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Theoretical-Epistemological Perspectives of Knowledge in the Global Era: A Conceptual Proposal

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Additional information is available at the end of the chapter

Abstract

It deals with the perspectives of knowledge in the global era. It indicates as a starting point in the following question: how is it possible to represent knowledge in a theoretical-conceptual character in the global era considering the construction of knowledge in networked society, as well as the relations between knowledge of knowledge and other terminologies? It aims to investigate the main fundamentals and characteristics of knowledge in the global era, representing the multiple conceptual relations in the social, valuing, procedural, technical, and psychic context, aiming at the reflection and construction of an integrated concept on knowledge. It concludes that each typology of knowledge presents a concept, and the junction of concepts institutes a general concept about knowledge.

Keywords: knowledge, epistemology, global era, concept, network society, types of knowledge, social, evaluative, procedural, technical, psychic

1. Introduction

Knowledge is a highly studied and controversial subject in the history of mankind and science. Due to the association with several areas/fields/sectors of human and scientific knowledge, knowledge is the central point in understanding the reality of the universe in a general way.

Knowledge in the global age has been a key in explaining the course of humanity and the constitution of social means, relationships and interactions, in particular, by the new technological and linguistic perspectives available for the production and promotion of

access/circulation/use of knowledge on a world level, which deal with a plural process of cognitive and cultural miscegenation.

The so-called "information and knowledge age" brings up, on the one hand, a certain skepticism in the sense that these new forms of production and socialization of knowledge can promote new forms of social inequalities, but also brings about the emergence of a new social order that establishes a new social/global scenario based on the autonomy of subjects in what concerns the sharing of knowledge.

This chapter presents a theoretical-conceptual approach to knowledge in the global era. It indicates as a starting point in the following question: how is it possible to represent knowledge in a theoretical-conceptual character in the global era considering the construction of knowledge in networked society, as well as the relations between knowledge of knowledge and other terminologies?

It aims to investigate the main fundamentals and characteristics of knowledge in the global era, representing the multiple conceptual relations in the social, valuing, procedural, technical, and psychic context, aiming at the reflection and construction of an integrated concept on knowledge.

The chapter consists of three topics:

(a) The first deals with the perspectives of knowledge in the global era reflecting on some of the characteristics of the so-called information and knowledge age in the network society;

(b) The second deals with the conceptual relations between knowledge and other terminologies through the division into knowledge typologies of social, valuing, technical procedural, and psychic nature;

(c) The third proposes a concept for knowledge within the global era.

This chapter seeks, in general, to base the foundations to resize the understanding about knowledge and, mainly, to formulate a key concept to promote new reflections and studies.

2. Perspectives of knowledge in the global era

There is a certain consensus in science history and in the history of mankind in general that knowledge is one of the elements that most exerted and exerts impact/influence in societies, since knowledge would be the justified rationality, able to explain the various senses of reality, seeking forms of creation/innovation for human development. Therefore, knowledge constitutes as the first fundamental characteristic relation between the human being/person/individual/subject and the social reality, presenting relational variations, according to the historical context. We opt for the use of the term "subject" since it considers a concept, which occupies space/environment in frank cognitive development mediated by the languages and technologies before the perspectives of appropriation of social reality.

The period between the end of the twentieth century and the beginning of the twenty-first century brings new forms of relations between the subjects and the social reality, configuring the construction of the so-called information age, based on the foundations of a networked society.

Knowledge, as a deep concept of social reality, reaches in contemporary times, global perspectives of production, and appropriation revealing a semantic-pragmatic interdependence, since knowledge is as much a concept that promotes meaning and dynamics to the subject as it is associated with other concepts such as data, document, message, communication information, belief, ideology, culture, truth, intelligence, language, technology, among others (this discussion will be better explored in the next section).

It happens that knowledge in the global era is placed as the center of attention eminently associated with the concepts of dominion (detention and appropriation) and power. The domain presents itself under different variables. It can be established, on the one hand, as the appropriation of the social reality for grouping of contents and formation of strategies for action or, on the other hand, as imposition and supremacy establishing precepts (rules and regulations of a particular local, regional, national, continental, or planetary social group). While power has two broad general axioms: the first refers to the idea of possibility of doing something and the second to deliberate or command, through force, according to the contexts of beliefs that present themselves to the human beings involved in the relations of knowledge.

Knowledge in the global age conquers plural dynamics by virtue of the multiple possibilities of domains and powers between the subjects. It is the power that shapes the forms of construction, application, and mastery of knowledge in global reality by fostering a decentering of knowledge in the global era. According to Castells, [1],

> *Power is no longer concentrated in institutions (the State), in organizations (capitalist companies) or in symbolic mechanisms of control (media companies, churches). On the contrary, it diffuses in global networks of wealth, power, information and images, which circulate and are transmuted into a system of variable geometry and dematerialized geography. However, power does not disappear. Power still governs society; still shapes and dominates us […] The new form of power lies in the codes of information and in images of representation in which societies organize their institutions and people build their lives and decide their behavior. This power is found in the minds of people.*

Knowledge is denoted as one of the main forms of power in globalized contemporary times, since it has been the driving force, which governs the state, society, companies, churches, family, social movements, political parties, regulatory bodies, besides education, culture, health, environment, technical-scientific practices, and so on. However, this knowledge-based power government depends, above all, on beliefs, ideologies, cultures, and technological devices that subjects (in this case, institutional subjects such as state, private, or alternative organizations as the third sector and/or human subjects as persons that have knowledge reference in certain social groups) hold to establish social domains.

Thus, power, via knowledge is "[…] defined as the ability to structure the field of action of the other, to intervene in the domain of their possible actions and not directly on their will" (AGUIAR) [2]. Knowledge is rationally justified, but it can be dynamically transformed, according to the contexts and desires of subjects, overcoming the notion of peremptoriness or the impervious character of knowledge.

In addition, for power, via knowledge, to consolidate in the global era, there is a central assistance: the perspective of virtual mediation between institutional or human subjects at local, regional, national, continental, and/or global level, which determines the multi-relational character of knowledge. This virtual or cybernetic mediation is the driving force that characterizes the global character of knowledge between institutional and human subjects, considering that the goal is no longer to potentiate power by physical or energetic force but by the strategy of the human mind.

In the global era, the desideratum of relations between subjects and social reality, conceives knowledge as a storage construct in the human mind. For this, this storage is fundamentally constituted from the use and interaction by the cybernetic devices. The device as understood here echoes with great sensitivity of Foucault's speech [3] who defines it as,

> *A decidedly heterogeneous set which encompasses discourses, institutions, architectural organizations, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral, philantropic propositions. In short, the said and the not said are the elements of the device. The device is the network that can be woven between these elements.*

The device is the plural construct defined by institutions/organizations, discourses, norms/laws, scientific, philosophic, administrative, juridical, and mediatical practices and propositions that is routed through the relations between the subjects and the social reality, via cybernetic mediation, which provides the elemental fruits for the formation of a network society or a informationally globalized society.

Thus, knowledge in network society or global era is characterized by a set of pluralisms, which can be divided, namely:

(a) Relational pluralism—it involves various forms of relations between institutional or human subjects with social reality from the multiplicity of existing devices;

(b) Temporal pluralism—virtual mediations, although real, are not necessarily current, implying a diachronic tension between mediation and instantaneity in knowledge construction. The more rapid and consistent the virtual mediation between the subjects, the more possibilities are there for the construction of a temporally solid knowledge, which will establish forms of domination and power in certain social groups;

(c) Spatial pluralism—it deliberates on two general connotations: the first is about the set of cybernetic devices to dynamize the interactions between the subjects and the social reality, and the second on the intercultural relations between subjects, promoting multiculturality and cultural heterogeneity meaning that spatial pluralism redefines the formation of searches, the forms of interaction and cultural construction of the subjects;

(d) Pluralism of beliefs—it is a consequence of the first three pluralisms, since pluralistic relational, temporal, and spatial perspectives are fundamental to (re) dimensioning of beliefs of institutional and human subjects. For example, a company (institutional subject) that previously invested in a particular country, state, or municipality and obtained recognition but through the relational/temporal/spatial pluralities, begins to observe difficulties, weaknesses, and losses, it can modify its beliefs seeking new forms of investments or a

person who had a previous perception, a priori, about the culture of a certain region or nation, and through relations with subjects from this nation or connoisseurs of this nation's culture, can (re)dimension his or her beliefs about the perception he or she used to have about this culture.

To sum up, knowledge in the global age possesses a deep mark of a network society based on the decentralization of power and on a set of pluralisms that make knowledge, a determining concept for understanding the world that is constantly changing. This concept of knowledge depends on the relation with other concepts, especially, information and message to be sufficiently assimilated and diffused.

3. Fundamentals of knowledge in the global era: terminological-conceptual correlations

As mentioned in the previous section, knowledge is a concept that presents an effective theoretical-semantic interdependence with other concepts, such as data, document, message, communication information, belief, ideology, culture, truth, intelligence, language, technology, and so on. This interdependence promotes ontological, logical, historical, and pragmatic liveliness to knowledge.

The relationship between the concept of knowledge and other terms is synthesized from five typologies concerning **social**, **valuing**, **procedural**, **technical**, **and psychic** aspects, as shown in the table below (**Table 1**).

Knowledge has multiple conceptual variables and to constitute itself as such, it needs to be thought from the five typologies exposed. A priori, knowledge, in its conceptual completeness, involves the five typologies, but each typology advocates a concept, considering that there is a conceptual interdependence between the typologies. In theory, these conceptual relations do not have a linear ordering, since the social, valuing, procedural, technical, and psychic character may converge in a specific or general character and particular or simultaneous character for the construction of knowledge.

Social	Valuing	Procedural	Technical	Psychic
Environment: natural and social environments	Belief	Data	Language (natural and artifitial)	Mind
Objective reality Social daily	Ethics Moral	Message	Technologies	Thought Idea
Social relations	Ideology	Information	Document	Intelligence
Interaction Social interaction	Memory	Communication	Services and products	Conscience

Source: elaborated by the authors.

Table 1. Typologies of conceptual relations between knowledge and other terminologies.

The relational typologies of knowledge deserve a set of considerations contemplating the peculiarities and generalities.

To Zagzebski [4], firstly, knowledge is divided into two elementary fundamentals: first, it is usually called knowledge by contact, since the subject is in contact, through experience, with the portion of known reality; while the second type is called the propositional knowledge since that what the subject knows is a true proposition about the world. The five typologies are synchronized with the configuration of knowledge by contact and/or propositional knowledge, and each typology has peculiarities in the form of undertaking meanings and actions in the aspirations of contact and propositions. For example, the social typology is eminently constituted by contact but can only be fully understood by the propositional aspect. The procedural typology in turn is broadly propositional but needs the contact to elucidate the foundational aspects of the knowledge to be treated. Therefore, in this text, the emphasis is more focused on the propositional knowledge, since it is able to explain and give meaning to any phenomenon related to the construction of knowledge.

Second, the typologies carry a (pluri) contextual vision about the procedures for the construction of knowledge. The (pluri) contextualism implies in the various/plural possibilities/perceptions about how knowledge can be constructed and appropriated by the subjects. As Stine [5] states "it is an essential feature of our concept of knowledge that firmer criteria are appropriate in different contexts. Knowledge is one thing in a casual conversation, another in the classroom, another in the court, and who would say it could not be another in a philosophical discussion";

Third, **social typology** is the principle of conceptual understanding of knowledge. In the first place, all construction of knowledge takes into account natural and social aspects of the environment, so that they are the basic elements for the existence of the subjects and initial determinants for the construction and understanding of knowledge. The objective reality/social daily life is the dynamics of the experiences/practices of human processes of the environment in which subjects deal and produce knowledge. Social relations establish the basis of the social structure of the subjects enabling a process of self-organization of coexistence, affective, spiritual and cultural practices, and general construction of values. Interaction is the *sine qua non* condition for the transformation of the environment and social reality promoting perspectives for the construction of knowledge, as it is present in diverse human, natural, scientific, institutional, and spiritual activities. Interaction is the mediating act which mobilizes all the other typologies. Therefore, interaction is one of the mediating driving forces for the construction of knowledge by approaching subjects and modifying realities;

The interaction denotes the construction of a praxiological knowledge, which takes a broader and more concrete dimension of the environment and social reality. Praxiological knowledge has as its object not only the system of objective relations that the form of objectivist knowledge constructs, but also the dialectical relations between these structures and the structured dispositions in which they are updated and tend to reproduce, Bourdieu [6] points:

> […] *this knowledge supposes a rupture with the objectivist mode of knowledge, that is to say a questioning of possibility matters and, hence, of the limits of intentional and objective point of view that apprehends*

outside practices, as a finished fact, instead of constructing its generative principle, situating itself on its own movement of effectiveness.

The interaction, thought as a generator of praxiological knowledge, surpasses the idea of a superficial objectivism of absorbtion of reality and in a phenomenological way of valuing only the first experience of daily life. Interaction as a promoter of praxiological knowledge focuses on the social processes, from their origins, going through the procedures/strategies, arriving at the purposes, and culminating on new forms of (re)construction of the social reality.

Fourth, **valuing typology** entails the formation of the appropriate abstractive factors of social reality. The values of belief, ethics/moral, and ideology have a common characteristic in the construction of knowledge: the need to value the historical process of a causal, procedural, and consequential nature in an integrated and articulated way. Nietzsche [7] summarizes the historical concept of affirmed value that the characteristic of the largest period of the history of mankind, called prehistory, was to value an action according to its consequences. The act mattered as little as its origins. In the middle of the nineteenth century, the situation changed and the value ceased to be attributed to the consequences of the action to focus on its causes. This represents an important event, the product of a great refinement of judgment, the distant and unconscious effect of aristocratic values, of the belief in the "origins," the distinctive sign of a period we might call the moral period of humanity, definitely the first step toward the knowledge of oneself. So the action happens in a reverse way and replaces the search for the consequences. It is a matter of finding the origin, this inversion being the fruit of long struggles and prolonged attributions and a singular narrowness of interpretation, which came to dominate. The origin of an act in the strictness sense of the term is linked to an intention in which this is by itself the origin and the prehistory of the action.

Thus, based on the values of belief, ethics/moral, ideology, and memory, knowledge must consider the historical foundations and the relations between origins, development, and purposes as a kind of more logical and coordinated construction of social phenomena inherent to the production of knowledge.

Fifth, **procedural typology** encourages the dynamization of the social and valuing typologies through communicational/informational practice. The conceptual relation between information and communication, understood here as Dacheux highlights [8] "information is what makes communication flow; communication is the flow of information" is what gives the regulating and organizing sense of the publicity of knowledge as a praxiological phenomenon.

In sixth and in addition to fifth, **technical typology** brings to the fore, the formal record of **procedural typology**. Therefore, procedural and technical typologies are intrinsically concatenated, being the first one–a strategic typology for the publicity of knowledge and the technical–a typology of registration of knowledge.

Otherwise, the technical typology allows the materialization of procedural typology, which, in turn, fosters a cognitive-praxiological sense of the social and valuing typologies. Frohmann [9] explains that the public and social character of information/communication (basis of procedural typology) has its consolidated expression when a critical analysis of the various expressions

of the document is conceived (basis of technical typology together with the language and technologies) in face of the needs of the user or, otherwise, the information studies that claim the concept of materiality from the notion of document bring a broader understanding of the public and social character of information.

Technologies, especially virtual/digital, are the basis of the knowledge foundation in the global age by redimensioning in a temporal space perspective, more specifically, the multiple meanings of language, of document and technical typology and, more generally, the social, valuing, procedural, and psychic typologies.

Lastres and Albagli [10] affirm that technologies favor the global age of knowledge, expanding boundaries in social relations, and interaction between subjects, as well as modifying the technical-scientific practices for the production of new knowledge. The theses which consider that globalization implies homogeneous spaces and a world "without boundaries" are those that suppose that information, knowledge, and technologies are simple commodities that can be "transferred" under the mediation of the markets via mechanisms of price. In these analyzes, the advances in information and communication technologies are credited with the possibility of joint realization and coordination of research and development activities by participants located in different countries of the world, allowing both the integration of them on a global scale, as well as the rapid and efficient diffusion of generated technologies and knowledge.

Finally, the **psychic typology** is a condenser of all other typologies, so that absorbs and abstractally appropriates all the praxiological development of knowledge contained in the previous typologies. The mind is the broader abstract refuge that contemplates thought/idea, the formation of intelligence and conscience.

In particular, with regard to conscience, it is pertinent to reflect that the social, valuing, procedural, and technical typologies consubstantiate the psychic typology of knowledge, that is, the psychic typology is possible only according to the existence and development of all other typologies. Marx's [11] speech is salutar when he states that "[…] it is not the consciousness of men that determines their being, but, on the contrary, their social being that determines their consciousness"; "[…] the senses immediately became theoretical in their practice […]".

The Marxian discourse justifies the reason why the social typology was inserted as a principle and the psychic typology as an end. However, the psychic typology does not come to a peremptory end but brings new conceptions on social typology by deliberating new perspectives to understand the construction of knowledge from the social typology.

The following typologies will allow, in the next section, the proposition of knowledge concepts mentioned in the present study.

4. A conceptual proposal for knowledge in the global era

In view of the discussion in the two previous sections, it is pertinent to propose concepts for knowledge in the global era by considering the characteristics of knowledge in global society

and network society, as well as the established typologies of knowledge. It is worth emphasizing that each typology generates a specific concept for knowledge considering the conceptual amplitude of the term in the global age.

Before proposing, the concept of knowledge is pertinent to recognize that knowledge is essentially linked to a phenomenon, that is, an occurrence embedded in social reality. Knowledge as a phenomenon is intrinsically linked to the concept of information. According to Silva [12], information is seen as a multiply-produced phenomenon for the production of knowledge.

As knowledge has a (pluri) contextualist character, as indicated in the previous section of this study, it is possible to understand it in initial definition as a set of phenomena. Therefore, the typologies conceived enunciate the embryonic idea of knowledge as a set of social, valuing, procedural, technical, and psychic phenomena.

Knowledge is understood as a set of phenomena in the sense of instituting itself in a set of occurrences and events from the social reality through interactions, determining in the scope of beliefs, ideologies, languages, and technologies, a socially generated conciousness, since according to Oliveira [13], the transgression of knowledge as an objective phenomenon can only be effected through practice.

The first concept of knowledge within the scope of social typology can be defined as the following table indicates (**Table 2**):

The concept of knowledge in social typology is associated with two factors: objectivist knowledge of reality (considered more reductionist because it values not the social process as a whole, but only the contact and the experience with the environment) and the praxiological knowledge proposed by Bourdieu [6], because it is a concept that recognizes the breadth of social processes (from the means to the interactions, expositions, and discoveries promoted in the interactionist practices) to understand knowledge and not just the objective phenomena.

The praxiological knowledge indicates the comprehension of social actions and their due resolutions of problems, considering that the subjects involved in the construction of knowledge must observe the different objective realities, seeking the perception of the interiorization of the social and (external) natural environment and the exteriorization of the internal (the dialetical-praxiological movement between what exists in reality, what is perceived and internalized) and, finally what is externalized (transmitted).

The second concept referring to the valuing typology is indicated in the table below (**Table 3**):

Typology	Concept
Social	A set of phenomena extracted from the natural and/or social environment, outlined in the objective reality/daily social within the scope of social relations through interactions.

Source: elaborated by the authors.

Table 2. Concept of knowledge within the scope of social typology.

Typology	Concept
Valuing	A set of phenomena justified by a belief, promoted by an ethical-moral conduct, based on an ideology grounded on temporal processes linked to memory.

Source: elaborated by the authors.

Table 3. Concept of knowledge within the scope of valuing typology.

The concept of knowledge in the valuing typology has a more philosophical character. Because, it is linked to the structuring of social thought, the concept of valuing typology brings a more reflective meaning to the concept of social typology, allowing a critical-applicable dialog to the concepts of the following typologies. It is from a social and valuing perception of knowledge that it is possible to think in a more praxiological way the procedural, technical, and psychic typologies.

To Rokeach [14], the idea of an valuing typology for formulating the concept of knowledge lies in the fact that belief transcends the attitude toward objects or toward situations; it is a pattern that guides and determines action, attitudes toward objects or situations, ideology, presentation of oneself to others, evaluations, judgments, justifications, comparisons of oneself with others, and attempts to influence others. The belief is sustained by the values produced throughout the historical process, receiving support from ideologies and supported by the preservation of mental and institutional memory.

The third concept, referring to the procedural typology, has the following formatting (**Table 4**):

In this conceptual proposal, knowledge is strictly associated with the concepts of information and communication. Regarding the relationship between knowledge, information, and communication, there are two aspects that act as consequences of the social and valuing typologies.

The first strand lies in Barreto's discourse [15] when he states that the relationship between information and knowledge is only realized "[…] if the information is perceived and accepted as such, placing the individual in a stage of development, self-conscious and within the world where their individual odyssey is carried out". This means that the relation of knowledge with information is supported by belief, based on the contact with social reality, that information is accepted by the subject as capable of semantic meaning by inserting it into a cognitive development modifying its perception about social reality.

The second strand is more intimate because it is based on the idea that, according to Wersig [16] "[…] information is knowledge in action […]". However, the concept of the author does not represent a conceptual totality, since knowledge in action is established more broadly through the communicational-informational process, which involves the application of data,

Typology	Concept
Procedural	A set of phenomena conceived from data, sent by message and dynamized strategically through informational and communicational processes.

Source: elaborated by the authors.

Table 4. Concept of knowledge within the scope of procedural typology.

message, production of information, as well as the use of technologies, languages (natural and artificial) and document, and finally, of the mental processes concerning the use of social consciousness so that knowledge is development in communicational-informational perspective, allowing the construction of new knowledge.

This means that information and knowledge do not have the same meaning but are inextricably coordinated so that they have a social-praxiological meaning. Knowledge is seen most strongly as a communicational-informational process, undertaken with the help of technical and psychic typologies, being synthesized as "[…] communicated knowledge regarding some particular fact, subject or event; what is transmitted, intelligence, news […]" (OXFORD ENGLISH DICTIONARY, 1989 apud BUCKLAND). [17]

In a synthetic way, the relational concept between knowledge, information, and communication is represented in Silva's discourse [18] stating that "[…] the social information, resulting from a human subject, active, apt, and ontic disposition to know and communicate—knowledge and communication differ from information, although, they form with it a coherent and essential unity […]".

Information is, in turn, constructed through social reality which includes a range of previously communicated knowledge that are disseminated in the social and natural environment that allow the construction of new knowledge and communicational processes. Therefore, information and communication (including data, messages, technologies, languages, and documents) dynamize the exposed knowledge and contribute to the construction of new knowledge.

The fourth concept is specified in the following table (**Table 5**):

The concept of technical typology of knowledge is directly related to the concept of procedural typology. All procedural knowledge (communicational-informational) depends on a technical knowledge (formulated from technologies, language, document, and services/products) to consolidate, since the technologies have the decisive role of making feasible the multi territoriality and multi referentiality of mediation and dissemination of knowledge, while languages (natural and artificial) act as an organizing subsidy of knowledge through a verbal and nonverbal perspective, while the document is the concrete support, which represents the dynamics of the action of technologies and language and, therefore, formalizes the communicational-informational activity (procedural).

In this way, there is a conceptual extension of procedural knowledge to technical and of technical to process (reciprocity character) from a coordinated articulation so that the knowledge of social and valuing typologies are dynamically applicable.

Typology	Concept
Technical	A set of phenomena based on natural and/or artificial language, structured/registered in a (multi) spatial mode by technologies (physical and digital), represented in documents and pragmatically invigorated by services and products.

Source: elaborated by the authors.

Table 5. Concept of knowledge within the scope of technical typology.

The language issue is fundamentally relevant for the fluency of knowledge of the procedural typology from the following aspects: **language as a medium for the dialog in the realm of social reality; language as a means of identifying of subjects; language as a means of organizing and representing knowledge; language as a means of communication and mediation of knowledge; and language as a means of supporting information for the construction of knowledge**.

The matter of the document brings the concrete and formal character of knowledge registry. This means that there is much undocumented/unregistered knowledge in the social environment, inhibiting prospects for building new knowledge. It is via document (textual, cartographic, iconographic, filmographic, sonorous, micrographic, information technologies, among others) that knowledge enables new relationships, interactions, and comprehension of the social context.

Silva [12] exposes that through the values of the document, such as historical-mediational, human, social, public, technical, and content, knowledge gains institutional consolidation and perspectives of new social relationships/interactions contributing to the promotion of knowledge sharing.

The fifth concept is as follows, as shown in the table below (**Table 6**):

Typology	Concept
Psychic	A set of phenomena appropriated by the mind that foster the construction of thought and ideas, enhancement of intelligence and selection by consciousness.

Source: elaborated by the authors.

Table 6. Concept of knowledge within the scope of psychic typology.

The concept in the psychic typology is a great condenser of knowledge, after passing through all other typologies. The mind is the abstract refuge of the representation of the external world (environment and social reality). It is the mental organization that defines the constructs of thought and ideas favoring the enhancement of intelligence, and finally, the characterizing character of the conciousness of the cognitive subject (any subject who is in a knowledge building situation).

The concept in the psychic typology is directly linked to all other typologies, especially the social one. Knowledge in the psychic typology elaborates the mental repertoire on everything that is appropriate in other typologies. The contiguity between knowledge in the psychic and the social typology resides in the reflection-conciousness dyad, since, Sartre [19] "[…] the reflexive conciousness (réflexive) positions as its object the reflected conciousness, I am ashamed or proud of it, I accept or refuse it and so on. […] Thus, there is no primacy of reflection on conciousness: it is not revealed to itself by the previous one".

In consciousness, the state of knowledge is selective. It is in conciousness that the subject selects the means he or she has to appropriate social reality and interact. It is in conciousness that the

subject sustains his or her knowledge in safeguarding or revelation of beliefs, ideologies, and his/her moral conduct. It is in the conciousness that knowledge about the communicational-informational processes is. It is in conciousness that the technical aspects such as provision of technologies, language games, and formal records (documents, services and products) are sufficiently tuned to be used by the cognitive subject. To sum up, Nietzsche [7], "[…] conciousness is the last and ultimate development of the organic **and knowledge** and, therefore, it is also what is more unfinished and less strong about it".

All typologies have specific and integrated concepts. However, all concepts have direct common goals, as shown in the following figure (**Figure 1**):

The stated aims show that knowledge has multiple conceptual variables from the origin (from where knowledge comes), procedures (which assist in the productive development of knowledge), and purposes (what knowledge is destined for).
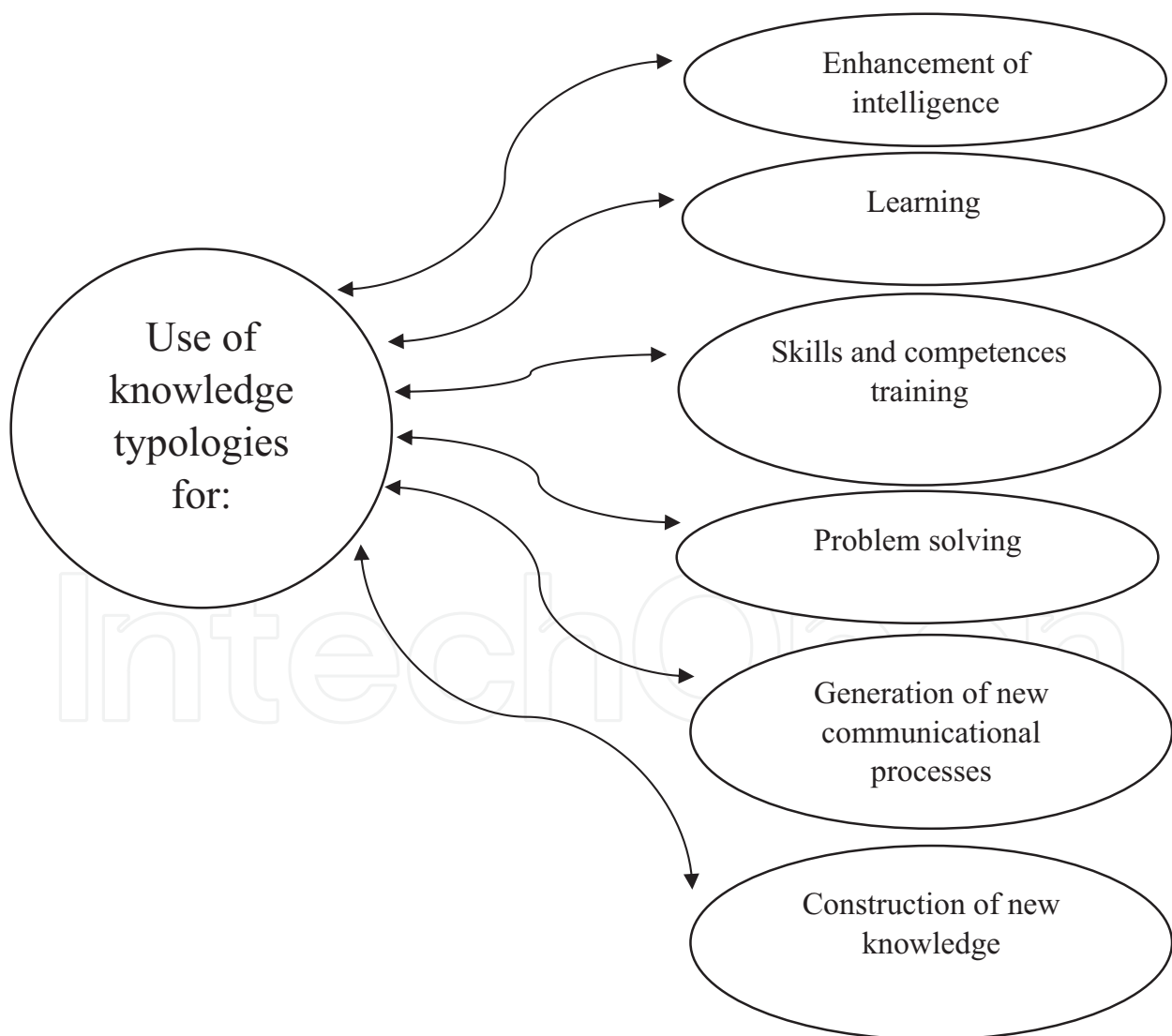
Figure 1. Goals of knowledge typologies. Source: Elaborated by the authors.

In particular, with regard to the purposes of knowledge, it is possible to observe that each point is related to the knowledge typologies delimited in this study. For example, the enhancement of intelligence is directly related to the psychic typology, although it is also fundamental for the redimensioning of social and valuing typologies (in the sense of interaction and values) and to the procedural and technical typologies (in the regulatory and strategic sense). Learning, skills and competences training, problem solving, and construction of new knowledge are related to all typologies, considering that they are vital marks of any activities inherent in knowledge. In turn, the generation of new communicational processes is more inherent to the valuing typology but contributes to the other typologies.

Therefore, the purposes identified in the figure indicate that the understanding of the concept of knowledge is a combination of the diversity of typologies designated in this study constituting an aggregated and holistic concept, as it will be explained in the concluding remarks.

5. Final considerations

Knowledge in the global era has multiple conceptual variations. Therefore, the division into typologies reflects a particularized understanding of knowledge enabling the constitution of a more totalizing concept of knowledge aggregating all typologies.

Thus, knowledge can be conceptualized in the global age as:

A set of phenomena extracted from the natural and/or social environment, outlined in the objective reality/daily social life within the scope of social relations through interactions; justified by a belief, fostered by an ethical-moral conduct, based on an ideology grounded by temporal processes linked to memory; conceived from data, sent by means of message and strategically dynamized by means of informational and communicational processes; based on natural and/or artificial language, structured/registered in a (multi) spatial way by (physical and digital) technologies, represented in documents and pragmatically invigorated by services and products; and appropriated by the mind they foster the construction of thoughts and ideas, enhancement of intelligence and the selection by consciousness with the purpose of improving intelligence, developing learning, stimulating the training of skills and competences, assisting in problem solving, valuing the generation of new communicational processes, and dimensioning the construction of new knowledge. The concept of knowledge is plural insofar as, on the one hand, it is aggregated to the social, valuing, procedural, technical, and psychic contexts and, on the other hand, it is aggregated to the objectivist epistemological, praxiological, and (pluri) contextualist contexts. This means that the concept of knowledge has a semantic-applicable characteristic (based on typologies), a logical-epistemological characteristic (based on theoretical-applicable trends/strands of knowledge), and finally, a teleological characteristic (this defines the knowledge path to change the social reality of subjects, construction of new knowledge, and generation of new communicational processes).

Therefore, the present study sought to conceive a particularized and holistic conceptual perception of knowledge prioritizing the indication of theoretical-epistemological and applicable bases in order to stimulate new discussions, interpretations, and perceptions about the plural reality of knowledge in the global era.

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