



# Environmental Paucity and Anthropocentrism in Textbooks on the Occupation of the Araucanía, and a Solution From the Fields of Environmental History and Environmental Education

Pobreza y antropocentrismo medioambiental en los libros de texto que tratan la ocupación de La Araucanía, y una solución desde la historia ambiental y la educación ambiental

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## Abstract

There will be no progress in the interculturality of textbooks associated with the topic of the military occupation of the Araucanía region if attention is only paid to political or social matters. The environment should also be included. This study provides an environmental analysis of secondary education textbooks that cover this content on the history of Chile. A mixed research strategy and a multiple research design were employed. The sample was composed of eight textbooks used in the secondary school subject of History and Geography from 2008 to 2021. The data were subjected to a quantitative content analysis and a documentary analysis. The results show that there is only limited representation of biodiversity and ecosystems, as well as a lack of didactic activities that foster environmentally friendly behavior and attitudes among students. More importantly, the environment is addressed from an anthropocentric perspective, which does not consider the biocentric environmental relationship that tends to characterize aboriginal peoples and, in this case, the Mapuche people. A more effective link with the tenets of environmental history and environmental education could correct these biases. This would foster methodologies that are more focused on human diversity, the role of the environment in human history would be highlighted, and the content of textbooks would be aligned with the sustainability that is required in the modern world.

**Key words:** Araucanía, Chile, environmental education, environmental history, textbooks

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## Resumen

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La interculturalidad en los libros de texto asociados a la temática de la ocupación militar de La Araucanía no avanza si solo presta atención a cuestiones sociales o políticas. El medio ambiente también debe ser integrado. El presente estudio realiza un análisis ambiental a los libros de texto de enseñanza media asociados a dicho contenido de la historia de Chile. Se ocupó una estrategia de investigación mixta y un diseño de investigación múltiple. La muestra estuvo compuesta por seis libros de texto de la asignatura de Historia y Geografía usados en educación secundaria desde el año 2008 al 2021. Los datos fueron sometidos a un análisis de contenido cuantitativo y a un análisis documental. Los resultados muestran que existe una limitada representación de la biodiversidad y de los ecosistemas, y que no existen actividades didácticas que fomenten en los estudiantes una actitud y comportamiento más sustentables con el medio. Más importante aún, el medio ambiente es tratado desde una óptica antropocéntrica, lo cual no considera la relación medioambiental biocéntrica que suele caracterizar a los pueblos aborígenes y, en este caso, a los mapuche. Por tanto, una vinculación más efectiva de los contenidos con los principios de la educación ambiental y de la historia ambiental podría corregir estos sesgos. Así, se fomentarían metodologías más tolerantes a la diversidad humana, se elevaría el rol del medio ambiente en la historia humana, y se alinearían los contenidos de libros de texto con la sustentabilidad que necesita el mundo de hoy.

**Palabras clave:** Araucanía, Chile, educación ambiental, historia ambiental, libros de texto

## Introduction

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The military occupation of the Araucanía region of Chile took place in the second half of the 19th century and was part of the territorial expansionism that was carried out by the Chilean state during that period, for both political and economic reasons. The state coveted the fertile soils of the region to expand wheat cultivation, and considered it essential to exercise sovereignty over the area to prevent the arrival of foreign powers that would endanger the nation. The indigenous population of the region, the Mapuche, also had to be civilized in accordance with the ruling power, as they were considered an ethnic group on the fringes of modernity by virtue of the logic of progress. The occupation of the region was carried out through military operations of various scales between 1859 and 1884, after which the territory was reorganized to facilitate its colonization by Chileans and foreigners, a process that continued until at least the first decade of the 20th century. For Mapuche families, this process resulted in the loss and alteration of their way of life, as they had to abandon their fields—being relocated by the Chilean authorities in other areas—as well as being surrounded or colonized by settlers who were alien to their culture. Although this process was similar to what happened in other areas of the planet, it could be said that it is distinguished by the persistent discontent among Mapuche communities that compare the current use of state force with the military procedures carried out in the 19th century.

Even teaching about the Chilean occupation of Araucanía has been affected by this context of socio-political instability. Students, who are descended from the Mapuche people and the colonists, have their own views on the past, leading to irreconcilable positions. Teachers are obliged to implement intercultural educational strategies

without having sufficient training (Montanares-Vargas, 2017). Similarly, a national monocultural curriculum has been exposed, which, by prioritizing national and global content, does not provide sufficient space for local perspectives (Montanares-Vargas, 2017a).

This paper thus addresses this educational problem through an analysis of textbooks used in the subject of History, Geography, and Social Sciences, which is responsible for addressing the issue of the occupation of Araucanía in Chilean classrooms. We argue that one way to correct the monocultural bias of Chilean education is to pay attention to the way in which these materials include the environment in their explanations of the past. We include background information provided by previous studies that demonstrate the scant interest in including environmental themes, showing that their contents exclude Mapuche knowledge and their perspective (Quintriqueo et al., 2015; Sanhueza et al., 2019; Turra-Díaz, 2015; Mansilla et al., 2016).

In the case of the occupation of Araucanía, the situation appears to be particularly delicate, not only because there are few works that address this issue from the perspective of education, but because those that do exist are reduced to explaining the dearth of attention in the curriculum to the physical violence experienced by the Mapuche at the hands of the state or the complex social composition of the region (Montanares-Vargas, 2017; Montanares & Heeren, 2020; Riedemann, 2009; Rojas, 2010; Sanhueza et al., 2019). Although the ecological and social impact of forestry companies established in Araucanía is discussed (Pinto, 2021), there is no in-depth analysis of the origins of these problems, a weakness that includes Mapuche historians (Cayuqueo, 2017; Marimán et al., 2006; Pairicán, 2021). Explaining the origin of these omissions, disinterest, or an excessive interest in the social or political history of Chile is beyond the scope of this paper. What is certain is that, in recent years, environmental history has revealed that there have been significant changes in ecosystems since the second half of the 19th century (González & Torrejón, 2020) and contrasting—and frequently conflicting—ways of relating to the environment between Mapuche and non-Mapuche people (González-Marilicán, 2022)<sup>1</sup>.

These environmental issues can be useful for current efforts aimed at promoting intercultural education in history, by integrating the Mapuche view of the past based on a theme that also lies behind the current conflict between the Chilean state and the Mapuche people. Indeed, it would be possible to present the contrasting environmental attitudes between the two societies that settled in the region once occupied by the state. The latter, represented by the Chilean and European colonists—and particularly by the ruling elites—would have been distinguished by a dualistic and anthropocentric posture towards nature; that is, by understanding the human being as an entity that is separate from the environment and as someone who merely exploits nature for economic benefit. The Mapuche, on the other hand, would be characterized by a more holistic, mutualistic, or biocentric relationship with nature (González & Torrejón, 2020). Likewise, we could reflect on the ecological changes brought about by the Chilean and European colonization of the region and the consequences this has had on the Mapuche way of life.

Therefore, as long as the environmental issues that are inherent to the occupation of Araucanía are not studied in depth, we are missing out on a valuable opportunity to fortify intercultural education in the region. This paper seeks to contribute to resolving this problem by answering the following main research question: To what extent and in what way has the environment been included in secondary school textbooks on History, Geography, and Social Sciences that discuss the occupation of Araucanía and which were used between 2008 and 2020?

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1. By "non-Mapuche" we refer to the European and Chilean colonists and the military and political officials who arrived in the Araucanía with the Chilean state in the second half of the 19th century.

## Conceptual Framework

### The occupation of Araucanía and how it is taught

As already stated, teaching of history has been affected by the consequences of the occupation of the Araucanía region. Teachers must teach content to students who are heavily influenced by the media and by what their family and friends say or think (Montanares-Vargas, 2017a). This creates a significant challenge for teachers, as they have to find appropriate strategies to connect with historical preconceptions that only recent history instills in students with particular force (McLean, 2011). Furthermore, initial teacher training has not considered the approach to sensitive or controversial issues such as Araucanía (Montanares-Vargas, 2017a). Indeed, teachers may attempt to avoid these topics in the classroom or address them only tangentially for fear of being accused of indoctrinating students (Toledo et al., 2015). Another problem is that there may be a lack of certainty to approach history from a Mapuche perspective (Montanares-Vargas, 2017a). This is particularly important, because it may not only reveal issues in teacher training, but also problems with the curriculum. In fact, the textbooks have been criticized for not explicitly including the injustices committed against the Mapuche people by the Chilean state (Riedemman, 2012, p. 291), for not providing a detailed reflection of the social memory of the Mapuche people (Sanhueza et al., 2019, p. 16), and for failing to effectively explain the social wealth that emerged in the region after the arrival of the colonists (Montanares & Heeren, 2020).

It is true that the curriculum has sought to promote respect for cultural and ethnic diversity, and as well as divergent opinions by means of its cross-cutting objectives (Morales et al., 2016), but this is not fully achieved in practice due to the demands of an education system that ends up prioritizing national and world history ahead of local history (Montanares-Vargas, 2017b). According to Elizabeth Montanares (2017; 2017a), a teacher from the Araucanía region who has specialized in controversial issues, only by correcting these shortcomings will it be possible to advance towards peace in the region by means of education.

The controversial subject of the occupation of Araucanía therefore calls for integrative and innovative approaches that involve cooperation, critical thinking, informed debate, social justice, the use of multiple perspectives, and the pursuit of peace (McCully, 2012; Montanares-Vargas, 2017a; Toledo et al., 2015). Environmental history and environmental education can serve those purposes.

### Environmental history and environmental education

Both environmental education and environmental history possess qualities that can make them successful complementary approaches to address controversial issues such as the occupation of Araucanía. Environmental education, for example, can be helpful not only because it seeks to raise awareness, change people's attitudes towards the environment, and establish sustainable behavior with respect to nature (Novo, 1998), but also because, by definition, it is aimed at promoting teamwork, humility, and respect for diversity, among other objectives (Ministerio del Medio Ambiente [MMA], 2018; Novo, 1998). Furthermore, it is a type of education that attempts to foster a positive and optimistic attitude towards life among students (García et al., 2020; Vliegthart et al., 2018), something that would fit very well into history classes that are often plagued by negative stories. Moreover, this would make the textbook for the subject of History, Geography, and Social Sciences a teaching device that is more consistent with the environmental education that is currently promoted by Chilean state and international organizations (MMA, 2018).

On the other hand, environmental history, a sub-discipline of history that is focused on studying the relationship of humans with the environment over time, can be helpful for the interculturality of the curriculum by being concerned with the different values or ideas that have existed with respect to nature (McNeill, 2019), with

environmental injustices where ethnic minorities and poor groups are often those most affected (Wakild & Berry, 2018), and, above all, with intending to reduce the prominence of human beings to benefit nature and its role in history (Hughes, 2017). Indeed, environmental history seeks to highlight the action of the environment on human affairs through natural phenomena such as floods, earthquakes, and plagues of insects, and through the natural resources that satisfy certain human needs.

It is important to clarify that environmental history does not seek to use the environment as a determining factor to explain the past. Instead, it aims to serve as a unifying focus, where all other histories converge to account for a more complete or complex past. To the teachers Emily Wakild and Michelle Berry (2018, p. 24), environmental history is not just talking about “insects or trees”, but about using a transdisciplinary approach to augment and make the understanding of capitalism, imperialism, and industrialization, among other phenomena, more comprehensive.

Therefore, what has already been said about textbooks and the way in which they address the occupation of the Araucanía region could be enriched and developed more completely through environmental history. If Andrea Riedemann (2009) criticized school textbooks for showing the Mapuche people as a mere recipient of the actions of the state, it can be argued with environmental history that this passivity has also been seen with the environment, as it has been included as an actor that merely satisfies the economic needs of the Mapuche and non-Mapuche people. Similarly, while Montanares and Heeren (2020) criticized textbooks for focusing too much on territory and not on the social complexity that began to emerge with the occupation of Araucanía, environmental history can be used to argue that the same category of territory can be made more complex, rather than solely being a container of natural resources or ecosystems awaiting exploitation or organization by the Chilean state.

Due to the inclusive nature of environmental education and environmental history, and their potential contribution to improving the intercultural perspective in the subject of History, Geography, and Social Sciences, they will be included in the analysis in this paper and, more specifically, when discussing ways to correct the problems identified in the textbooks.

## Methodology

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The research design was extensive and multiple, and used a mixed approach. The authors chose this approach because more accurate conclusions can be drawn from the data analysis with triangulation of methods (Bryman, 2016). In this study, we adopted an interpretivist epistemological orientation and a constructionist ontological stance, both in line with qualitative research (Bryman, 2016). From these perspectives, it was assumed that textbooks and their representation of the environment in history are not only sympathetic to the social or cultural context of their authors, but also to the bias or values of those who submit them to analysis. It could therefore be said that the purposes of this research are largely determined by the desire to reduce the prominence of social history in Chile and thus promote a kind of environmentalism in the History, Geography, and Social Sciences curriculum.

The sample consisted of six textbooks used by the Chilean Ministry of Education, from 2008 to 2021. With the exception of the textbooks published by Santillana in 2009 and 2021, all were obtained via the internet. The school textbooks are for the subject of History, Geography, and Social Sciences and are the editions for students. From 2017 onwards, the content associated with the occupation of the Araucanía region was included in the ninth-grade course, along with the topics related to the construction of national states in 19th century world history. Although the content on Araucanía is also taught in elementary education, we have chosen to analyze secondary school textbooks because that is the educational stage in which the authors of this paper have specialized. The criteria for the selection of the sample were temporal and institutional. The analysis of the sample began in 2008, because that was when Chile's Ministry of Education included environmental education

in the national curriculum, through the so-called transversal objectives (MMA, 2018). This is important because it assumes that the textbooks would include greater attention to the natural environment. Furthermore, the fact that the sample is from books distributed and funded by the Ministry of Education ensures that it is accurate and, therefore, representative of the official or government position on how certain content should be taught. It should be noted that in the books published from 2016 to 2020 there were no alterations to the content on the topic of the occupation of Araucanía, so only the text of the 2016 edition of Morales et al. will be cited as representative of them.

Table 1.  
*Textbooks reviewed*

Sample	Authors	Publisher	Year published	Year in classrooms	Level
1	Icaza et al., 2021	Santillana del Pacífico S.A.	2021	2021	9th grade
2	Morales et al., 2016	Santillana	2016, 2017, 2018, 2019	2017, 2018, 2019, 2020	9th grade
3	Mendizábal & Riffo, 2013	SM	2013	2013, 2014, 2015, 2016	10th grade
4	Méndez et al., 2009	Santillana del Pacífico S.A.	2009	2010, 2011, 2012	10th grade
5	Müller et al., 2009	Santillana del Pacífico S.A.	2009	2009	10th grade
6	Donoso et al., 2003	Santillana del Pacífico S.A.	2003	2008	10th grade

*Source: prepared by the authors.*

The data analysis consisted of subjecting the primary sources—which in this case were the textbooks and the way they addressed the topic of the occupation of Araucanía—to a qualitative and quantitative investigation. The qualitative examination was based on a documentary analysis that criticized the textbooks externally and internally (Tosh, 2015). The external critique took into account the authorship of the sources, as well as the temporal and spatial context of their production, while the internal critique analyzed the presence and use of the environment within the contents. This latter critique will be described below in greater detail when discussing the quantitative analysis of the data. The conjunction of these criticisms allowed us to obtain a better understanding of the intentionality or possible reasons behind the way in which the texts describe the environment. It is important to highlight this because quantitative content analyses do not always investigate the reasons behind the dimensions extracted from the sources. In other words, they are not always able to explain the reasons for the phenomena studied (Bryman 2016, p. 307). The quantitative part of the methodology consisted of manually carrying out a quantitative content analysis (Bryman 2016). This type of analysis was used because, according to Alan Bryman (2016, p. 289), it is a useful research method to identify changes and continuities in a given phenomenon over time. The dimensions or categories examined were, in part, similar to those of Hernández et al. (2018) in their study on whether Spanish textbooks respond to environmental education. In order to analyze each of the books, a sheet was designed to facilitate the collection of the data, which were subsequently coded in order to carry out a quantitative assessment of them. This coding is specified as follows:

1. Type of natural element: there are five sub-dimensions, where 0 = Not applicable, 1 = Soil, 2 = Flora, 3 = Watercourses and bodies of water, 4 = Fauna, 5 = Air. For example, the following was noted in one of the textbooks: “The Mapuche population was eradicated from the occupied areas and relocated in indigenous reductions<sup>2</sup>, that is, lands provided under concessions by the state with a community format, generally located on land with poor quality soils and in mountainous or coastal areas” (Morales et al., 2016, p. 234). In this case, “soils” and “lands” were considered to be environmental terms, but given that the latter were actually occupied as arable or livestock land, they were understood as synonyms. Therefore, in this excerpt there is only one natural element, the soil. The number of times that each type of natural element appears was also counted. Furthermore, a second part of this dimension was added, in case another type of natural element was found in the source analyzed. The sub-dimensions were the same as those explained here.

2. Type of human relationship with the natural environment: There are three sub-dimensions, 0 = Not applicable, 1 = Economic relationship (economic benefit), 2 = Cultural relationship (e.g., religious relationship, where nature is seen as an inherent part of human life; conflictive relationship, where the forest, among other ecosystems, is seen as an obstacle or a threat). These sub-dimensions were measured according to the type of information included in each paragraph. For example, economic quotations are shown in Table 3. A second part of this dimension was also added.

3. Content approach: There are two sub-dimensions, 1 = Anthropocentric, 2 = Biocentric. Anthropocentric is understood as when the natural world is represented as a reservoir of resources awaiting exploitation for human benefit (Hernández et al., 2018, p. 88). Examples of this approach have been included in Table 3 using representative quotations. Meanwhile, the biocentric or holistic approach is understood with contents that extol coexistence with nature (Hernández et al., 2018, p. 88). For example, the distribution of lands carried out by the state “had a profound impact on the Mapuche community. The change in the ownership of the land affected a foundational element of their worldview, since for this people the land is part of their culture and not solely an economic resource” (Morales et al., 2016, p. 234).

4. Critical approach: This refers to the level at which textbooks criticize the relationship between human beings and the environment, with a view to promoting a sustainable ethic in students. The sub-dimensions were: 1 = Not critical (the relationship between human beings and the environment is not questioned and sustainable attitudes are not promoted), 2 = Critical (the relationship between human beings and the environment is questioned and sustainable attitudes are promoted).

5. Action: This dimension concerns whether or not the textbook promotes specific, environmentally responsible actions, such as recycling materials, reducing water consumption, avoiding disposal of waste, etc. Two sub-dimensions were selected: 1 = does not promote action, 2 = promotes specific actions.

6. Percentage of environmental content: This was calculated based on the number of subtopics or paragraphs that include environmental concepts. A subtopic or paragraph was considered environmental if it contained at least one type of natural element.

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2. Settlements.

Table 2.  
*Data sheet*

<p><b>Natural element</b></p> <p>0. Not applicable</p> <p>1. Soil</p> <p>2. Flora</p> <p>3. Water courses and bodies of water</p> <p>4. Fauna</p> <p>5. Air</p>
<p><b>Natural element II</b></p>
<p><b>Human relationship with the environment</b></p> <p>0. Not applicable</p> <p>1. Economic relationship</p> <p>2. Cultural relationship</p>
<p><b>Human relationship with the environment II</b></p>
<p><b>Focus of contents</b></p> <p>1. Anthropocentric</p> <p>2. Biocentric</p>
<p><b>Critical focus</b></p> <p>1. Not critical</p> <p>2. Critical</p>
<p><b>Action</b></p> <p>1. Does not promote action</p> <p>2. Promotes specific actions</p>
<p><b>% environmental contents</b></p>

*Source: prepared by the authors.*

Table 3.  
*Anthropocentric quotations*

Authors	Representative quotations
Icaza et al., 2021	“The valleys of Araucanía were considered the best for agriculture. Their aim was to increase wheat production and sell it to the mining areas of northern Chile and Australia” (p. 160)
Morales et al., 2016	“The increase in the population in northern Chile ... along with the explosive increase in demand for wheat thanks to the gold rush in the United States and Australia, focused attention on the fertile valleys of Araucanía to develop agriculture and industry” (p. 231)
Mendizábal & Riffo, 2013	“The plan for the occupation of Araucanía ... consisted of two central points: to advance the frontier line to the Malleco River and to subdivide and sell the land that remained in the hands of the state to ‘industrious’ colonists who would develop agriculture and industry” (p. 194)

Méndez et al., 2009	“The expansion into these territories between 1881 and 1883 meant the nationalization of the occupied lands, which were subsequently auctioned or sold to Chileans and foreign colonists .... They began intensive agricultural exploitation” (p. 181).
Müller et al., 2009	“The opening of trade in the mid-19th century awakened interest in the frontier area due to its territorial size and productive potential” (p. 171).
Donoso et al., 2003	“To the east of the Nahuelbuta mountain range ... the excellent land for raising livestock and growing wheat and legumes had led to the expansion of agrarian property beyond the Biobio” (p. 177).

*Source: prepared by the authors.*

## Results and Discussion

### Type of natural element and percentages of environmental content

It is interesting to note that there is generally high environmental content in each of the sources reviewed, with a presence of around 60%, and, in the case of the textbook published in 2009, it represents 100% of the contents. However, this promising picture changes if we consider the types of environment included in the historical explanations.

Indeed, the environment is not included in its full biodiversity. For example, the environmental terms most frequently mentioned in the textbooks refer to land and livestock. The former appears in all of the textbooks reviewed and is generally linked to arable land, either for Mapuche or non-Mapuche use. It is followed by the animal kingdom, which is only really represented through the livestock managed by the Mapuche, including cattle, horses, and sheep—although at no time is this specified. It is notable that on no occasion is the livestock introduced by the colonists mentioned, as this could give rise to interesting discussions about biological invasions, as well as the ecological and cultural alterations caused as a consequence of this. However, unlike the soil, the fauna represented by livestock does not appear in the textbooks used in classrooms from 2010 to 2012. On the other hand, only in one case—in the textbook used in 2009—were the forests mentioned.

It is clear that the environment is not merely these elements. There are ecosystems, such as forests, rivers, lakes, the sea, and marshes, that deserve as much mention as livestock and soil. In the words of environmental historian John McNeill (2001), it could be said that only the pedosphere and biosphere have been included in textbooks, while the lithosphere, hydrosphere, and atmosphere are missing. This lack of integrity or diversity can also be seen in the biosphere itself. The fauna in the region seem only to be comprised of cows, horses, and sheep, while no mention is made of native fauna, such as the pudu, guanaco, and puma, among other animals, which would have been negatively affected by the consequences of the Chilean occupation of the region (González & Torrejón, 2020). On the other hand, it is surprising that practically nothing is said about native forests, because by the second half of the 19th century these were one of the ecosystems that has been affected by the colonization (González, 2020).

## Approach and type of human-environment relationship

The limited variety of the descriptions of the environment is not the only problem, as there is also an issue with how the relationship between humans and the environment is portrayed. Indeed, anthropocentric quotations abound in each of the cases reviewed, where natural resources—considered in terms of livestock and land—exist purely to satisfy human economic needs.

It could be counter-argued that these passages of text already show an environmental approach to the content by talking about natural resources exploited by humans. However, as can be seen below, the explanations of how humans interact with the environment can be more complex than this, more in accordance with the Mapuche worldview and, therefore, more intercultural.

A similar bias can be seen in the didactic resources included in the textbooks. Their attention is generally focused purely on social and political issues. The most illustrative case is the textbook produced by Morales et al. (2016), which only includes testimonies from experts who speak about the social consequences of the occupation of Araucanía for the Mapuche people, which cannot be included here for reasons of space. Indeed, it is quite striking that in the same textbook, a historical photo, so rich in environmental terms, has been cropped in order to portray a human group in the foreground.

The problem with this edited source is that it is not only unrelated to any activity in the book, but that it suggests the essence of what is being argued here, namely that the explanations of the occupation of Araucanía have centered on humans. The original photo could have been useful for the students to gain an idea of size of the native forest of that time, its diversity, and the usefulness or problems that it represented for the Mapuche people and/or the Chilean and foreign colonists.

In any case, a similar image has been included in the current textbook, this time linked to an activity with the students.

The task invites the students to examine the photograph and use it to identify the economic, social, and territorial consequences of the occupation of Araucanía for the Mapuche people. Although the approach is still anthropocentric—since the concern is about the Mapuche people—it is a valuable opportunity to look more deeply at environmental issues such as those mentioned in this paper.

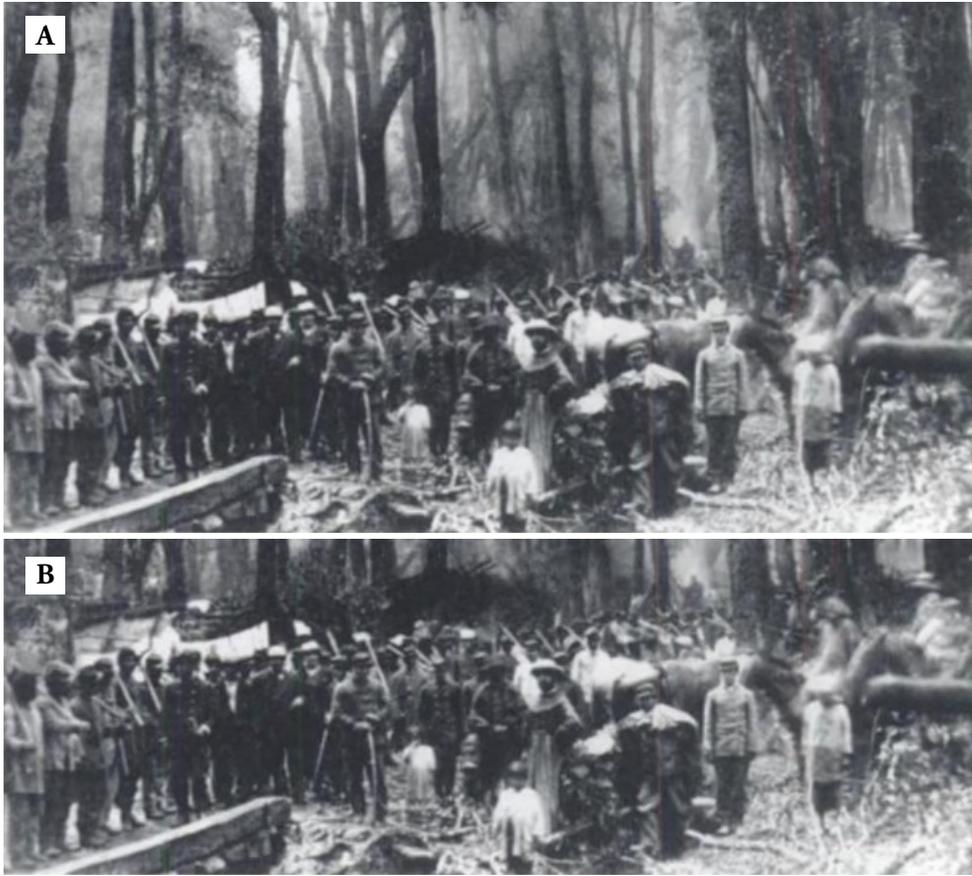


Figure 1. *Cornelio Saavedra's Chilean troops in Araucanía*

Source: A. Public domain image. [https://commons.wikimedia.org/wiki/File:Tropas\\_de\\_Cornelio\\_Saavedra\\_en\\_la\\_Araucan%C3%ADa.jpg](https://commons.wikimedia.org/wiki/File:Tropas_de_Cornelio_Saavedra_en_la_Araucan%C3%ADa.jpg) B. Morales et al. 2016, p. 235.



Figure 2. *Chilean troops arrive in Villarrica in 1883*

Source: Icaza et al. (2021), p. 161.

The general monotony of the didactic resources could be diversified with fieldwork, a research methodology typical of environmental education and environmental history (Vliegthart et al., 2018; Wakild & Barry, 2018). At least for students from Araucanía, this could represent a valuable opportunity to learn about the native tree species that were exploited by the colonists when they arrived—and which are now threatened by increasing urbanization—to learn about natural spaces that are or were sacred to the Mapuche, and to work with other types of historical sources—such as landscapes—and disciplines such as geography and archaeology. Environmental history is essentially interdisciplinary (Hughes, 2016).

However, there are three cases in which the relationships of human beings with their natural environment are shown from the cultural perspective, giving space to a more biocentric view of history and, therefore, one that is more in accordance with the Mapuche reality. For example, in the textbook by Morales et al. (2016), the following was included regarding the consequences of the occupation on Mapuche life—which is the same quotation as used in Icaza et al., 2021—“The change in the ownership of the land affected a foundational element of their worldview, since for this people the land is part of their culture and not solely an economic resource” (p. 234). Mendizábal and Riffo (2013) also wrote that “the economic transformations in Mapuche society provoked ... social and cultural changes marked by the deterioration of traditions based on the close connection of the indigenous people with the land, considered the cornerstone of their worldview” (p. 197).

Although these are brief quotations, they are sufficient for an intercultural and environmental explanation of the past. In fact, with these we could examine the attitudinal differences between Mapuche and non-Mapuche people towards the environment, revealing the aboriginal view of history. Although there is still a lack of research on the Mapuche's ecological relationship with the environment in the past, it is possible that by the second half of the 19th century, the Mapuche may have been more interested in ecological balance than the non-Mapuche, by offering thanks and maintaining a reciprocal relationship with nature through ceremonies such as the *nguillatun* (González & Torrejón, 2020). On the other hand, the Chilean state and the colonists would have generally behaved with a somewhat dualistic and extractivist attitude towards the environment, being unrestricted by ethics like those of the Mapuche. For the colonists, the forest was mainly an obstacle to be removed in the name of agriculture and civilization (González-Marilicán, 2022), which is, curiously enough, a view very similar to that included in textbooks written more than a century after the events!

Nevertheless, the three quotations found in the textbooks are also valuable because they can allow us to examine the human relationship with nature in more detail. For example, during the occupation of Araucanía, there were changes in the environmental attitudes of many Chileans and foreigners who arrived in the region. While there was initially the predominant idea that the forests should be exploited economically for the colonization of the region, towards the end of the century greater concern emerged regarding their conservation (González-Marilicán, 2022). The people began to attribute a greater value to the ecological role of forests. There would also have been attitudinal differences between the colonists themselves, since people from Mediterranean areas—such as Italy and Spain—without dense forests like those in southern Chile, would have displayed a greater negativity towards the forests in the region because they were not accustomed to such an environment. This situation would have been somewhat different from the experiences of settlers from more humid and heavily forested areas, such as Germany or southern Chile itself (González, 2020a).

This could also produce another benefit for intercultural education, and one not necessarily linked to the Mapuche people, namely, that during the occupation of Araucanía there were different experiences of colonization, each with its own challenges, hardships, and joys. Examining these stories in the classroom can be a powerful impetus for interculturality, since it would provide more depth to a history that tends to be represented in binomials or essentialisms, as if the Mapuche were a homogeneous ethnic group versus another more or less

uniform group represented by the colonists. This would make it possible to achieve the recommendation of Montanares and Heeren (2020) regarding the importance of highlighting the cultural diversity of the Araucanía region during its recent history.

As a consequence, environmental history would produce greater complexity in the understanding of the past depicted in textbooks, since it would enable in-depth discussion of the way in which cultures are related to the environment, thus avoiding generalizations or simplistic explanations of history. There would have been multiple ways of relating to nature during the occupation of Araucanía, rather than solely the Mapuche and non-Mapuche forms. It would be an innovation in the way in which the relationship between humans and nature is traditionally portrayed, namely, one in which the former merely exploits the latter for economic purposes.

The contrasting ways of relating to nature of Mapuche and non-Mapuche people could be very well utilized by environmental education, as they would pave the way for discussion of how human beings have related to their environment in history and what lessons we can draw from them to promote a more sustainable present.

The anthropocentric approach shown here is possibly the most important argument in this paper for four reasons. Firstly, because by opposing the biocentric attitudes and behaviors that usually distinguish aboriginal peoples and the Mapuche people in particular, it reveals one of the most direct barriers to the intercultural potential of the textbooks. Indeed, only the Chilean perspective of natural resources is being taught, perpetuating the homogenization or the monocultural nature of the Chilean educational system. Secondly, because in combination with an external critique of the primary sources analyzed here, it would suggest the causes of this anthropocentric representation of the environment in the explanations of history, which are structural or institutional. Indeed, the texts were almost entirely written by academics trained within a Western-European-Chilean education model and who are therefore biased in their way of seeing the past and the human relationship with nature. The authors also studied at universities that are distant from Araucanía. Even the Ministry of Education itself, which is responsible for commissioning textbooks, would have an anthropocentric conception of the subject, since the only time the non-human natural environment appears in the learning objectives associated with the occupation of Araucanía—in the phrase “land distribution”—it does so from a passive perspective, as if it were only available to humans for their economic benefit (Ministerio de Educación, 2016, p. 205). There are obviously more profound reasons, such as the way in which the West and Chile have related to the environment over time, but this is a discussion that goes beyond the scope of this study. Third, the anthropocentric approach revealed is important because by comparing it with the strategies proposed here, historical thinking, which is so essential for sensitive or controversial topics in Chilean historical education, could be fostered among students (Sáez-Rosenkranz & Salazar-Jiménez, 2016). Finally, making such an approach visible in textbooks would enable discussion of new ways to integrate nature into human history. As is shown below, the natural world can exert other effects on human affairs, besides serving as a reservoir of resources waiting to be exploited by humans.

## Criticism and action

The focus of the environmental content in textbooks is also reflected in the way in which the relationship between humans and the environment is criticized and in the promotion of actions leading to a more sustainable relationship with the natural environment. Indeed, a fundamental aspect of environmental education is to encourage changes in people's behavior. It is not sufficient to simply teach ecological-scientific concepts, because at present “we have a wealth of knowledge and overwhelming evidence of [environmental] problems” that “does not translate into marked institutional or personal actions that lead to the conservation of biodiversity,” (Vliegthart et al., 2018, p. 534).

Nevertheless, none of the textbooks encourage such questions to be asked to students. The activities proposed discuss only human issues, such as the economic and social consequences of the Chilean occupation for the Mapuche population. There is nothing mentioned about the negative changes in ecosystems and biodiversity due to human activity. It is perfectly possible to discuss or criticize state economic policies and their effects on the environment and society, such as the unusual flooding from rivers such as the Imperial and Cholchol that destroyed both Mapuche and non-Mapuche settlements in Nueva Imperial and Puerto Saavedra, which is likely to have been influenced by the agricultural expansion promoted by the state (González & Torrejón, 2020). This same expansion would also have left numerous people in rural areas vulnerable to plagues of locusts, which, according to testimonies from 1891 and 1892, left a large part of the region's rural population in poverty (González, 2020a). The Chilean colonization policy could also be another issue to discuss, as everything seems to indicate that the environment to be inhabited by the colonists was not adequately assessed. Toltén, for example, suffered such a level of isolation and inclement weather that, in the late 19th century, it appeared to be on the verge of abandonment (González, 2020a). These examples—and others that cannot be cited for reasons of space—may not only help to criticize the way in which humans have behaved with respect to nature, but could also constitute evidence that nature can have a significant impact on human life and history. These topics could complement debates or discussions on the consequences of the occupation included in some textbooks as in Donoso et al., (2003), Mendizábal and Riffo (2013), and Morales et al. (2016).

Finally, everyday life does nothing invite us to have responsible and sustainable consumption habits with regard to the environment. The difference in the value given to the environment between Mapuche and non-Mapuche people at the end of the 19th century could be used for environmental education, by contrasting the different attitudes that existed—and which still exist—towards the environment in Araucanía. This was already done in a certain way, with lesson 3, entitled “Imperialism”, in unit 3 of the textbook published by Morales et al., (2016, p. 174).

## Conclusions

The textbooks for the subject of History, Geography, and Social Sciences, used from 2008 to 2021, and which address the topic of the Chilean occupation of the Araucanía region in secondary education, contain a considerable environmental component, as they include numerous terms associated with the natural environment. However, these environmental references are poor with respect to terms mentioning biodiversity and ecosystems. The environment is also represented from an anthropocentric point of view, that is, as a passive actor that only serves as a stage for human events and as a reservoir of natural resources waiting to be exploited by humans. These problems could be lessened with the help of environmental education and environmental history. Other ecosystems and organisms would thus be included in the explanations of the past; the capacity of the environment for effects on human events would be repositioned; traditional ways of understanding the interaction between Mapuche and non-Mapuche and their relations with the environment could be seen in greater complexity; environmentally-friendly attitudes and behaviors would be encouraged; and teaching would be complemented with cooperative work methodologies. It should be noted that other aspects of the textbooks—such as secondary written sources and infographics—were not analyzed in depth due to reasons of space. An analysis of these would help enrich the conclusions reached here.

The high specificity of the results obtained should not prevent more general implications from being observed. Indeed, if what is proposed is considered, it would contribute to the peace required in classrooms in Araucanía and would help align the subject of History with the sustainability needed by the planet. Perhaps the environment can help create a truly inclusive curriculum, since it would not only address ethnic or cultural differences between humans, but also the space that has supported, regardless of their social, ethnic, or national origin.

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