

The Mapuche relational ontology: insights that can be articulated with school knowledge

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Abstract

This article addresses the relationship between Mapuche knowledge that emerges from and is preserved by family education, supported by the connection that the Mapuche people establish with territory and nature. The article aims to present data collected on Mapuche knowledge associated with the person-nature relationship. The methodology used is a documentary and descriptive review of scientific, normative and national and international dissemination literature, in order to systematize Mapuche knowledge associated with the person-nature relationship developed through the Mapuche relational ontology. Our main results show that there is Mapuche knowledge that can be incorporated into school education; however, through the school curriculum the State has invalidated, denied or omitted this knowledge, relying instead solely on Eurocentric and Western knowledge. Finally, we offer contributions obtained through this review, in order to enable the incorporation of Mapuche knowledge on the person-nature relationship into school education through dialectic mechanisms between school contents and the knowledge found in the Mapuche relational ontology.

Keywords: relational ontology – Mapuche knowledge – school curriculum.

Introduction

This article presents a theoretical discussion of the person-nature relationship built upon the Mapuche educational knowledge. Such knowledge has its origin in the connection that people establish with their territory and with nature and that they have preserved thanks to their family and community education (Quintriqueo, Quilaqueo, 2018). From that perspective emerges the relational ontology that explains the Mapuche worldview and the relationship established between the human, the material and the immaterial. This allows us to see the Mapuche

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knowledge associated to the person-nature relationship, making it possible to understand and explain the sustainable relationship that the Mapuche people have with their natural environment. The importance of studying this topic underlies the colonality of knowledge (Quijano, 2000) present in the subjects taught in Chilean schools, based on and supported by Western, Euro-centric knowledge. The result of this process can be seen in de-contextualized teaching and learning processes that respond to a reproduction of contents chosen through Western rationality, shaping in teachers, students and society as a whole a hegemonic and homogeneous view of representing the reality and in the way to conceive knowledge. This has also led to the invisibilization, negation or omission of knowledge that is not part of this Western rationality. As a consequence of this educational institutionality, Mapuche knowledge has come close to extinction. This poses the challenge of taking a deep look at the Mapuche relational ontology to understand the person-nature relationship through their own worldview. We will also propose theoretical and methodological guidelines that would make it possible to incorporate this knowledge into education in Chile, in a context of social and cultural diversity.

The assumption underlying this article is that the diversity of Mapuche knowledge about the relationship of people with their territory and nature can be articulated with the teaching and learning processes of education, in order to generate contextualized and meaningful learning within intercultural education.

The methodology used in this article is descriptive documentary review (Gómez *et al.*, 2014), which allows us to analyze, synthesize and interpret the main contributions that have been made about the Mapuche relational ontology in scientific, normative and divulgation literature. Thus, our process was conducted in four stages. The first one centered in the definition of the problem, referred to the Western Euro-centric approach that supports the educational system in Chile, and that imposes its supremacy in education without taking into account indigenous knowledge. In the second stage we conducted the search for information, by researching key concepts such as 1) relational ontology, 2) Mapuche relational ontology, 3) Mapuche worldview, 4) Mapuche knowledge and history, 5) Mapuche knowledge and natural sciences, and indigenous knowledge and school knowledge. In the third stage we organized the information based on the categorization of the literature, to account for experiences of articulation of indigenous knowledge with the school curriculum, specifically of relational ontology. Finally, the fourth stage consisted of the analysis of the information through the Mendeley reference manager: we carried out an inductive analysis through which we identified dimensions related to our object of study that make it possible to understand the phenomenon being studied.

In the following sections we address issues regarding the monoculturality present in educational institutions, the person-nature relationship from the Euro-centric Western view, relational ontology as a concept, and the Mapuche relational ontology about the person-nature relationship. Finally, we discuss and present conclusions with the aim of articulating Mapuche

knowledge with school education for the teaching of Natural Science through an intercultural educational approach.

Monoculturality in Chilean school education

Monoculturality began to be installed in Chilean school education when the Western Euro-centric modernity appropriated América (Castro-Gómez, 2000). Thus, educational monoculturality, as a power device, imposed sociocultural, political and economic patterns (Lander, 2000). In his respect, we believe that all the historical experiences, resources and cultural products were also articulated in a single global cultural order around the Western European hegemony (Quijano, 2016). With this hegemony, Europe concentrated the control of forms of subjectivity, culture, knowledge and modes of production, achieved through colonization processes, which included operations such as the expropriation from colonized populations of their cultural discoveries, the repression of the forms of production of knowledge of the colonized, as well as their patterns of production of meaning and their symbolic universe, forcing the colonized to learn partially the culture of their dominators in every regard that was useful for the reproduction of the domination (Quijano, 2015). To a considerable extent, such operations materialized as the schooling of the indigenous population.

Thus, the Chilean schooling system has been characterized from the start as a hegemonic mechanism that invisibilizes and homogenizes the relational ontology of the indigenous peoples of the country. In this sense, schools were born in Colonial times supported by a Western monocultural Eurocentric rationale that determines, recognizes and validates a single form of knowledge, thus shaping a single way to perceive the world (Arias *et al.*, 2018). Nowadays, schools continue playing their hegemonizing and homogeneizer role through a school curriculum whose selective contents and educational practices help to perpetuate the Western, Eurocentric monoculturality of the school system (Tubino, 2011; Quilaqueo *et al.*, 2014). Consequently, the students' knowledge, experiences and feelings are not regarded as variables of interest for education (Riquelme *et al.*, 2016; Battiste, 2019; Maders, Barcelos, 2020).

Finally, our understanding of the world has been limited by the imposition of Western Eurocentric thought, which has led to the negation and invisibilization of other forms of knowing and conceiving reality (Mayorca, Padilla 2014; Quijano, 2016). As a result, we have been educated in the belief that there is only one conception of the person-nature relationship, supported by the Western Eurocentric view.

The person-nature relationship through the Western Eurocentric view

In the Western Eurocentric view, the person-nature relationship is characterized mainly by its dualistic and universal character (Ingold, 2013) that separates the person from nature, classifying the non-human according to the characteristics of the human. This dichotomy establishes

an opposition between the person and nature, establishing a relationship of superiority of the human to the non-human in which nature is conceived as an accessible and inexhaustible source of resources that must be dominated and exploited. In this sense, humans began to colonize, tame, and transform nature to respond to their own interests (Albán, Rosero, 2016).

From that perspective, the colonizing pattern of thought about the person-nature relationship was the foundation of the development of science, technology and the economy. Thus, they commodified people's ways of life (Albán, Rosero, 2016; Escobar, 2003). Consequently, the Western Eurocentric view established a pattern of world power and a homogenizing discourse about nature, how we understand it, and how we relate to it (Albán, Rosero, 2016; Escobar, 2003; Lander, 2000), giving shape to a belief in an indefinite progress towards perfection that translated into the use and abuse of technological resources and nature in favor of human development.

Likewise, the model of the person forged by modernity was endowed with a strong rationality and a utilitarian view, which converged in what has been called the *pragmatism of Western thought* (Callahan, 1972; Castillos *et al.*, 2017). In this approach, the model of the person is placed omnipotently in the knowledge of the outside world and of oneself. Thus, human beings took for their own benefit the fruit of the earth and, according to their economic ambitions, have been exploiting the natural resources provided by nature (Pacheco, Osses, 2015).

Hence, the relationship between the person and nature that emerged from Western Eurocentric thought is the one that remains current and is promoted in our times, and is one of the main causes of the deterioration of the natural environment and our irresponsibility towards it (Callahan, 1972; Pacheco, Osses, 2015; Castillo *et al.*, 2017). The prevailing paradigm promotes the utilization of the environment in favor of economic development, without considering the damage done to nature and the negative long-term impact for human beings themselves.

Therefore, it is necessary to situate these other forms of relating to nature – or relational ontologies – since, by offering another conception of development, of nature, and a different way of social life, they constitute a necessary avant-garde movement to face the multiple social and ecological crises we are currently going through (Escobar, 2016).

Relational ontology

Relational ontology arose in the Latin American social and political context, characterized by the emergence of intercultural and social protest policies that questioned the Neoliberal economic model and its intervention in the life model of peasants and indigenous people (Soto, 2000). In that context of crisis and questioning of the Neoliberal model, social science disciplines such as anthropology reflected on their own historical and relational role in the study of groups like indigenous people and peasants. This reflection resulted in the emergence of new perspectives and approaches, giving rise to the ontological turn (Descola, 2011; Viveiros de Castro, 1993; Oslender, 2016; Serna, Del Cairo, 2016; Heywood, 2017).

The ontological turn, as an approach, seeks to question the set of modern rationalities and pose symmetrically another type of rationalities and ontologies (Soto, 2000). In that sense, it aims to question and counter the tendency of the classical vertical and homogenizing perspective of knowledge to foster a dialog of knowledge (De Sousa, 2010). The ontological approach confronts the dualism of nature and culture (Descola, 2011) established, which has been the basis of school knowledge used by the State. From that perspective, the Natural Sciences of the school curriculum are articulated through the binary concepts of nature and culture, resulting in the invisibilization, negation or omission of indigenous knowledge (Quintriqueo *et al.*, 2019). The ontological turn also proposes the de-hegemonization of knowledge, seeking to show that Western Eurocentric knowledge is not the only possible way of being and producing knowledge.

The indigenous relational ontology allows us to make visible and recognize different perspectives in the person-nature relationship, which is proposed as a counter-hegemonic way vis-a-vis the Eurocentric universal paradigm of nature, positioning it as a perspective that reveals the *pluriverse* (Escobar, 2016) of relational notions and ontologies between society and nature. Descola (2002) criticizes harshly the dualistic notion of nature that arose from capitalistic modernity, pointing out that this notion treats nature as an object of experimentation, survey, and exploitation. Descola also questions the projection of this perspective to other peoples and cultures that in no way share a cosmology that is not their own, as well as its imposition as the only way to see the world.

Relational ontology emerged from the social and peasant movements as an epistemological and socio-political alternative (Ulloa, 2011). It also became a permanent denunciation of the extension of a coloniality that operates in the way it names, enunciates, categorizes, and imposes categories and constructions from a hegemonic way of thinking (Quidel, 2016). Moreover, from that perspective there was a distinction of the dualistic thought between the human being and nature, between the human and the non-human, where the human is rational and reflective whereas the non-human lacks consciousness, soul and reflectiveness, with other cosmologies of the world where the relationship between these two dimensions is mediated by social schemes in which the non-human also possesses a soul, consciousness, and reflectiveness (Descola, 2002).

Thus, the conception of nature is understood as an entity with the capacity of action and with its own dynamism, which reassesses the view of nature as passive or pristine. Furthermore, both nature and culture are conceived as interactive social constructions that affect each other and modify the relationship of people with nature (Descola, 2002). This new way of understanding the relationships between humans and non-humans is understood as relational ontology.

In this sense, relational ontology is understood as the whole immense network of interrelationships and materiality that arises from the relationships between the human and the non-human (Escobar, 2016). Consequently, relational ontology offers the basis for a political on-

tology approach that allows us to understand the ethnic-territorial struggles in Latin America, as it argues that such struggles constitute defenses of worlds or ontology relationships of those peoples and minority groups that are affected by the invasion of their territories by Western modernity (Escobar, 2016).

From that perspective, indigenous thought is structured through a comprehensive view that relates language, art, spirituality, myths, and reason, establishing an organized set of their own interpretations, classifications, and explanations related to the experience, time, territory and context that characterize these human groups (Oses, 2009).

Hence, it is urgent that we revalue and make visible indigenous knowledge in an inclusive, tolerant, and comprehensive way. This would make it possible to implement the systems used by them, who have constructed their own knowledge, representations, and categories that explain their conceptions about the universe, nature, and their own norms to articulate their practices with nature to keep their environment sustainable based on relationships of respect and care (Oses, 2009; Albán, Rosero, 2016).

It is thus that, with the purpose of countering the undervaluation of this knowledge as a product of the process of globalization, it is possible to search for a way to dismantle the classical dualistic view and replace it with a multidimensional view of the territory (Escobar, 2012). For the specific context addressed by this article, we need to know the Mapuche relational ontology.

The Mapuche relational ontology

The Mapuche relational ontology is constituted by “the *che* (humans) and a number of non-human entities called *ngen* (associated to ecological niches), *ngenechen* (heavenly deity) and the *alwe* (ancestors)” (Rojas-Bahamonde *et al.*, 2020: 12). This relationship of the human with the non-human is ancestral and based on knowledge that provides the guidelines for the life of the Mapuche people (Briones, 2014). A characteristic of Mapuche knowledge is that it has been built from the human/non-human relationship that is articulated with spirituality (Quintriqueo, Cárdenas 2010; Quilaqueo, 2012; Quilaqueo *et al.*, 2016). There is also an interspecies relationship developed by the Mapuche that exemplifies their complex way of conceiving life (Quidel, 2016).

The Mapuche people have a double nationality, since they inhabit territories in Chile and in Argentina. According to the reports of the National Institute for Statistics (Instituto Nacional de Estadísticas, INE, 2018), in Chile the Mapuche people represent 79.84% of the total indigenous population living in the country, and they are also the most numerous. They are distributed from the region of Valparaíso to Los Lagos, and identify themselves according to the territory they inhabit. They call *Pikunche* the people who live in the northern sector, *Naqce* the ones who inhabit the lowlands, *Wentece* those who live on the plains, *Lafkence* the ones from the coastal zone, *Pehuenche* those who inhabit the mountainous areas, and *Wijices* the people who live in the southern territory.

This is relevant because the Mapuche people have constructed their relational ontology based on knowledge founded on the connection they establish with the territory, nature, and spirituality, making up a triad that generates a relationship of reciprocity with the environment (Quilaqueo, Quintriqueo, 2017). This relationship is called *kvpalme* and is the basis of *kvmpeñ*, a concept associated to kinship, and *tuwvn*, linked to territorial identity (Quintriqueo, Quilaqueo, 2006; González-García, Contreras-Fernández, 2013). The *kvpalme* has economic, political and spiritual implications because it represents the social and cultural heritage of the family and the community. Moreover, it is essential to the construction of the dialogic relationship the Mapuche establish with their environment (Millaman, 2008).

All of the above is part of the Mapuche upbringing, which takes place within the family and the community and underscores conceptual, procedural and attitudinal contents that have been taught by parents, grandparents, *kimce* and traditional authorities. The *kimce* is a person dedicated to cultivating Mapuche knowledge, the social and cultural aspects of families and different territorial communities, known as the community's sage (Quilaqueo, 2012; Quintriqueo, Quilaqueo 2019). In this sense, the Mapuche upbringing has been fundamental in the preservation of Mapuche knowledge, allowing the communities to maintain their cultural identity despite its invisibilization, negation, and omission by Chilean school education, which has also been a way of introducing Neoliberalism in their territory. Thus, the Mapuche family upbringing has remained in place with the aim of educating in values, to shape individuals who develop a relationship of living well in a given territory, projecting the complementariness that must exist between people and nature (Quilaqueo *et al.*, 2016). This is because the knowledge that orients Mapuche upbringing emerges primarily from the direct relationship they have with the environment and their everyday life (Quintriqueo, Torres 2012; Quilaqueo *et al.*, 2016).

This Mapuche knowledge is called *kimvn*, a concept that could be translated as "knowing", "learning" and "feeling". The *kimvn* has been transmitted through myths, legends, stories and family histories from their father's and their mothers' sides.

From that perspective, the *kimvn* is part of contents of oral tradition associated to nature, people and society, such as 1) relationship with the environment, 2) healthy life, 3) knowledge of living beings, and 4) natural cycles.

In this sense, the Mapuche view characterizes and teaches a person-nature relationship defined, in the first place, as a symbiosis (Quintriqueo, 2010). Secondly, they regard nature as an opportunity to feed animals and families with the products that emanate from the earth (Hasen, 2014). Thus, they develop a sustainable relationship that allows them to cultivate their lands, respect agricultural cycles and, as a result of that, the land is neither eroded nor exploited indiscriminately (Pacheco, Osses, 2015). This responds to the Mapuche view that indicates that all the spaces in their territory are living beings, and therefore the territory and the Mapuche can live together in harmony (Guerra *et al.*, 2019; Quidel, 2016).

In this sense, the Mapuche relational ontology, following an annual cycle, organizes time and space, and it is based on this organization that they conduct the social and cultural activities of the family. This cycle is respected because it signifies the rest and rebirth of life in all its expressions, human and non-human.

From that perspective, the *kimvn*, linked to nature, teaches them to live according to the principles seen in nature itself (Quintriqueo, Torres 2012), learned through observing-doing, playing-imitating and listening-remembering (Arias-Ortega, 2019; Valiente, 1993). It also encourages pro-environmental, frugal, altruistic and equitable behavior (Pacheco, Osses, 2015) that allows them to identify future risks and a sustainable behavior. For this reason, it is necessary to recognize indigenous knowledge about the person-nature relationship in order to develop a relationship of respect, care and balance with nature from an early age (Pérez, Argueta, 2015), to be able to establish a sustainable relationship that would be a great contribution of the Mapuche relational ontology through a school education with an intercultural perspective.

From the above we can conclude that for the Mapuche people nature represents a political subject that affects the political and social life of the humans that belong to the community (Briones, 2014). For this reason, it is of the utmost importance to include nature in the moments of discussion and dialog of political issues in the communities. This contributes to preserving the *kvme mogen*, the living well of the community with its environment.

The *kvme mogen* is a concept in *mapuzugun* that characterizes living well in the Mapuche perspective. Living well is a theoretical approach that explains the principles and values that rule several indigenous peoples in their social relationships and their relationships with their environment (Gudynas, 2011). Living well is a construction of society, founded on the coexistence of human beings in diversity and harmony with nature (Acosta, 2013). This concept emerged at the end of the 1990s, supported by Latin American social movements and a feeling of rejection of the ideal of development promoted by Neoliberalism (Vanhulst, Beling, 2013). Therefore, it is a contemporary discourse born as a criticism of the Neoliberal model, but also as a challenge for a cultural reconstruction that would allow us to live harmonically in the present, assuming and respecting difference and striving for union in diversity (Quintana, 2017). Thus, living well is based on sustainable life, justice, a solidary and communitarian economy, reciprocity, the re-valuation of ancestral practices and knowledge, and complementariness (Gudynas, 2011). The aim of these practices is not the accumulation of capital but to establish quotas for a sustainable exploitation of resources. They want to reproduce their culture and ways of life in a balance with the means and resources that sustain living well (Acosta, 2013). They are also concerned about living in harmony, and this is achieved through the valuation of their entire habitat; that is, by reclaiming rights of property, the right to live as a community and in accordance to the knowledge they have preserved for thousands of years (Gudynas, 2011).

The *kvme mogen* has been practiced for centuries, but due to the current environmental emergency its revitalization has become necessary. Its knowledge is needed for a sustainable

development as well as for generating a model of resistance to predatory capitalism and the hegemony of Western culture (Vanhulst, Beling, 2013; Quintana, 2017). The *kvme mogen* is rooted in the preservation of balance and has remained in place through different ceremonies and rituals (Hasen, Cortez 2012).

Finally, the *kvme mogen* is a dialog open to diversity for the construction of sustainable societies (Leff, 2002). From this perspective, it presents a possibility of change from an economic rationale to an environmental rationale, which poses the challenge of engaging in a permanent and flexible dialog that allows for the relationship of different discourses as an alternative to environmental devastation. Therefore, it is necessary to review and make visible the Mapuche knowledge that emerges from their upbringing and is linked to the *kvme mogen* and school education, since it is thus that new generations of citizens with an intercultural perspective and an environmental awareness can be educated.

Contributions of the Mapuche relational ontology to school education

The contributions of Mapuche relational ontology to school education emerge from a descriptive documentary review of the scientific, normative, and divulgation literature. Several authors (Valiente, 1993; Pacheco, Osses, 2015; Bascopé, Caniguan, 2016; Vergara, Albanese, 2017; Quilaqueo, Quintriqueo, 2017; Quintana, 2017; Guerra *et al.*, 2019; Arias-Ortega, 2019) have revealed in their research contributions that they have organized around six items:

- 1) The Mapuche relational ontology makes visible knowledge that can be articulated with the subjects of Natural Sciences and History, Geography, and Social Sciences, which are linked to the objectives of learning on sustainability included in the school curriculum proposed by Chile's Ministry of Education (MINEDUC, 2018). In that sense, the sustainable behavior that the Mapuche people establish with their natural environment is explained by their relational ontology, founded on the relationship they establish from an early age with the territory and nature. This knowledge is a necessary content for school education due to the environmental crisis that our planet is going through, and could be included as a transversal content in the subjects of Natural Sciences and History, Geography and Social Sciences.
- 2) The Mapuche *kimvn* is constituted by conceptual, procedural and attitudinal contents that are developed in their family and communitarian upbringing. A segment of this knowledge refers directly to the person-nature relationship. This knowledge could enable teachers, students, and families to develop a different view of the person-nature relationship established by school education.
- 3) Based on their relational ontology, the Mapuche people organize their harvest, sowing and sociocultural practices according to the cycles of nature. This would make it pos-

sible to understand the pertinence of modifying the extractionist rationale introduced by Western Eurocentric colonialism, deeply rooted in Latin American elites, which since Colonial times until now have regarded extractionism as an articulating axis within their national economic production models (Salazar, Pinto, 2009; Quijano, 2014).

- 4) The Mapuche relational ontology, although taught within the family and the community, is learned with educational methods such as seeing-doing, imitating-learning, and learning-playing. This translates into experiential learning, since it is associated with the experience of what has been lived through. The articulation of this principle with school education would make it possible to generate culturally, socially and territorially pertinent learning experiences, based on observation, experimentation, and experience.
- 5) The *kvme mogen* provides an opportunity to learn about a view of the world based on respect, valuation of the environment, justice, and reciprocity. These values are desirable for the comprehensive formation of people and can be articulated with the contents taught specifically in the subject of Citizenship Education, and transversally in all subjects.
- 6) In regard to Intercultural Bilingual Education, it is necessary to incorporate the Mapuche relational ontology into it to revitalize and value Mapuche knowledge in order to counter the loss of valoration that Mapuches have suffered in recent decades. This becomes necessary because the evidence shows that in its implementation the Intercultural Bilingual Education has been centered in the literacy of the *mapuzungun*, but not in the revitalization of the Mapuche language or culture.

Finally, these six contributions of Mapuche relational ontology to school knowledge can be articulated with the teaching and learning processes of the subjects of History, Geography and Social Sciences, and Natural Sciences.

Discussion

Our discussion is centered in the relationship between school education and its inscription in the Western Eurocentric thought, which has forced students, teachers, and the educational community work with a conception of the person-nature relationship based on the modern perspective. This dualistic and universal view in which the human being is positioned as superior over everything that is non-human, has possibilities of transformation through the recognition and validation of the knowledge that emerges from indigenous relational ontologies (in this case, that of the Mapuche) to turn these obstacles into challenges to work through school education with the Mapuche knowledge.

The first obstacle has to do with the personal experiences of the students, which are not considered to be a variable of interest in their upbringing. The Mapuche relational ontolo-

gy promotes a relationship between knowledge, family and history, providing students with knowledge with their own contextual and significant identity. In this sense, it would be important to articulate and incorporate this family dimension of the Mapuche *kimvn* with the school curriculum to promote a more active participation of the family in the educational community and strengthen interpersonal relationships among all the agents of the school community.

A second obstacle is the different rationalities, an aspect not taken into account in the teaching and learning processes in school education. However, in the Mapuche relational ontology indigenous/*Kimvn* school knowledge adopts a flexible, dynamic and changing posture, accepting that knowledge may vary according to the time, the place, and the context.

The third obstacle is the one represented by the affective variables that are denied in the classroom. In the Mapuche relational ontology knowledge is closely linked to the individual in search of a comprehensive development, which contemplates all the dimensions of the human being in a community. This consideration would allow us to address the emotional area of students and their self-knowledge.

The fourth obstacle is related to the lack of knowledge about Mapuche knowledge by teachers, who do not have an intercultural perspective in their initial formative processes as teachers. This is because the formative itineraries of the majors in Pedagogy in Chile do not contemplate this type of knowledge.

Finally, a fifth obstacle is one related to the folklorization of Mapuche knowledge, which is scarcely used in school education. This devalues this knowledge and raises doubt about its validity. An example is the celebration of the Mapuche New Year in educational institutions where different activities are held to commemorate this day, but without a cultural framework that contributes to the development in indigenous and non-indigenous children of the Mapuche knowledge related to the importance and valorization of this date.

Also, it is important to mention that Mapuche knowledge is not dogmatic, nor obsolete. It is flexible, contextualized in the territory (Quidel, 2016), still current in Mapuche family and communitarian upbringing.

From that perspective, the dialog of knowledge between the school curriculum and Mapuche relational ontology would make it possible to articulate the frameworks of reference of students, teachers, the school, and the family (Arias-Ortega, 2019), allowing for a dialog between individuals from different cultures in favor of significant, quality teaching and learning processes with a meaning for all students, indigenous and non-indigenous.

Conclusions

There is a basis of knowledge associated to the person-nature relationship in the Mapuche relational ontology such as the *kimvn*, specifically the *kvme mogen*, which can be articulated with school education in its content about sustainability, in particular in the subjects of Natural

Sciences and Historia, Geography and Social Sciences. The Mapuche knowledge that can be articulated with school contents is related to the environment, a healthy life, and knowledge of living beings and natural cycles.

Articulating the Mapuche relational ontology with school education would allow us to reclaim the autonomy and validity of Mapuche knowledge, to shape pertinent and contextualized teaching and learning processes through a dialog of knowledge (De Sousa, 2010; Arias-Ortega, 2019), thus permeating the actions of teachers to offer, from the regional context, situated knowledge so that their teaching and learning processes become pertinent socially, culturally, and territorially, because relational ontology is gestated through everyday family and community life lived in contact with their territory and nature.

Thus, through the Mapuche relational ontology, the conception of the person-nature relationship positions the human being in a state of respect and care of their environment, allowing for concrete actions that make it possible to educate people to face the environmental crisis we are going through.

Finally, we need to develop a way of thinking associated with the territories, cultures and knowledge of the peoples and their ontologies (Escobar, 2012), in order to modify and deconstruct the Eurocentric formation that has taken root in Latin America, and specifically in Chile.

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References

- Acosta, A. (2013). *El Buen Vivir. Sumak Kawsay, una oportunidad para imaginar otros mundos*. España: Icaria.
- Albán, A.; J. Rosero (2016). Colonialidad de la naturaleza: ¿imposición tecnológica y usurpación epistémica? Interculturalidad, desarrollo y re-existencia. *Nómadas*, (45), 27-41. <https://doi.org/10.30578/nomadas.n45a2>
- Arias-Ortega, K.; S. Quintriqueo; V. Valdebenito (2018). Monoculturalidad en las prácticas pedagógicas en la formación inicial docente en la Araucanía, Chile. *Revista Educacao e Pesquisa*, (44), 1-19. <http://dx.doi.org/10.1590/S1678-4634201711164545>
- Arias-Ortega, K. (2019). Métodos y prácticas socioculturales mapuches en la escuela: desafíos de la relación educativa profesor mentor y educador tradicional. In Quintriqueo, S.; D. Quilaqueo (eds.). *Educación e interculturalidad*. Chile: Ediciones Universidad Católica de Temuco, 29-50.

- Bascope, M.; N. Caniguan (2016). Propuesta pedagógica para la incorporación de conocimientos tradicionales de Ciencias Naturales en primaria. *Revista Electrónica de Investigación Educativa*, 18, 161-175. <https://redie.uabc.mx/redie/article/view/1143>
- Battiste, M. (2019). *Decolonizing Education: Nourishing the Learning Spirit*. Australia: Purich Publishing.
- Briones, C. (2014). Nuestra lucha recién comienza: vivencias de pertenencia y formaciones Mapuche de sí mismo. *Revista de Antropología Avá*, 10. <http://argos.fhycs.unam.edu.ar/handle/123456789/356>
- Callahan, D. (1972). Living with the New Technology. *The Center Magazine*, 5(4), 4-14.
- Castillo, A.; J. Suárez; J. Mosquera (2017). Naturaleza y sociedad: relaciones y tendencias desde un enfoque eurocéntrico. *Revista Luna Azul*, (44), 348-371. http://www.scielo.org.co/scielo.php?script=sci_abstract&pid=S1909-24742017000100021&lng=en&nrm=iso&tlng=es
- Castro-Gómez, S. (2006). *La hybris del punto cero. Ciencia, raza e ilustración en la Nueva Granada (1750-1816)*. Colombia: Centro Editorial Javeriano. <https://repository.javeriana.edu.co/handle/10554/41212>
- Descola, P. (2002). La antropología y la cuestión de la naturaleza. In Palacio, G.; A. Ulloa (eds.). *Repensando la naturaleza, encuentros y desencuentros disciplinarios en torno a lo ambiental*. Colombia: Universidad Nacional de Colombia-Sede Leticia, 155-171. <https://repositorio.unal.edu.co/bitstream/handle/unal/57002/958818102X.preliminares.pdf?sequence=10&isAllowed=y>
- Descola, P. (2011). Más allá de la naturaleza y la cultura. In Montenegro, L. (ed.). *Cultura y naturaleza, aproximaciones a propósito del Bicentenario de Colombia*. Colombia: Jardín Botánico de Bogotá José Celestino Mutis. <http://www.ceapedi.com.ar/imagenes/biblioteca/libreria/393.pdf>
- De Sousa, B. (2010). *Descolonizar el saber, reinventar el poder*. Montevideo: Ediciones Trilce.
- Escobar, A. (2003). Mundo y conocimientos de otro modo. *Tabula Rasa. Revista de Humanidades*, (1), 52-86. <https://www.redalyc.org/pdf/396/39600104.pdf>
- Escobar, A. (2012). Cultura y diferencia: la ontología política del campo de cultura y desarrollo. *Wale'keru. Revista de Investigación en Cultura y Desarrollo*, 1(2), 7-16. <https://dugi-doc.udg.edu/bitstream/handle/10256/7724/WALEKERU-Num2-p7-16.pdf?sequence=1&isAllowed=y>
- Escobar, A. (2016). *Sentipensar con la Tierra: Las luchas territoriales y la dimensión ontológica de las epistemologías del Sur*. *AIBR, Revista de Antropología Iberoamericana*, 11(1), 11-32. <http://www.aibr.org/antropologia/netesp/numeros/1101/110102.pdf>
- Gómez-Luna, E.; D. Navas; G. Aponte-Mayor; L. Betancourt-Butirago (2014). Metodología para la revisión bibliográfica y la gestión de información de temas científicos, a través de su estructuración y sistematización. *DYNA* 81(184), 158-163. <https://revistas.unal.edu.co/index.php/dyna/article/view/37066/44433>

- Guerra, D.; W. Riquelme; C. Skewes (2019). ¿Qué es un lago? El lago Maihue y los otros modos de vivir los paisajes lacustres en el sur de Chile. *Revista Estudios Avanzados* (31), 21-41. <https://doi.org/10.35588/idea.v0i31.4273>
- González-García, F.; D. Contreras-Fernández (2013). Diversidad vegetal: de los mapuches a la enseñanza formal chilena. *Magis, Revista Internacional de Investigación en Educación*, 6(12). Edición especial Enseñanza de las ciencias y diversidad cultural, 153-167. <file:///Users/vivianavillarroelcardenas/Downloads/adminpujojs,+9.pdf>
- Gudynas, E. (2011). Buen Vivir: Germinando alternativas al desarrollo. *América Latina en Movimiento*, (462). <http://www.alainet.org/es/revistas/462>
- Hasen, F. (2014). Desarrollo y Buen Vivir desde un enfoque ecosistémico. La experiencia local del lago Neltume, Chile. *Sustentabilidades*, (10). http://www.sustentabilidades.usach.cl/sites/sustentable/files/paginas/10-08_0.pdf
- Hasen, F.; M. Cortez (2012). Aproximaciones a la noción mapuche de küme mogñen: Equilibrio necesario entre el individuo, su comunidad y la naturaleza. *Revista Electrónica de Psicología Iztacala*, 15(2). <file:///Users/vivianavillarroelcardenas/Downloads/32368-72765-1-PB.pdf>
- Heywood, P. (2017). The Ontological Turn. *The Cambridge Encyclopedia of Anthropology*. <http://doi.org/10.29164/17ontology>
- Ingold, T. (2013). Anthropology beyond Humanity. *Suomen Anthropology* 38(3), 5-23. https://www.waunet.org/downloads/wcaa/dejalu/feb_2015/ingold.pdf
- Instituto Nacional de Estadísticas (2018). *Síntesis de resultados CENSO 2017*. Chile. <http://www.censo2017.cl/descargas/home/sintesis-de-resultados-censo2017.pdf>
- Lander, E. (2000). Ciencias sociales: saberes coloniales y eurocéntricos. En Lander, E. (comp.). *La colonialidad del saber: eurocentrismo y ciencias sociales: perspectivas latinoamericanas*. Buenos Aires: CLACSO, 4-23. <http://biblioteca.clacso.edu.ar/clacso/sur-sur/20100708034410/lander.pdf>
- Leff, E. (2000). *Saber ambiental: sustentabilidad, racionalidad, complejidad, poder*. México: Siglo XXI.
- Maders, S.; V. Barcelos (2020). Educacao escolar indígena e intercultura: Um diálogo possível e necessário. *Arquivos Analíticos de Políticas Educativas*, 28(167). <https://doi.org/10.14507/epaa.28.4755>
- Mayorca, E.; A. Padilla (2014). Medioambiente, naturaleza y ecología: un problema racional. *Revista Panorama Económico*, 22(16), 151-168. <https://doi.org/10.32997/2463-0470-vol.22-num.0/2014/163>
- Millaman, R. (2008). The Mapuche and Climate Change in the Chilean Neoliberal Economic System. *Indigenous Affairs*, (1-2), 66-71. https://www.iwgia.org/images/publications/IA_1_2_08_The_Mapuche.pdf
- Ministerio de Educación (2018). *Bases curriculares. 7º básico a 2º medio*. Chile. <https://media.min-educ.cl/wp-content/uploads/sites/28/2017/07/Bases-Curriculares-7º-básico-a-2º-medio.pdf>

- Quintriqueo, S.; P. Cárdenas (2010). Educación intercultural en contextos mapuches: hacia una articulación entre el conocimiento mapuche y conocimiento disciplinario en ciencia. In Quilaqueo, D.; C. Fernández; S. Quintriqueo (eds.). *Interculturalidad en contexto mapuche*. Argentina: Editorial EDUCO, 89-126.
- Quintriqueo, S.; H. Torres (2012). Distancia entre el conocimiento mapuche y el conocimiento escolar en contexto mapuche. *Revista Electrónica de Investigación Educativa*, 14(1), 16-33.
- Quintriqueo, S.; D. Quilaqueo (2018). *Educación e interculturalidad: Aproximación crítica y decolonial en contexto indígena*. Chile: Universidad Católica de Temuco.
- Quintriqueo, S.; D. Quilaqueo (2019). Modelo de intervención educativa intercultural en contexto indígena. Chile: Ediciones Universidad Católica de Temuco.
- Quintana, R. (2017). La educación ambiental y su importancia en la relación sustentable : Hombre-Naturaleza-Territorio. *Revista Latinoamericana de Ciencias Sociales, Niñez y Juventud*, 15(2), 927-949. <https://doi.org/10.11600/1692715x.1520929042016>
- Riquelme, E.; D. Quilaqueo; S. Quintriqueo; E. Loncon (2016). Predominancia de la educación emocional occidental en contexto indígena: necesidad de una educación culturalmente pertinente. *Psicología Escolar y Educativa*, 20(3). <https://doi.org/10.1590/2175-3539201502031038>
- Rojas-Bahamonde, P.; M. Mellado; G. Blanco-Wells (2020) Sobrenaturaleza mapuche: extractivismo, seres no humanos y miedo en el Centro Sur de Chile. *Revista Austral de Ciencias Sociales*. <https://doi.org/10.4206/rev.austral.cienc.soc.2020.n38-01>
- Salazar, G., J. Pinto (2009). *Historia contemporánea de Chile I: Estado, legitimidad, ciudadanía*. Chile: Ediciones Lom.
- Serna, D.; C. Del Cairo (2016). The Ontological Turn Debates on Modern Naturalism. *Revista de Estudios Sociales*, (55), 193-204. <https://doi.org/10.7440/res55.2016.13>
- Soto, V. (2000). *Desafíos de la educación y el curriculum en el proceso de modernización en Chile*. Chile: Editorial Tiberiades.
- Tubino, F. (2011). El nivel epistémico de los conflictos interculturales. *Revista Construyendo Nuestra Interculturalidad*, (6), 1-14.
- Ulloa, I. (2011). Concepciones de la naturaleza en la antropología actual. In Montenegro, L. (ed). *Cultura y naturaleza. Aproximaciones. Aproximaciones a propósito del Bicentenario de la independencia de Colombia*. Colombia: Jardín Botánico José Celestino Mutis, 25-45.
- Valiente, T. (1993). *Didáctica de la ciencia: de la vida en la educación primaria intercultural bilingüe*. Ecuador. Ediciones Abya-Yala.
- Vanhulst, J.; A. Beling (2013). Buen vivir: la irrupción de América Latina en el campo gravitacional del desarrollo sostenible. *REVIBEC - Revista Iberoamericana de Economía Ecológica*, 21, 15-28.
- Vergara, T., V. Albanese (2017). Repensar la enseñanza de las ciencias en la educación intercultural bilingüe: ¿Un nuevo modelo de enseñanza? *X Congreso Internacional sobre Investigación*

en *Didáctica de las Ciencias*. *ENSEÑANZA DE LAS CIENCIAS*, (Extraordinario), 5053-5057.

https://ddd.uab.cat/pub/edlc/edlc_a2017nEXTRA/23_repensar_la_ensenanza_de_las_ciencias_en_la_educacion_intercultural_bilingue.pdf

Viveiros, E. (1993). Le marbre et le myrte: de l'inconstance de l'âme sauvage. In Becquelin, A.; A. Molinié (orgs.). *Mémoire de la tradition*. Nanterre: Société d'Ethnologie.