Journal of Consciousness Studies, 2023, 30, No. 5–6, pp. 232-254

Variability in cultural understandings of consciousness: A call for dialogue with native psychologies

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Abstract

Investigation of Indigenous concepts and their meanings is highly inspirational for contemporary science because they represent adaptive solutions in various environmental and social milieus. Past research has shown that the conceptualisations of consciousness can vary widely between cultural groups from different geographical regions. The present study explores variability among a few of the thousands of Indigenous cultural understandings of consciousness. Indigenous concepts of consciousness are often relational and inseparable from environmental and religious concepts. Furthermore, this exploration of variability reveals the layers with which some Indigenous peoples understand the conscious experience of the world. Surprisingly, the Indigenous understandings of global consciousness was found not to stay in opposition to local consciousness. The final concluding section of this study discusses the usability of Indigenous concepts and meanings for recent scientific debates regarding the nature of consciousness. Issues such as material versus non-material sources of consciousness, the energy component of consciousness, or the interconnection of consciousness with the environment arose from the in-depth exploration of Indigenous concepts and their meanings.

Keywords: consciousness, Indigenous psychologies, decolonial psychology, decolonial turn, Indigenous science, Indigenous knowledge, decoloniality, decolonizing, cross-cultural comparison, cultural psychology, relational ontology, global consciousness, collective consciousness, quantum binding, quantum entanglement, mind-body problem, mind-body relations, soul-body relations, shamanic consciousness, Indigenous concepts

MeSH Headings: Consciousness, Indigenous Peoples, Shamanism

Note: This is the preprint version of the manuscript, the published article is available at https://doi.org/10.53765/20512201.30.5.232

1. Introduction

Indigenous concepts, meanings, and languages are all implicated as continuing heritage of Indigenous peoples (United Nations, 2016) and help scientists to better understand Indigenous cultures and ways of thinking (Trnka and Lorencova, 2022). The world's linguistic diversity is currently under threat. Many Indigenous languages are endangered around the world and the rate of loss is high (Harrison, 2007; United Nations, 2016). Importantly, past research has shown that the retention of Indigenous languages may be a protective factor for the psychological and physical health of their speakers (Olko et al., 2022). Regardless of the value of Indigenous heritage and cultural diversity itself, Indigenous psychologies have also been found to be highly inspirational for the development of scientific psychology (see e.g.

Chakkarath, 2005; Sedlmeier and Srinivas, 2016; Yu, 2010), the philosophy of science (Cox et al., 2021; Broadhead and Howard, 2021; Liu and King, 2021), education for sustainable development (Zidny et al., 2021), as well as ecological conservation and other goals (see the ways traditional knowledge, sometimes also called "Indigenous science", can be utilised: Lilleyman et al., 2022; McKemey et al., 2022; Tengö et al., 2021).

The studies comprising this symposium on Indigenous concepts of consciousness have brought many new insights into the Indigenous understanding of concepts related to consciousness across various ethnic groups. The explorations of highly abstract, immaterial concepts, such as mind, thinking, and consciousness, offer important information for the providers of psychological and psychotherapeutic services. Since not all peoples experience, model, or understand conscious phenomena in the same way, the culturally sensitive understanding of Indigenous concepts is crucial for treating diverse populations (APA, 1990). Motivation among psychologists to understand culture and ethnicity factors in mental life is increasing in order to provide appropriate psychological services (APA, 1990). Research focused on Indigenous understandings of mind and consciousness provides knowledge toward developing skills for recognising cultural differences and assessing and intervening in directed and more effective ways. Such research provides evidence for education to increase competency in skills for working with specific populations, because it reveals the role that ethnic understandings play in all psychological and psychotherapeutic treatment.

Another important contribution of this research is knowledge about Indigenous concepts, such as mind, thinking, and consciousness for their own sake. Recently, native healing practices, especially shamanic ones, have experienced a resurgence of interest and are sometimes used by clinical psychologists and psychotherapists. For example, traditional practices have been utilised in psychiatry (Blom et al., 2015; Lee, Kirmayer, and Groleau, 2010), mental health counselling (Stewart, Moodley, and Hyatt, 2017; Sutherland, Moodley and Chevannes, 2014), dance therapy (Ramos, 2018), treatment of addictions (Rich, 2012), and psychotherapy facilitating recovery from traumatic events (Harris, 2009). There is also a wave of interest in exploring the use of traditional psychoactive drugs in modern healing (Dupuis and Veissière, 2022; George et al., 2022; Gobbi et al., 2022). Therapists adapting traditional Indigenous practices are often not raised in or deeply familiar with the culture from which they are borrowing. There is a danger not only of offending through misappropriation, but also of misunderstanding these methods' potentials and perils. Therefore, an in-depth understanding of Indigenous concepts related to mind and consciousness is a necessary prerequisite for the legitimate, safe, and successful application of these practices in other cultural settings.

Turning our attention from applied to pure scientific endeavour, we note first an ongoing discussion about the concept of consciousness in science (for an overview see e.g. Gennaro, 2018). Some scientists expect the concept of consciousness to show a multiplicity of meanings (Manson, 2011; Rosenthal, 2009). Others support a rather univocal view (e.g. Black, 2017). Exploring meanings associated with "consciousness" that have occurred in Indigenous cultures bring new insights into this debate. These cultural meanings are not just multiple but are also the result of hundreds of years of cultural developments. One should keep in mind that the evolution of each culture was shaped by a different set of environmental and social factors and that its system of meanings was locally successful and adaptive (Richerson and Boyd, 2005). Simply put, we suggest that those meanings that function well in a given environmental and social milieu emerge in cultural evolution. The adaptivity of meanings alone highlights the value of investigating Indigenous concepts and incorporating research of them into discussions about the concept of consciousness in philosophy and science.

The present study explores the meanings of Indigenous concepts related to consciousness that were presented in particular papers at the recent symposium of the *Journal of Consciousness Studies*, as well as in previous analysis of conceptual systems of 55 Indigenous

groups across various regions of the world (Trnka and Lorencova, 2022). The previous research cited shows that Indigenous cultures vary widely in the meanings they ascribe to consciousness. The question is, in what ways do the cultural meanings of consciousness vary? This essay focuses especially on the ways in which consciousness is conceptualised in particular Indigenous cultures and on the temporal and spatial/relational aspects of these conceptualisations. Themes topical for the interaction and cooperation between Indigenous and Western scientific models of consciousness are discussed throughout the following sections. However, we do not undertake comparisons of particular folk, religious, philosophical, and scientific discourses about consciousness in a complex way.

2. Single concept versus dispersed conceptualisation of consciousness

In psychology, "consciousness" usually denotes a subject's ability to be aware or to experience, though more definitions and approaches to consciousness do exist (Gennaro, 2018). In many cultures, the phenomena that English glosses as "consciousness" are conceptualised, grouped, categorised, and explained differently. Direct translation is not possible in these cases. This means we can only approximate the Indigenous concepts using semantic translation and indicate the context in which Indigenous words are used.

Many Indigenous concepts related to mental phenomena are described using glosses of the terms *soul* and *spirit*. Ethnographers often use these words as opposites to the grossly tangible body and other material objects. These supposedly spiritual components of humans are connected with intention, awareness, selfhood, self-consciousness, and other attributes of the mind or consciousness.

In many Western ontologies, whatever the words *soul*, *spirit*, or *psyche* are used for, they are in opposition to the body, as is seen on an ongoing debate questioning the body-soul or mind-body problem (Chudek et al., 2018). The physicalist claim, i.e. that mental states are ultimately nothing above physical states, dominated in science in past decades (Chambliss, 2018). In contrast to these debates (see also Chalmers, 2021), the understanding of spirit and soul, particular components of psyche, or even the body itself is sometimes different in Indigenous ontologies (Mark and Lyons, 2014). In some Indigenous conceptual systems, spiritual and physical components are not necessarily opposed or contradictory, as it appears from the articles in this symposium.

The categories of any two cultures' concepts (and words used to label them) rarely overlap fully, which causes translation problems. For science, consciousness and spirit are two different concepts; their meanings are separated by a quite clear boundary. For Indigenous cultures, words referring to posited spiritual entities are often used to describe consciousness and related phenomena.

Moreover, the concept of consciousness is developed quite deeply in some cultures, while in others it is developed only superficially. For example, the concept of consciousness is quite blurred in the Asabano culture from New Guinea. It is not clearer even when focusing our attention on the soul. Asabano souls are not seen as the essences of the self or agents of personal awareness. They are, at least in part, distinct from and alien to the thinking and feeling self. The same can be found in other New Guinean ethnic groups (see e.g. Lohmann, 2023).

While in the case of Asabano there is no connection between the concepts of consciousness and soul, the situation is different in other cultures. In Altaian Tlingits (Halemba and Tyukhteneva, 2023) and various Mongolian ethnic groups (Frecska, Birtalan and Winkelman, 2023) the concepts are so complex that it is not easy to separate the pure concept of consciousness and the concept of soul. The concept of soul involves a meaning similar to what it has in Western cultures, but it also includes physical and mental features, including consciousness. However, to find the conclusive borders of separate "consciousness" is not

possible. Consciousness could be understood as a component of the soul or a soul cluster (Frecska, Birtalan and Winkelman, 2023).

In many Indigenous cases, consciousness is not viewed as a separate element, as it is often seen through the lens of science. For example, relational Indigenous ontologies bring another view of consciousness. They do not involve only the internal features of humans, but also external ones, as humans are understood to be inseparable from their environment. For example, in Mapuche culture, the closest concept to our understanding of consciousness is *rakizuam*, which is defined as a particular kind of reflexivity or state of awareness of the interdependence of people with natural and spiritual entities (Pérez and Marsico, 2023).

From the given examples it is evident that Indigenous concepts can be really polysemous, but their polysemy is greatly strengthened when transferred to scientific concepts. Science often adopts an individualistic approach, using mostly formal logic and a naturalistic ontological framework. It uses dualism and a structural approach as an analytical tool. This is very different from many Indigenous philosophies whose ontological frameworks are rather relational and emphasise more holistic thought. Misinterpretations, misunderstandings, and confusions could simply come out from these different approaches. From a scientific perspective, Indigenous concepts may be seen to be illogical, variable, vague, and elusive.

We have to keep in mind that the concepts of Indigenous peoples, do not always serve as analytical categories; they rather work with living experience. And this experience shows a person to be a relational, processual, or composite being (McCallum 2020, Santos Granero, 2012, Halemba and Tyukhteneva, 2023, Martínez Mauri, 2023). For this reason, in the following text, we use and understand the words *consciousness*, *soul*, *spirit*, and *body* not as mutually exclusive, but, on the contrary, as tightly interconnected.

3. Persistence-interrupted existence

Persistence-interrupted existence variability reflects the continuousness of consciousness in time. Some cultures understand conscious existence to be only temporary. Human consciousness can be believed to start to exist at birth and terminated at death of a subject. In contrast, many cultures believe in a persistent existence of consciousness. There are also instances where human consciousness is understood to be transformed after death, but not finally terminated.

Let us look into these variations in more detail. The Māori concept *mauri* denotes the vital essence that energises the physical form, e.g. the human body (Tassell-Matamua et al., 2023). After the death of the human body, *mauri* dissipates, and the vital essence returns back to the overall source of potentiality, called *Te Kore*. Also, the related concept *wairua*, i.e. an immaterial entity with a relationship to life that transcends space-time boundaries, returns back to *Te Kore* after death (Valentine, Tassell-Matamua and Flett, 2017). *Mauri* and *wairua* are examples of temporary embodiment of consciousness into particular physical form (human body).

In contrast, the existence of a life principle called *burba* among Guna people is not interrupted after the death of the human body (Mauri, 2023). The *burba* exists further as the same entity and conducts a journey from the world of the living to the "unseen world" of a great creator. The main difference between Māori *mauri* and Guna *burba* is in their cohesiveness. The Guna *burba* exists after death as the same entity, so its cohesiveness is high. The Māori *mauri* dissipates after death. It loses an individualised sense of cohesiveness as we might understand it from a Western perspective, but its essence fuses and energises other life forms, so in many ways it remains as part of tangible existence (Tassell-Matamua et al., 2023).

Similarly to dissipation of the Māori *mauri* and *wairua* back into the primary source of potentiality, Oglala Sioux also believe that individual consciousness is transformed after death

(DeMallie, 1987). The individual mind and consciousness are believed to emerge at the moment when a fundamental force called the "Great Mystery" breathes the spirit into a human body. After death, this spirit is believed to be freed from the body and transformed into a kind of non-localised state. This non-localised state is described as "being everywhere and pervading all nature." In this case, the process of disembodiment of consciousness results in a non-local, omnipresent existence.

Some cultures believe that death leads to the final termination of consciousness of an individual. In the Cashinahua people, one of the souls, the "body soul" denoting consciousness, is believed to become permanently transformed into a faceless, monstrous, and memory-less forest spirit after a person's death (McCallum, 1996). The Maasai people even believe that a person's death is the end of everything. After death, no further transformations of soul or consciousness are expected to occur (Westerlund, 2006).

Interestingly, some cultures also show relatively unstable components of consciousness. The Nahua people have several concepts related to human consciousness, for example, *tonalli*, denoting the psyche/life energy that is located in the head, and *O'ol* (Ciofalo, 2023). *O'ol* is a kind of spiritual essence that is present in the body of a subject in normal states of consciousness, but it leaves the body during sleep. In this cultural understanding, *tonalli* is persistently present in the body and *O'ol* is an unstable component of the human body. If *O'ol* leaves the body, the normal state of consciousness is believed to change into an altered state of consciousness during sleep. The notion that during dreaming the disembodied soul is travelling in the real world is also widespread in other cultures (see, e.g. Lohmann, 2003a).

Aside from *tonalli* and *O'ol*, the Nahua people also have the concept *teyolia*, which refers to a subject's vitality, intention, or knowledge (Ciofalo, 2023). *Teyolia* is also an unstable component, because it separates from the body upon the subject's death. However, its existence is persistent, because *teyolia* is believed to transform into an immortal entity after death.

4. Locality-globality variation and individual-relational consciousness

Locality-globality variation reflects the degree to which consciousness is understood to be localised in a human (or non-human) subject. Some cultures understand consciousness to be localised in a subject, for example, in the human body or in a body organ, while other cultures may understand consciousness to be not only local, but something pervading the space into the global sphere. In these cultures, globality and locality do not stand in opposition; rather they are understood as a continuous vessel.

The understanding of consciousness as local can be found, for example, in the African Igbo people. Igbos understand consciousness as a spirit/body synergy, when the spirit *mmuo* could be also understood as the mind (Nweke, 2003). According to Okoye (2011), the Igbo words *ako na uche* mean the awareness which serves as mediator of the conscious and unconscious parts of the self. A person without it is driven merely by the desire for self-gratification. To be conscious, the spiritual and physical parts need to be connected. When the spiritual part of a man leaves the body, for example during sleep (in dreams), the person becomes unconscious (Okoye, 2011). Moreover, the spiritual and material part (the body) need to be in harmony; otherwise, the person becomes physically or mentally ill (Nweke, 2023).

Also, Asabano, a New Guinean ethnic group, place the conscious agent in the body. But the processes in the body are understood differently from the perspective of science. In Asabano, the conscious person is composed of mentation processes connected with the heart, sensory perception (senses), and big and little souls located on the back (Lohmann, 2023).

There are other cultures where consciousness is quite clearly connected with a particular organ. We can find variations in localisation or connections of consciousness with particular body organs across cultures. For example, in Cashinahua, Nahua, and Maya traditions, the head,

heart, and liver are connected with psychic entities and aspects of consciousness (McCallum, 1996; Ciofalo, 2023). Guarani people connect an aspect of consciousness with the heart (Benites, 2015), while Guna connect *gurgin* with the head (but not the material brain) and *burba* with various body parts, such as hair, fingers, the heart etc. (Martínez Mauri, 2023).

In local variations, consciousness is seen as closely related to the subject (see Figure 1). It can be understood as a product of unity between parts of the body (material and psychical) or as a product of processes taking place within the subject. This notion mirrors the scientific understanding of consciousness represented by cognitive psychology and neurobiology.

In some Indigenous cultures, despite the localisation of consciousness to a specific body organ, consciousness is not necessarily understood only as local. Moreover, it is not understood as a product of the body or a body organ. Rather, it is taken as a localised embodiment of global consciousness within a particular individual.

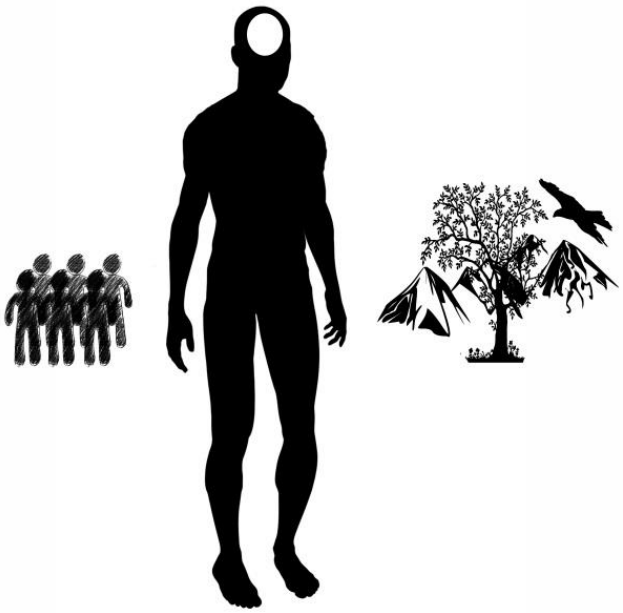

Figure 1: Local consciousness: Consciousness is localised in individual human subject and/or in a particular body part/s (e.g. the head). The connections with natural and social or other entities are not considered essential.

Under some circumstances, consciousness localised in individual bodies are believed to interact and become interconnected (see Figure 2). In science, this kind of interaction between individual consciousnesses is called collective consciousness (or effervescence) (Trnka and Lorencova, 2016). Collective consciousness (effervescence) is suggested to emerge generally in special situations (rituals, healing), where individual consciousness is extended to another level. Conscious activities of individuals interfere, and the field of collective consciousness then emerges based on this interference. Grandpierre (1997) called this process local-global coupling, because it has a character of coupling between the different-level processes, global and local. In the course of a ritual or healing process, the individual and the collective system are under the entangled influence, so it seems that they merge into one “organism” (see Rappaport, 1999). In this sense, we can speak of a collective body, where non-local communication among its members is possible (Wendt, 2006). Collective ritual activities connected with the creation of a collective consciousness have been studied in both Indigenous and Western cultures from Durkheim (1912/2001) to the present (see e.g. Grandpierre, 1997;

Throop and Laughlin, 2002; Lorencova, Trnka and Tavel, 2018; Zumeta et al., 2020), and the states of the individuals' consciousness are described as altered or extended.

Although different authors define collective consciousness or unconsciousness in various ways (see e.g. Jung, 1959; Lévi-Strauss, 1963; Bourdieu, 1977; Schäfer, 2008; Iurato, 2015), all of them understand it as rather a passive "collection" of memories, archetypes, wisdom or potentialities which can be "touched" only through active personal action, usually in a special framed situation given the time and space. It must be said that it is not easy for science to explain the nature of collective consciousness. Collective consciousness is hypothesised to be a field that emerges based on some process of quantum binding (e.g. quantum entanglement) (Trnka and Lorencova, 2016), and there are more theories proposing such a kind of field: biological fields (Grandpierre, 1997), vibration microtubules fields (Hameroff and Penrose, 1996), dendritic and synaptic fields (Combs and Krippner, 2008) or quantum level synaptic events (Eccles, 1994).

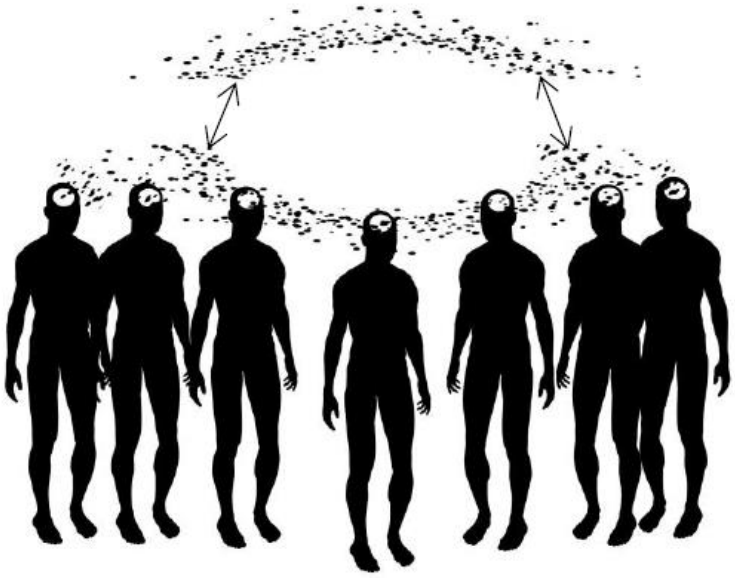

Figure 2: Collective consciousness (effervescence): Individual consciousness is extended into a collective consciousness creating a transcending field connecting all participants and touching the "unconscious" sphere (indicated by arrows).

In contrast to scientific understanding of collective consciousness, some Indigenous understandings of global consciousness assume one global source of consciousness (Figure 3). Global consciousness is believed to exist without the active contribution of humans and is relatively independent of them. Moreover, it is global, because it is not located only in human beings (human bodies) but penetrates the whole environment where human beings live and which they are a part of. This (global) understanding of consciousness is more relational and holistic in comparison to the local understanding of consciousness.

Guarani people show an interesting conceptual understanding of consciousness that anticipates a global agentive principle called *nhe'e*. The consciousness of an individual subject is believed to be a result of the *nhe'e* entering into a specific human body through the top of the head and settling this essence in the subject's heart (Benites, 2015).

A similar notion can also be found in Māori culture, where consciousness is understood as an inherent property of an all-pervasive spiritual energy, known as *Te Kore*. Individual consciousness arises from *Te Kore*, becomes individualised as *wairua* (spirit) and joins with the tangible energy known as *mauri*, to then become a type of individualised consciousness

specific to a person. In this perspective, consciousness cannot be reduced to a product of the physical functioning of the brain. Moreover, embodied consciousness is still notably catalysed by and connected to the universal consciousness common to all beings (Tassell-Matamua et al., 2023).

In Maori, *Te Kore* is not the energy source only of human, but of all living systems – human and non-human, the natural environment, the celestial spheres and the entire universe. All come from and are expressions of the same source (Tassell-Matamua et al., 2023). Similar concepts can also be found in Indigenous South American cultures. According to Guarani, all life forms (both vegetal and animal) have *nhe'e,* the agentive energetic potential of consciousness (Macedo, 2014).

These examples show that, in some Indigenous worldviews, global consciousness does not stand in opposition to local consciousness. Rather, global consciousness is a source from which individualised consciousness located in individual subjects emerges. These subjects (human and non-human) are interconnected through the same source of potentialities (see Figure 3).

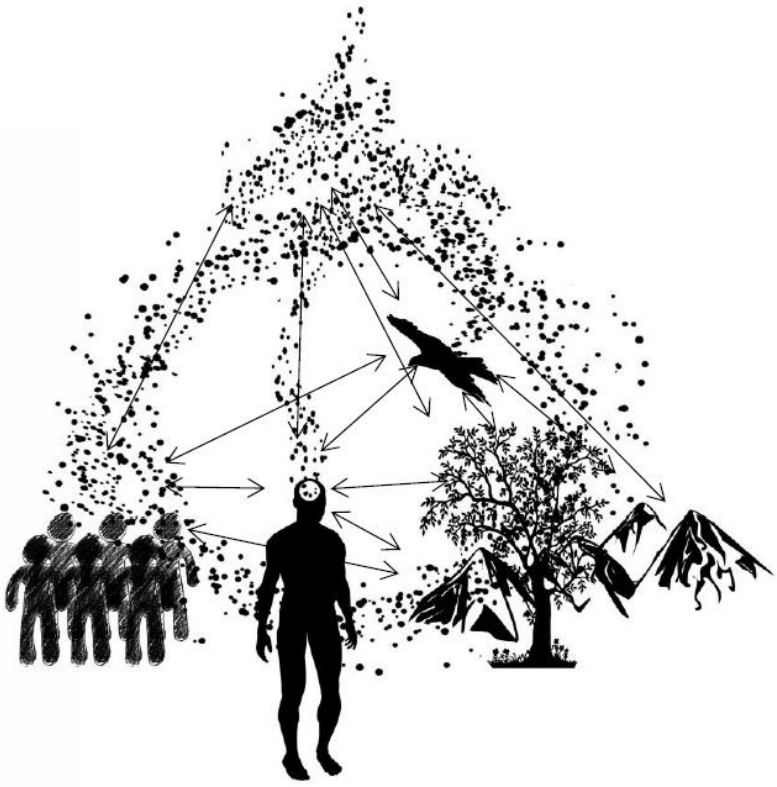

Figure 3: Global consciousness: Individual consciousness as the embodiment of global consciousness. There are various forms of embodiments from the same shared source. From this point of view, the spiritual/potential form is the same, while the natural/material form differs. The common spiritual basis acts as a connection between different material forms (relations/connections indicated by arrows). In this sense, relations (connections) are essential, not individuals.

5. Non-exclusivity and developmental layers of consciousness

When speaking about global consciousness, there are two interesting Indigenous ideas discussed in the ethnographic literature as well as in the papers of this symposium. The first is the idea that consciousness is not only the privilege of humans. The second idea is that even in humans, consciousness is developed at various levels.

The first idea, that consciousness is not only a human privilege, assumes that humans and non-humans share some similar basis. The basis posited varies from one culture to another. It is not easy to analyse or translate because corresponding terms across languages are lacking. Thus, different words are used – such as spirit, spiritual part, and individual consciousness –that do not exactly correspond with native concepts. Despite different labeling, both humans and non-humans are believed to have a common spiritual component. Through this shared component, humans and non-humans are mutually interconnected.

The second idea is connected with the notion that consciousness is developmental. This means it develops at different levels in both human and non-human entities. In the Māori understanding of consciousness, various layers or levels of embodied consciousness exist, and these layers could connote awareness and sensing, and could also include a developed level of consciousness inherent in shamans (Tassell-Matamua et al., 2023).

Among Altaian Telengits there are even different specialists – "people who know" (*biler ulus*) – with different abilities, who can connect with other entities using their extended senses. *Kulak ugar* are people who can hear what other people cannot, e.g. spiritual beings. Furthermore, *kos koror* are people who can see the souls of the dead. *Kam* is a shaman who uses various senses to communicate with various beings (Halemba and Tyukhteneva, 2023).

Similarly, also the Guna people's *gurgin* (consciousness) is variable and is not even the same in all human beings. All people are born with *gurgin*, but some people are born with a special *gurgin* that predisposes them differently to life, e.g. they have a *gurgin* that means they will become shamans (*nergan*), because their consciousness is more developed and powerful (Martínez Mauri, 2023). For Guna, *gurgin* (consciousness) is a specifically human possession, but it enables one to connect with the *burba* (spiritual part) of non-human beings. In the Cherokee tradition, everything that comes from the Great Spirit, who is formless but form-building, is conscious. However, the consciousness of a stone is different from the consciousness of animals, which is different from that of humans (Honeycutt, 2018).

Some Indigenous concepts of global consciousness and its embodiment in different forms posit various layers or levels of development of individualised consciousness. These possible layers of global consciousness are depicted in Figure 4. The layers show levels of consciousness as reflected in some Indigenous concepts. The list of the levels is not fully exhaustive in the diagram. In both human and non-human layers, there may be various levels that are not captured in this picture.

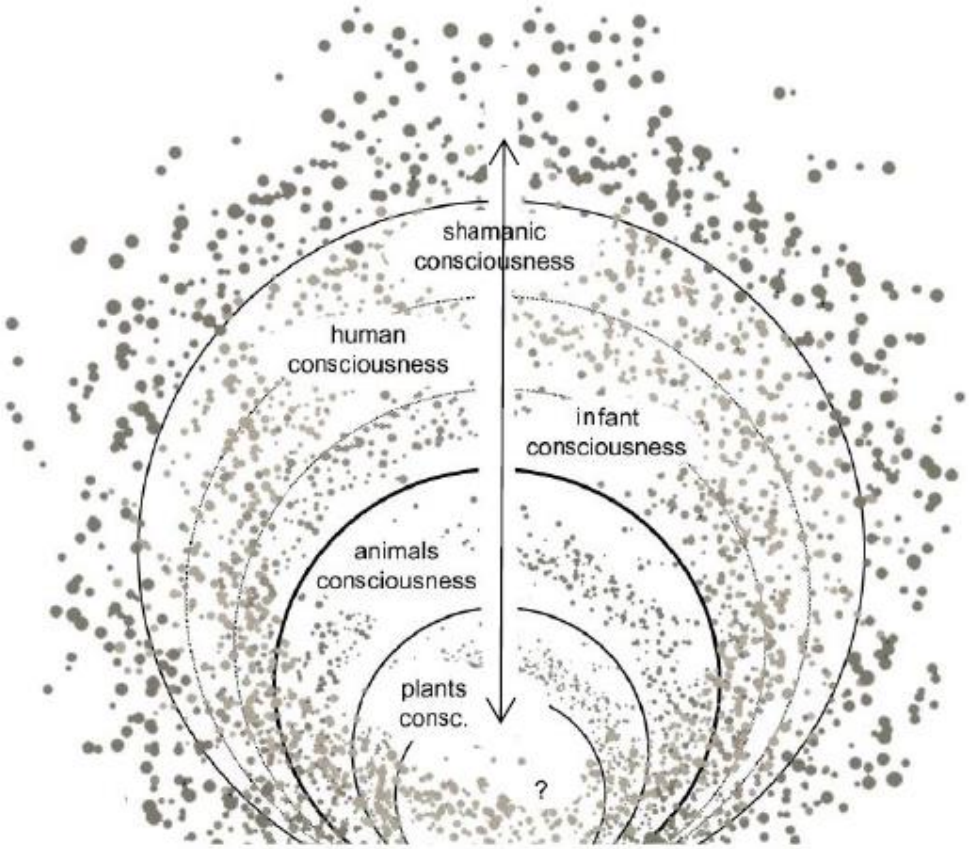

Figure 4: Model of the layers of global consciousness: Different layers of consciousness (e.g. plant consciousness, animal consciousness or human consciousness) are separated by circular lines representing the separating impenetrable boundaries. These layers share some common features, while they differ in the degree of development. In the case of the human layer we can find different levels of development – from the very simple consciousness of infants to complex and developed consciousness of people with shamanic consciousness (shamans, healers, prophets, etc.). The white vertical "path" with arrow in the middle shows the possibility of penetrating layers for a person with shamanic consciousness.

Particular layers are not permeable during normal states of consciousness for common people. Permeating the borders of different layers is possible for people with a shamanic level of consciousness. It could be also possible to cross the borders during altered states of consciousness and by using psychoactive substances and activities. However, new research of shamanic consciousness and altered states of consciousness caused by intoxication with psychoactive substances shows that these states can differ, even though they involve some of the same characteristics (Huels et al., 2021). Shamanic altered states of consciousness during rituals are described and studied quite often in psycho-ethnographic and neuropsychological literature (see e.g. Frecska, Birtalan, and Winkelman, 2023).

However, descriptions of the communication of people who have developed their consciousness with non-humans throughout everyday life can also be interesting. For example, the communication of the Aboriginal clever man Namadbara with a tree mentioned in Greenwood (2023) or the Igbo healer Da Ada Ocha's communication with medicinal herbs, described in Nweke (2023) show the penetration of layers of consciousness during everyday

situations outside the framework of the ritual. Their "interspecies" communication seems to take place on an intuitive or semi-conscious level. Moreover, when these specialists report about their communication with non-human counterparts, they describe it as if the plants intentionally talked to them. From their point of view, the initiation, intention and knowledge are thus not only a human feature.

6. Concluding remarks

Our analysis of various Indigenous consciousness-related concepts showed that many concepts cannot be satisfactorily linked with one another, much less with scientific concepts or English terms, such as consciousness, mind, and body. Indeed, some Indigenous meanings are closer to consciousness, some to mind, and some to soul, although this may be a result of dominant Western understandings that tend to compartmentalise these as distinct and separated. This implies that it is necessary to analyse a broader spectrum of related concepts to get a complex idea about the Indigenous conceptual knowledge systems of consciousness-related phenomena.

Here, a definition of new scientific concepts that would make it possible to reflect more on the diversity and at the same time the complexity of Indigenous concepts would help. The choice of words when describing Indigenous concepts is very important, and it is necessary to analyse the meaning in which they are used in detail; otherwise, they can be misleading (see also Lohmann, 2003bF). More deep and culturally sensitive ethnographic research on Indigenous concepts is needed. A lot of older ethnographic data showed colonial cultural bias and the etic approach of their authors (see e.g. Benites, 2015). For example, what "Spaniards conceived as soul in the Nahuatl vocabulary had more to do with consciousness" (Ciofalo, 2023).

An honest emic study of Indigenous concepts and cultural context can primarily help members of Indigenous groups in developing their own psychological/scientific practices and knowledge that will better suit the problems they have to solve. A better interplay between Indigenous and Western concepts and meanings is also suggested to be supportive for the culturally sensitive treatment of members of Indigenous groups in clinical and other settings.

Deep study of Indigenous concepts can also bring scientifically valuable information for understanding how humans in diverse cultures experience and conceptualise reality for its own sake. If we consider all that has been said so far about Indigenous concepts of consciousness in this issue, it is not surprising that humans do not play a central or exclusive role in most of analysed Indigenous conceptual systems. In addition, Indigenous concepts are often not hierarchical or mutually exclusive. Despite the fact that an Indigenous concept denotes the consciousness of individuals and their inner life, it may at the same time also be closely related to their surroundings. The person and their environment are not mutually exclusive; they are often interconnected. Individual consciousness is connected with the place where one lives (and where one's ancestors lived), with the community of people, with non-human beings, and with supernatural sphere (spiritual energy, global consciousness).

Indigenous ontologies, native science, and Indigenous psychology could also be inspirational and useful for Western science; therefore, mutual dialogue is needed. Western science is bounded by its monoculturalism, reductionism and standardised procedures, which sometimes do not allow highly complex phenomena to be studied. Indigenous psychologies and traditional knowledge, by contrast, are the results of centuries of practical experience, experimentation and observation. Indigenous cultures thus offer different views, approaches, and interpretations of the studied phenomena. This can be an inspiration for Western scientists to grasp the topic or idea and study it from a different perspective. Although indigenous approaches are not scientific (from the Western point of view), many practices and findings are the same or similar to the findings of Western science (see e.g. Stoffle et al., 2016).

The developmental conceptualisation of consciousness and the notion that consciousness exists at different levels in man and other creatures are the examples of how native concepts of consciousness could enrich the Western scientific discussions. While in some indigenous cultures such a concept has been embedded for a long time, in Western culture and science it appeared relatively recently. It was only ten years ago that scientists issued an official statement attributing consciousness to animals (Low et al., 2012). Despite the earlier assumptions of Western scientists that infants or animals do not possess any consciousness, current research shows that consciousness is not absent in these cases (Trevarthen and Reddy, 2017; Allen and Bekoff, 2017), but that it operates at different levels than in an ordinary person.

Another example where the Indigenous concept of humans and their world could be inspirational is the material and energetic components relations. In some Indigenous cultures described in this issue, the person or self is constituted of material and non-material parts. These parts do not stand in opposition; on the contrary, they form a functional unity. The non-material part is described as kind of energy coming from the supernatural sphere (cosmos). Through this energy, humans are connected with other beings and with the supernatural (cosmic) sphere (Tassell-Matamua et al., 2023; Ciofalo, 2023). The macro-cosmos exists and reflects itself as micro-cosmos in a person (Ciofalo, 2023). This Indigenous understanding is in accordance with systemic theory and contains notions analogical to quantum theory. Considering consciousness as a kind of energy (component) shared with other objects could be an interesting avenue for future research.

Experiencing and using collective effervescence (collective consciousness), altered states of consciousness, and synchronisation is also widespread in Indigenous cultures, mostly for healing purposes and maintaining relationships with other beings and entities. Research of consciousness in this area is still limited in Western science. Thus, Indigenous psychology and Indigenous science could be valuable sources of inspiration and material for Western science.

This does not mean that Western science should uncritically accept indigenous concepts; rather, it should be open to other perspectives and experiences. It is necessary to realise that the starting point of Western scientists rests on folk and emic cultural beliefs and lived experiences, just like the starting points of people in other cultures. It is likely that the above-mentioned earlier assumption of Western scientists that ascribed consciousness only to humans came from the Western cultural paradigmatic beliefs of scientists who carelessly allowed this assumption to influence their work. In this direction, knowledge of how different cultures may explain the same phenomena can help, for example, to start thinking about what the essence of consciousness is or whether animals are conscious. The perspectives and biases of different ethnic cultures can inspire correctives to one another. Future debates that consider the views and approaches from multiple perspectives and disciplines are needed in this interesting field of study of consciousness. In this sense, Indigenous science and ontologies would be relevant to join the scientific discussions about human and non-human consciousness.

Acknowledgements

Many thanks to the Prague College of Psychosocial Studies and the College of Applied Psychology for support of this project – both institutions participated equally in the preparation and implementation of the project. Many thanks to Hana Georgi and the reviewers for their inspiring comments to the previous versions of this manuscript. We appreciate the possibility of using the icons freely provided by pixabay.com.

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