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11.2.2 THE CHALLENGES OF KNOWLEDGE IN A KNOWLEDGE DEMOCRACY

Jesús Granados Sánchez and Cristina Escrigas

At this point in history, we need to review the idea of what reality is and the mechanisms by which we produce knowledge. It is not possible to build a new world order if it does not change our perception of what reality is and what is true. It is time for a revision and an enlargement of the conception of knowledge.

UNDERSTANDING REALITY IN A KNOWLEDGE DEMOCRACY

Thanks to the contributions of socio-constructivism, we can affirm that internal aspects of an individual's cognition and collectivity issues are involved in the development of knowledge, which means that subjects construct their own knowledge from their perceptions and through the subsequent restructuring that makes in terms of society. Therefore, we nowadays believe that knowledge relates partly to genetic potential, and that it is also a social product and a personal reconstruction (Benejam, 2005).

According to Simmons (1993), we can say that humans occupy, in addition to an ecological world, a social and a psychological world. The ecological world refers to the place we are, the physical reality that is governed by the laws of nature, which is unique and objectified. The social world constitutes the organization of people and the knowledge that groups have developed to explain the ecological reality that surrounds them. Every civilization has a collective mentality that has shaped its own cultural rationality

(Leff, 2004). The ways of thinking about and interpretations that different cultures have of the position of the human species on Earth have had enormous importance because, somehow, they have legitimized humans' development, which means the relationship between humans and between humans and their environment. The social sphere also has to do with governmental politics and actions which create structures that can enable, or not, the conditions for the development of a collective intelligence (Innerarity, 2011).

Although science and cultural backgrounds provide a framework of common social knowledge, endless personal versions derive from this framework. Each individual's cultural learning is unique due to that person's particular experience in the community, which is established by factors such as education, geographical context, social relationships, occupation, and so on. This experience is also established by personal cognitive factors (which form the so-called psychological world) such as memory, imagination, experience, values, evaluation, understanding, thought processing, command of the language (very important during the learning process), sensations and personal emotions, which are conveyed by the ecological and the social world. Ultimately, we can say that every person creates for themselves a subjective image of the world according to their life in society and their experiences and personal history. This is what Fien (1992) called *personal geography* and Simmons (1993) *lifeworld*. The great diversity of personal records is very valuable since it brings to humanity different ways of reading our surroundings, and getting to know the 'world' of the others both helps and enriches us in restructuring our own ideas and visions.

The ecological, social and psychological worlds are spheres that act simultaneously in each individual, enabling the creation of a personal reality through the processes of perception and cognition that enable action (Figure II.2.2.1). But, as Chambers (1997) pointed out, not all realities count, and some individuals impose

their realities on others (those they deem ‘lower’ than them). The result is the implementation of hierarchies of knowledge or regimes of truth that are sustained through discourses, institutions and practices, and that determine which knowledge is true, assuming that some individuals and groups know better than others, and therefore that decisions over action must fall on them. This is the case with science. For Bunge (1998) ‘Science is the source of knowledge that provides the different societies the basis of their knowledge.’ Along the course of history, Western society has valued and trusted both science and technology, and these have been converted into a myth. We have to admit that scientific knowledge has helped in the conceptual reconstruction of the world, and it keeps getting wider and deeper all the time. But one of the most prominent contributions to the epistemology of the last century has also been the consideration that science is showing the limits of reason and the impossibility of reaching a true knowledge.

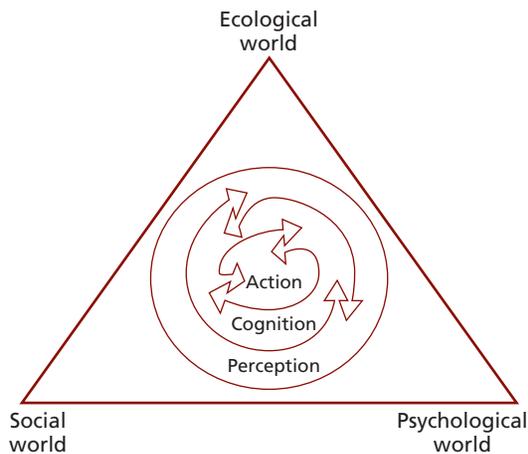


FIGURE II.2.2.1 Key spheres in knowledge creation
Source: After Granados (2010).

Science is defined as the group of answers that the scientific community gives to the problems of the moment. It seems clear that if these scientific answers to theory are provided by certain people, these people cannot be separated from their context. This means that their answers are affected by the acknowledgement of the problems of the moment, by the social urgencies and the necessities that make certain issues the centre of attention, by how they understand and see reality according to the knowledge available to them, and by the interests of the power groups and structures that rule the world in every period. If we accept that scientific knowledge is a social product elaborated by people through time, this implies that knowledge is a

historical product and therefore that it remains subject to interpretation and change (Benejam, 2005).

Given the fact that science is an instrument to understand the world, and seeing that the world is changing at a fast pace, it is somehow perceived that science and the scientific method (which were conceptualized and created and emerged in a world that is not the world of today) can no longer give answers to many demands, especially to the large changes and challenges that occur on a planetary scale (Clark et al., 2005). Therefore, this perception creates a need for a new relationship between science and society that corresponds to the new demands.

THE CHALLENGES FOR KNOWLEDGE

Figure II.2.2.2 expresses the need to enlarge the conception of knowledge through six main domains: a recognition of the plurality of sources and cosmovisions of knowledge, and the need for a dialogue among them; a knowledge that is comprehensive; the use of knowledge to take action; the creation of holistic and complex knowledge to understand the whole; the democratization of knowledge and power through the co-creation of knowledge; and the assumption of a dynamic and creative knowledge.



FIGURE II.2.2.2 Key issues for enlarging the conception of knowledge
Source: Granados (2013).

PLURALITY AND DIALOGUE: THE ECOLOGY OF KNOWLEDGE

We must move on from considering that the only criteria of truth and validity of knowledge are found in science, in the sense that other knowledge is considered non-existent or irrelevant and assuming that any knowledge is incomplete. Therefore, the ecology of knowledge recognizes the plurality of knowledges and establishes the necessary epistemological dialogue between the different constellations or sources of knowledge, which must be complementary.

The debate on the relationships between science and other knowledges (de Sousa Santos et al., 2007) is a critical aspect for scientific knowledge and the hegemony of Western thought. Dominant Western scientific knowledge currently obscures or underprivileges other forms of knowing and the voices of other knowers. For Boaventura de Souza Santos (2007, pp. 3–4):

this monopoly is at the core of the modern epistemological disputes between scientific and nonscientific forms of truth. Since the universal validity of a scientific truth is admittedly always very relative, given the fact that it can only be ascertained in relation to certain kinds of objects under certain circumstances and established by certain methods, how does it relate to other possible truths which may even claim a higher status but which cannot be established according to scientific methods, such as reason as philosophical truth or faith as religious truth ... On the other side of the line, there is no real knowledge; there are beliefs, opinions, intuitive or subjective understandings, which, at the most, may become objects or raw materials for scientific inquiry.

The ecology of knowledge is an epistemological and political option of a new kind of solidarity among social actors or groups. According to Simmons (1993), it is necessary to consider ‘other plants in the garden’, since with them and with their cultivation the universal benefit can be greater. It is more than a recognition of the invisible; it is about valuing all our indigenous ancestral heritage and placing it in an equal position with other sources of knowledge. We also have to recover the value of tacit knowledge, of everyday knowledge, of the knowledge of rural and indigenous cultures as other legitimate and complementary forms of knowledge (Novo, 2006). What matters is the epistemological dialogue and complementarity among constellations of knowledge:

Being infinite, the plurality of knowledge existing in the world is unreachable as such, since each way of knowing accounts for it only partially, and from its own specific perspective alone. On the other hand, however, since each way of knowing exists only in the infinite plurality of knowledge, none of them is able to understand itself without referring to the others. Knowledge exists only as a plurality of ways of knowing, just as ignorance exists only as a plurality of forms of ignorance. The possibilities and limits of understanding and action of each way of knowing can only be grasped to the extent that each way of knowing offers a comparison with other ways of knowing. Such comparison is always a reduced version of the epistemological diversity of the world, the latter being infinite. What I call ecology of knowledge lies in this comparison ... The limits and possibilities of each way of knowing reside, thus, ultimately, in the existence of other ways of knowing. They can only be explored and valorized in comparison with other ways of knowing. The less a given way of knowing knows the limits of its knowing about other ways of knowing, the less aware is it of its own limits and possibilities. This comparison is not easy, but herein lies the learned ignorance we need in our time. (de Sousa Santos, 2009, p. 116)

Each exercise of ecology of knowledge implies a selection of ways of knowing and a field of interaction in which the exercise takes place. An unlimited number of ecologies of knowledge is possible, as unlimited as the epistemological diversity of the world. For de Sousa Santos (2009), the ecology of knowledge faces two problems: how to compare ways of knowing given the epistemological difference; and given that plurality of knowledge is infinite, how to create the set of ways of knowing that partake of the ecology of knowledge. To deal with the former, de Sousa Santos (2009) proposes translation; to deal with the latter, artisanship of practices.

COMPREHENSIVE KNOWLEDGE

Traditionally, rational knowledge has been considered to be of a higher order. Novo (2006) states that the value of feelings, emotions and affection has been expelled from the rational discourse. We think that knowledge must be considered as an equilibrium and a mixture of different human ways of knowing and capturing reality that includes intuitive, experiential and emotional knowledge and reason.

Knowledge also should seek a balance between personal aspects, such as values, affective and cogni-

tive learning, rationality and intuition, the object and the subject, the material and the spiritual, and collective aspects, such as economics and ecology, present and future, local and global, individual and community (Sterling, 2001).

USE OF KNOWLEDGE TO TAKE ACTION

The creation of knowledge needs not only to describe, but also to prioritize its capacity of transformation, taking into account the context of phenomena and acquiring a problem-solving perspective and the creation of alternative futures. Thus, knowledge has to integrate a scalar variable in all forms (local, national, regional, global, and so on) and in all its interrelationships, and it must also incorporate the time variable in its different forms (circular time, cyclical time, and so on) and considerations.

In terms of social change, we find that action and intervention are as important as cognition and rationality in the knowledge-creation process. Therefore, knowledge is to be guided by ethical criteria, especially regarding their technological applications and the repercussions arising from their impact. It is about including ethics attached to precaution (Novo, 2006).

HOLISTIC AND COMPLEX KNOWLEDGE

Knowledge must integrate its humanistic and technological orientations, and must have multiple perspectives and be built upon cross-disciplinary bases and complexity. Complexity implies the limits of knowledge and an assumption of ignorance, uncertainty and insecurity. The aim of knowledge is to understand the whole.

DEMOCRATIZATION AND POWER: SOCIAL CO-CREATION OF KNOWLEDGE

Knowledge is seen as being in the hands of a monopoly of expert knowledge producers, who exercise power over others through their expertise (Hall, 2002; Tandon, 2002). Power relationships affect both those who participate and those whose knowledge counts (Gaventa, 2006), as well as how knowledge is socialized and used.

The current polycentric production of knowledge must consider the universities, the new centres of expertise, as well as all the agents that can and want to be involved in hybrid, horizontal and cooperative spaces of reflection and action, with the purpose of co-creating the needed knowledge in each situation. This reflective modernization is also a promotion of equity in the spread, use and creation of knowledge. This view of knowledge moves from knowledge that

is privately produced and for private consumption, to a commitment to the socialization of knowledge for the common public good. The current emphasis in knowledge production and consumption is based on the assumption that knowledge is a commodity; in contrast, the knowledge commons view informs the significance of social control over the production and utilization of knowledge. In such a shift, commitment to knowledge as a contribution to the common public good may transform meanings and practices in public spheres.

DYNAMIC AND CREATIVE KNOWLEDGE

Today, information and communication technologies, the so-called social web, enable us to access and share information and knowledge, and to interact and collaborate with others easily and instantly through communities with the same interests, while at the same time contributing to enhanced sociability. This scenario presents a total revolution for knowledge: the chaotic interaction allows different ideas and types of knowledge to be brought into contact, which results in multiple combinations or mutations that favour creativity and innovation. The processes of knowledge creation, knowledge management and validity are short in time, and their evolution is unpredictable.

BEING KNOWLEDGIASTIC

The leitmotiv of the 6th International Barcelona Conference on Higher Education organized by GUNi was 'Be Knowledgegiastic' (Figure II.2.2.3).¹ We suggested this new term to designate an attitude of being: 'Being knowledgegiastic is to show enthusiasm about and actively encourage the co-creation of transformative knowledge'. 'Being knowledgegiastic' implies actively incorporating six changes into the way we handle, use, build and understand knowledge. There must be:

- a movement from a mono-culture of scientific knowledge to an ecology of knowledge;
- a passage from rational knowledge to comprehensive knowledge;
- a move from descriptive knowledge to knowledge for intervention;
- a change from partial knowledge to holistic and complex knowledge;
- abandonment of the isolated creation of knowledge in order to start building a social co-creation of knowledge;
- a change from conceiving a static use of knowledge to a dynamic and creative knowledge.



FIGURE II.2.2.3 'Be Knowledgiastic'

Universities are already beginning to make some of these shifts. A practice of knowledge democracy linked to an intelligent society would be supported by dramatic increases in the varieties of community–university engagement that are arising now in thousands of creative and imaginative ways in universities in literally every part of the world. This would build on a vision for a new architecture of knowledge and an activist sense of social responsibility in higher education.

NOTE

- 1 The term 'knowledgiastic' was first presented during the plenary session 'Building the World We Imagine' at the 6th International Barcelona Conference on Higher Education, where the chair of the session engaged the audience with an unexpected activity: about 30 boxes were passed to the attendees for expressing their wishes and commitments for the world they imagined, by drawing and writing in the boxes. As a result of the activity, a wall was created and became the leitmotiv of the conference: 'Be Knowledgiastic'.

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II.2.3

ENLARGING THE CONCEPTION OF KNOWLEDGE: THE DIALOGUE BETWEEN ANCIENT KNOWLEDGE AND SCIENCES

Manuel Ramiro Muñoz and Paul Wangoola

The following text is the dialogue that Paul Wangoola and Ramiro Muñoz had at the 6th International Barcelona Conference on Higher Education, Let's Build Transformative Knowledge to Drive Social Change (Barcelona, May 2013). The two speakers contributed to enlarging the conception of knowledge from the dialogue between ancient indigenous knowledge and scientific knowledge. Both of them are part of these two worlds. Paul Wangoola, who comes from Uganda, from the African ancestral tradition, is the founder and president of the Mpampo African Multiversity. He plays diverse advising roles related to heritage, history and reconciliation in Uganda. Manuel Ramiro Muñoz comes from Colombia and is the Director of the Intercultural Studies Center at the Pontificia Universidad Javeriana of Cali, Colombia.

WHICH ARE THE PRINCIPAL CHARACTERISTICS OF ANCIENT HOLISTIC KNOWLEDGE?

Paul: One main characteristic of African ancient and indigenous knowledge is that knowledge has a common source. That common source was there before God, before time and before matter. It is sometimes called the creative force or the vital force – a force that is responsible for the creation of all beings and all living things. And living things and every creation share the characteristics of this vital force, which is coherent and multiple in its being, but also coherent and a complementary unity of opposites. That is a very

enduring characteristic of ancient knowledge: having a common source, complementarity, unity and both internal and external coherence.

Now, everything that was created is also internally and externally interconnected, coherent and at peace. This knowledge and great awareness are distributed in creations and living things – in the rocks, in the plant world, in the animal world and in human beings. So if you want knowledge, you need to be surrounded by all these things, because that is where knowledge is, and you learn from them. In our case, to ensure that we do not lose any knowledge, we deeply believe that everything that is living is our brother. The rock is our senior brother and sister; the plant world is also our senior brother and sister, and the animals are our senior brothers and sisters. To demonstrate that, each one of us has a totem to emphasize our unity with the rest of beings and nature.

Manuel: The characteristics of ancient African indigenous knowledge, described by Paul, are not very different from those of ancient indigenous knowledge in Central and South America. I would add that the criteria of truth and validity are totally different from those we have in the scientific world. I would like to express this through an aphorism from the Nasa people which says that 'The word without the action is empty; the action without the word is blind; the word and the action outside the spirit of the community is death.' To avoid being empty, any word has to be supported by action, in a relation that, in our jargon, would be that between theory and practice. To avoid turning into activism, the action needs the word. And here is a high value given to knowledge built through the word, either oral or written.

But the ultimate criterion of truth and validity for the word and the action, as the aphorism ends saying, is in the community praxis. What makes a word, an action or both valid and relevant is the extent to which it builds community. And, as Paul said, the community does not only belong to human beings. All peoples,