. *Contexto Social II*. Disciplina do curso de graduação em enfermagem da UFSC, jul – dez, 2005, Nota de Aula.
- RIBEIRO, L. Escrever no Paradigma Consciencial. *Scriptor*, v.1.n.1, p.16-28, 2010.
- SCHÄEFER, L.; SCHNELLE, T. *Los fundamentos de la Visión Sociológica de Ludwik Fleck de la teoría de la Ciencia*. In: FLECK, Ludwik. *La génesis y el desarrollo de un hecho científico*. Alianza Editorial: Madrid, 1986. p. 9-42.
- VIEIRA, W. *O que é a Conscienciologia*. Rio de Janeiro: Instituto Internacional de Projeciologia, 1994a. 180 p.
- VIEIRA, W. *700 Experimentos da Conscienciologia*. Rio de Janeiro: Instituto Internacional de Projeciologia, 1994b. 1058 p.
- VIEIRA, W. *Os Caminhos da Consciência*. Revista Psique Ciência e Vida. 2010. Disponível em: <http://psiquecienciaevida.uol.com.br/ESPS/Edicoes/48/artigo160133-1.asp> Acessado em 19.04.2016.
- VIEIRA, W. (Org.); *Enciclopédia da Conscienciologia*. 8a ed. Digital. Versão 8.00. Foz do Iguaçu: Associação Internacional do Centro de Altos Estudos da Conscienciologia (CEAEC) & Associação Internacional Editares, 2013.

Fernanda Cabral Schweitzer is a specialist in Occupational Medicine (AMB/ANAMT); a graduate in Medicine (UFSC). A volunteer of Conscientiology since 1999, currently volunteering in the International Association for the Expansion of Conscientiology (AIEC) and in the International Association for the Conscientiological Interchange (INTERCONS). She has been a professor of Conscientiology since 2001.

Mariana Cabral Schweitzer is a Doctor in Science (USP-UCP), has a Masters in Nursing (UFSC), is a specialist in Acupuncture (CIEPH-Shandong University), a specialist in Public Health (UFSC) and graduated in Nursing (UFSC). A volunteer of the International Association of Laboratory Research of Ectoplasm and Parasurgery (ECTOLAB) since 2013. She has also been on the editorial board of the Interparadigmas Journal since 2015.

Translation: Laura Bruna Araújo.

Revision: Jeffrey Lloyd.