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# Elaboration of axiological maps through the analysis of simple correspondences in the speech of the educator, Inés María Mendoza Rivera

Elaboración de mapas axiológicos mediante el análisis de correspondencias simples en el discurso de la educadora Inés María Mendoza Rivera

通过分析教师 Inés María Mendoza Rivera 演讲中的简单对应关系来制定价值论图

Разработка аксиологических карт на основе анализа простых соответствий в дискурсе педагога Инес Марии Мендосы Ривера

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## Abstract

Our research problem is part of the crisis of values facing today's society. The analytical method implemented is the axiological analysis of content technique of a quantitative nature. To support the approaches, values are addressed from an educational perspective and their importance in the integral formation of the human being. The results obtained in the research agree with the ideals of Professor Inés María Mendoza Rivera. This educator contributed to the defense of the Spanish language teaching and the advance of education in Puerto Rico in the mid-20th century. The objectives of this study are: to check whether or not the different levels of the Hall-Tonna model have the same impact on the epistolary and narrative discourse of Inés María Mendoza and establish axiological maps from the cross of the different discourses considered and the greater or lesser predominance of the various axiological levels of the Hall-Tonna model.

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Key words: Education, Values, Hall-Tonna, Inés María Mendoza Rivera.

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## Resumen

Nuestro problema de investigación se enmarca en la crisis de valores que enfrenta la sociedad contemporánea. El método analítico implementado es la técnica de análisis de contenido axiológico de naturaleza cuantitativo. Para sustentar los planteamientos se abordan los valores desde la perspectiva educativa y su importancia en la formación integral del ser humano. Los resultados obtenidos en la investigación coinciden con los ideales de la profesora Inés María Mendoza Rivera. Esta educadora contribuyó con la defensa de la enseñanza en el idioma español y el desarrollo de la educación en Puerto Rico a mediados del siglo XX. Los objetivos de esta investigación son: comprobar si los diversos niveles del modelo de Hall-Tonna tienen o no la misma incidencia en el discurso epistolar y narrativo de Inés María Mendoza y establecer mapas axiológicos a partir del cruce de los diferentes discursos considerados y el mayor o menor predominio de los diversos niveles axiológicos del modelo de Hall-Tonna.

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Palabras clave: Educación; Valores; Hall-Tonna; Inés María Mendoza Rivera.

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## 概要

我们研究主题背景为当代社会面临的价值危机。分析方法为对价值论内容进行定量分析。我们从教育的角度探讨了价值观及其在人格教育中的重要性。本文研究结果和Inés María Mendoza Rivera老师的想法相吻合。这位教育工作者在20世纪中叶为捍卫西班牙语教学和波多黎各的教育发展做出了贡献。这项研究的目的是：验证Hall-Tonna模型的不同水平在Inés María Mendoza的书信和叙事话语中是否表现出相同的发生率，并根据被考虑在内的不同话语和Hall-Tonna模型的不同价值论水平的主导地位之间的交叉来建立价值论图。

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关键词: 教育; 价值; Hall-Tonna; Inés María Mendoza Rivera.

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## Аннотация

Проблема нашего исследования вписывается в кризис ценностей, с которым сталкивается современное общество. Применяемый аналитический метод представляет собой методику аксиологического контентного анализа количественного характера. Для того чтобы сохранить эти подходы, ценности рассматриваются с точки зрения образования и их значения для целостного формирования человека. Результаты ис-

следований совпадают с идеалами профессора Инес Марии Мендосы Ривера. Этот педагог внес свой вклад в защиту преподавания испанского языка и развитие образования в Пуэрто-Рико в середине 20-го века. Целями данного исследования являются: проверка того, имеют ли различные уровни модели Холла-Тонны одинаковую распространенность в эпистолярном и повествовательном дискурсе Инеса Марии Мендосы, а также создание аксиологических карт на основе пересечения различных рассматриваемых дискурсов и более или менее преобладания различных аксиологических уровней модели Холла-Тонны.

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Ключевые слова: Образование; Ценности; Холл-Тонна; Инес Мария Мендоса Ривера.

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## Introduction

UNESCO (1995), considering the principles put forward in the Vienna Declaration and Programme of Action of the World Conference on Human Rights, states the following:

All human rights are universal, indivisible and interdependent... the significance of national and regional particularities and various historical, cultural and religious backgrounds must be borne in mind, but it is the duty of States, regardless of their political, economic and cultural systems, to promote and protect all human rights and fundamental freedoms. (p. 7)

The United Nations Organization (1999) resorts to this statement to conclude its Declaration for a Culture of Peace, where it promotes the acquisition of values, attitudes and skills such as solidarity, creativity, civic responsibility, and ability to resolve conflicts by non-violent methods. To promote an “authentic civic education” which implies an international reach, critical thinking must be introduced into all levels of the curriculum.

Villegas (2015) points out that “the human beings, in their self-preservation instinct, build their culture on a value basis upon those actions that provided them with adequate levels of security and well-being, making in turn these values suitable for their social construction” (p.35). This wording clarifies that values in fact make up the core of the welfare of human beings. Hence, values are the roadmap for social construction and for the development and security of each individual. We fully recognise the importance of the culture of values and how those closely related to social environment govern human beings.

Values represent and define the reason and purpose of laws and standards, as they lend meaning, legitimacy and relevance to amendments. Moreover, they are the right thing to do and, in this sense, they justify all applicable laws, rules and regulations. Unless the enactment of legislation is based on values, it does not give a meaning to life (Gervilla, 2000).

In Puerto Rico, we keep to the ideas outlined by Gervilla (2000) when analysing the curricular and conceptual frameworks from elementary to higher education. We reaffirm this on the basis of the research carried out by Aponte (2015), in which the obtained results call for urgent attention to review the policy documents of university study programmes for teachers’ training. Likewise, in his analysis of social studies curriculum framework, Villegas (2015) highlights that educational reform documents are based on and dominated by political-partisan cultures, which adversely affect the development of value-based educational policies.

From the social point of view, values represent cultural ideals: conceptions about what is good or bad, desirable or undesirable. They lie upon social practices, standards and institutions and help setting the preferences, attitudes and behaviors that individuals regard as legitimate or illegitimate and empowered or discouraged in different social contexts. Underlining its importance, Schwartz (2012) reminds us of the following:

Values have been at the heart of social sciences from their outset. For Durkheim (1897/1964) and Weber (1905/1958), values were crucial in explaining social and individual changes. Furthermore, they have played an important role not only in sociology, but also in psychology, anthropology and other related disciplines. Values are used to identify cultural groups, societies and individuals, to track changes over time and to explain the motivation factors concerning attitudes and behaviors.

Values have been the subject of study concerned with many research works and interpretations. They constitute a group of supportive and respectful co-habitation rules among human beings. Consequently, we consider them as positive and valid qualities that are of specific concern to each person in their particular context. They influence our attitudes in order to maintain healthy relationships with family and other members of our society.

There are universal values and relative values. Among the former, we can find the following: respect, freedom, goodness, equality, love for justice, honesty, solidarity, truth, honor, peace, to cite some. These values interact among themselves and are important since they contribute to the development of human dignity. They are closely linked to education and culture. Relative values, on the other hand, are not common to all cultures. They fall under subjective evaluation, either individually or in groups; therefore, they are not usually stationary and evolve over time. They are emerging and always depend on the historical period, the family nucleus, the society and its social institutions. In short, human beings choose the good and the dark of life according to their reality.

Brian Hall (1997), defines values as “a subset of one’s culture and whose starting point is cultural alignment (or its own belief) at all levels of a system” (p. 228). Changes brought about by the Industrial Revolution first and then by the era of technology, high-speed transportation, telecommunications and the increase in people’s quality of life paved the way to a massive swap in values. Throughout this period, education is vastly expanded into new economies. There is a global change in values, influenced by technological innovation, emerging interests in ecology, the planet’s health and the new concept of human relationships, thus allowing us to have a holistic view of such changes (Hall, 1997).

The Hall-Tonna model provides operational definitions of the values as well as of structure and content to make the understanding of human development much easier (Bunes & Elexpuru, 2007). This model is in line with our research, which seeks to connect Professor Inés María Mendoza’s value categories with the Hall-Tonna axiological model. We prefer it as it recovers, through all its categories, a comprehensive and sustainable human development model, considering *survival, affiliation, self-determination and interdependence*. At the same time, it brings to the fore a vision of the world engaged by each term. The authors identify a universal list of 125 value-words and offer a complete and empirically validated model of values in relation to human development. This theory is precise as to its involvement and reflection. The concept of value is undertaken through universal experiences codified in a repertoire of words

involving the core concept of the term. These words are the basic motivating factors of human behavior (Bunes, 2012).

Hall (1997) puts forward that “the achievement of behavior principles” can only be attained by means of 125 values, which are in turn divided into two subcategories: target *values*, which refer to the desired ideals and goals, and mean *values*, which correspond to the skills and capacities. The combination of both kinds *makes it* possible to describe any human behavior. Each one has a list of skills and a description of behaviors that correspond to each value, which holds that values support relationships.

In 1979, Hall began another stage in his research, this time with a multidisciplinary team including Benjamin Tonna, who had a major influence on his thinking. In this phase of investigation, they established a relationship between values and human development, which transformed their work into a tool to solve educational problems through the administrative context and curriculum design. The outcome resulted in a relationship of the 125 words closely related to the concept of value and allowed him to distinguish between those interactions that trigger conflict and those that are so profitable as to increase growth from a global perspective (Elexpuru, Medrano, & Quevedo, 2001).

At this point, they need to ask themselves how to communicate the findings in a convenient way, which leads them to clearly identify those values present in individuals, groups, and organisations. After four years of research, they came up with an instrument they called the Hall-Tonna Values Inventory, which is considered to be a reliable tool. As a result, international organisations became interested in its use for the analysis of corporate documentation; consequently, they improved the theory and tools (Elexpuru et al., 2001).

For Hall (1997), values are dependent on the ideals which give meaning to our lives, taking into account our priorities and motivations. We could check out that it is a complete model researched, analysed and validated in countless studies, making it an ideal theoretical framework for our investigation.

In this work, we highlight the social and educational work carried forward by Professor Inés María Mendoza Rivera. We similarly value the figure of a visionary educator in her time, who fought for the survival of the Puerto Rican culture, civil rights to freedom of expression and thought and for the holistic nature of Puerto Ricans’ character. We also seek to set up the category of values outlined by Professor Mendoza and to analyse the validity of her discourse in contemporary education.

To carry out the present investigation, we laid down the following objectives:

- Check whether the different levels of Hall-Tonna’s model (meta-categories, sub-phases and axiological time phases) have the same impact on Inés María Mendoza Rivera’s epistolary and narrative discourse in the texts considered.
- Elaborate axiological maps based on the intersection of the different discourses considered and the greater or lesser predominance of the different axiological levels of Hall-Tonna’s model.

Education in Puerto Rico is closely linked to economic and political relations, first with Spain and then with the United States. The colonial context is the starting point for studying any of the aspects that define and describe the Puerto Ricans. We cannot lose sight of the fact that the educational system foundations still prevailing in Puerto Rico were settled during the four hundred years of Spanish rule. Furthermore, the

impact of the American system, from the 1898 invasion to the present, must be also highlighted.

The analysis of values is carried out considering the historical context and social conditions that Puerto runs through from 1930 to 1960. Within this period, the year 1929 marks the origin of the biggest crisis that took place in Puerto Rico in the 20th century. Puerto Ricans suffered precarious conditions, and in 1928, Hurricane San Felipe hit the island, which was added to the existing Great Depression. This event closed down large industries and took many companies, banks and agricultural enterprises out of business. Puerto Rican families felt a dreadful grief. The capacity to generate jobs was reduced, a rural-urban migration process started and health problems on the island increased (Scarano, 2016).

During that time, Professor Mendoza had already enacted the absence of a proper philosophy regarding Puerto Rico's educational system. This allegation is a direct consequence of the invasion of the Americans in 1898, who imposed their language, customs and religion that were not tempered by the reality inherent to Puerto Rico at the time. In her dissertation to the Hays Committee, created to investigate the Ponce Massacre<sup>1</sup>, she reacts to the guidelines sent by US President Theodore Roosevelt to Education Commissioner Jose M. Gallardo, who was in charge of strengthening English language teaching in public schools. President Roosevelt points out that the core issue of political status must be sorted out first and after that, an educational philosophy should be defined (Barreto, 2014). Based on this statement, Professor Mendoza expresses what we cite in the following excerpt:

When our children complete their education under this system and become lawyers, doctors, chemists or university deans, they seem more confused than when they were in kindergarten. Our educational system, lacking a philosophy of education due to our undetermined political status, does not set guidelines for children and the shaping of their mind and character, unless the philosophy of education in the colony is to develop a 'colonial mentality'. (Mendoza, 1937, quoted by Delgado, 2016, p. 30)

Professor Mendoza's approach is in force in contemporary Puerto Rican education since educational policies are aligned with the regulations enacted by the American Department of Education of the United States of America. This situation prevents the development of policies from adjusting to the Puerto Rican student's reality. However, after more than one hundred years of American colonialism, we the Puerto Ricans remain rooted to our vernacular language, culture and idiosyncrasy, which is far from the American one.

The period from 1947 to 1964 is one of the most important in the context of Puerto Rico's economic transition in the mid-twentieth century. The economy is converted from an agricultural to an industrial one. Upon arrival of the Commonwealth<sup>2</sup> (ELA) in 1952, the population grew drastically; health and education improved; and trade, agriculture and industry developed. Transportation and communications enhanced, so Puerto Rico grew more open and urban. However, the problems arising from the colonial situation along with increased wealth brought along more inequality (Scarano, 2016).

We are concerned about the foundations of public education in Puerto Rico and we are struck by what could be the guidelines that, in the Puerto Rican context, would facilitate the

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1 <http://www.lexjuris.com/lexprcont.htm>

2 <http://www.lexjuris.com/lexprcont.htm>

strengthening of a teaching in values. In view of this concern, we selected Professor Inés María Mendoza Rivera and her contributions to Puerto Rican public education in the mid-20th century, a period in which important advances in both Puerto Rican economy and educational system of Puerto Rico.

Mendoza's epistolary discourse is anchored in her fight for the vernacular language and her concern for the Puerto Ricans' identity. We chose a sample of her epistolary and narrative discourse compiled in two essays: *Doña Inés María Mendoza y la batalla del idioma, Cartas 1937-1938*, editado por el historiador puertorriqueño Carmelo Rosario Natal (2004) and *Inventario de cosas perdidas: Artículos y discursos de Inés María Mendoza*. The latter includes the articles and speeches written by Professor Mendoza, edited by Aponte (2011), a Puerto Rican writer and literary critic.

Natal (2004) carries out a detailed investigation on the exchange of letters between Professor Mendoza and the Hays committee chair. Through her epistolary speech, the educator rises up against the teaching of English at schools. She invites Hays to contact her in case he would be interested in the "massacre" of the Puerto Rican children's reasoning and thinking (Mendoza, 1937). From our own standpoint, Mendoza very strategically and intelligently makes for a debate with Hays, which he challenges with strength and gallantry. This alludes to the term "massacre", since the Hays committee was created to investigate the events of the Ponce Massacre, a confrontation that took place on March 21<sup>st</sup>, 1937. A Civil Liberties Union commission, chaired by Arthur Garfield Hays, investigates these events. The investigation concludes that the perpetrator of that massacre is the Puerto Rican government (Reyes, 2019).

On the other hand, Alegría (1991), a prestigious Puerto Rican archaeologist and historian, in his essay titled "*Inés María Mendoza de Muñoz Marín. Incorruptible Defender of Our Mother Tongue, the Spanish language*", he asserts that her presentation to the Hays committee (1937), which led to the cancellation of her contract as a teacher, did not undermine her pedagogical and patriotic principles. After this controversy, she met and became engaged to her future husband, Luis Muñoz Marín (the first governor of Puerto Rico elected by Puerto Ricans). As mapped out by Alegría (1991):

Muñoz Marín's charismatic personality and the political force he generated [...] overshadowed and limited the contribution that in its own right belonged to his faithful and persevering companion [...] he was always a loyal and courageous guardian of the patriotic awareness of the powerful political leader [...] the essence of Puerto Ricanness that characterized the government led by Luis Muñoz Marín since 1940 for the benefit of the country was largely inspired by Inés María Mendoza. (p.17)

The sample of narrative discourse we have selected is contextualized in the historical period of Puerto Rico between 1930s and 1960s. During this period, a change in Professor Mendoza's ideological thinking took place. Between 1949 and 1964, Professor Mendoza stood out for her interest in initiatives aimed at improving rural life, the well-being of children, nature conservation, community education and the study programs of the Institute of Puerto Rican Culture, particularly for the Old San Juan restoration. Professor Mendoza represents the creative body behind government projects drawn up in writings and memos addressed to the governor.

In view of the celebration of the centenary of Inés María Mendoza Rivera's birth, Dr. Teresa Tió Fernández, Professor of Art History at the Department of Humanities at Cavey Campus in the University of Puerto Rico, expressed the following excerpt in her discourse:

Inés is one of the women who contributed most to the training of our people [...] a great writer who, through hundreds of press articles, emphasized the essence of Puerto Ricanness, her love for the mother tongue and the culture of the country [...] she imparted her thoughts and unwavering commitment to the rights of women in order to attain equality and dignity. (Tió, 2010, p. 1-2)

We agree with what Tió (2010) put forward when he recognized, in Professor Mendoza, her commitment with the fight for the rights of the Puerto Ricans and her concerns for the progress of our education, an indispensable vehicle for the development of our people. Ramos (2008), a well-known Puerto Rican writer, highlights the teacher's work to "universalize education and thus promote an ethical life that encourages voluntary and socially responsible behaviour" (p. 30). Professor Mendoza lends particular importance to justice, productivity, freedom, knowledge and enforcement. She is one of the supportive women in the face of this reality, a purpose she achieves in many ways; but, above all, when deploying words and reading to exercise what will be her profession: teacher (Ramos, 2008).

With this quote, we reaffirm that the purpose of this study and our interest in the investigation is the enactment of the values outlined by this educator, which the Puerto Ricans must recognize and grade. We echo Professor Mendoza when she emphasizes that: "Education is the instrument we own to preserve culture and improve it..." (Mendoza, 1937, cited by Delgado, 2016, p. 31).

## Method

The present research consists of a descriptive design implemented through an analytical study (Buendía, Colás, & Hernández, 2012). For its development, we resorted to the quantitative content analysis technique (Krippendorff, 1990) applied to the epistolary and narrative discourse of Inés María Mendoza Rivera, a prominent Puerto Rican educator.

According to Bardin (2002), the quantitative approach to content analysis is based on the frequency of appearance of certain elements in a discourse. This methodology is useful when used in the analysis of the content of a paper, where the frequency of appearance of certain values is investigated with the intention of establishing an axiological category. In this regard, we chose the axiological taxonomy proposed by Hall-Tonna (1995) as the variables of the study. As far as the sampling process is concerned, we selected a sample of her epistolary and narrative discourse through non-probabilistic procedures.

### Process of analysing documents

Following Bardin's (2002), Krippendorff's (1990), López's (2002) and L'Écuyer's (1987) theoretical background, we adjusted our procedures for analysing documents to a series of steps:

*Choice of corpus:* The texts chosen for the axiological analysis belong to different documents, where a list of epistolary and narrative discourses by Inés María Mendoza Rivera are compiled.

*Target formulation:* The targets on which the study is based are as follows:



- To verify whether the different levels of Hall-Tonna's model (meta-categories, subphases and axiological temporal phases) have or not the same impact on Inés María Mendoza Rivera's epistolary and narrative discourse in the multiple dissertations selected.
- To establish axiological maps based on the intersection of the different discourses considered and the greater or lesser predominance of the different axiological levels of Hall-Tonna's model.

### Setting up and defining the units of analysis

In the present research, we adopted the nomenclature proposed by Krippendorf (1990) and Bardin (2002). We noted the presence of *registration units*, which are the smallest meaningful sections of text and considered basic elements for counting frequencies and their corresponding categorisation and the *context units*, which correspond to the excerpt of the dissertation where the segment selected is optimal for the registration unit to gain significance. In our particular case, we have chosen Inés María Mendoza Rivera's epistolary and narrative discourse for analysis.

The category system is a deductive one and is based upon Hall-Tonna's axiological model (Hall, 1995). Along the same lines as Korres and Elexpuru (2015), we assert that the axiological proposal offers a complete theoretical model on values in relation to human development: evolutionary, moral and awareness development. Both authors brought forward the existence of 125 values, which split in turn into two types:

- **Target values:** They not only describe ideals and objectives but also guide and sustain attitudes. They compel and encourage us; they are our ultimate goals in life.
- **Mean values:** They mirror and translate the target values into regulatory and behavioural codes.

Each of the typologies just explained is divided into 4 different phases, namely: survival, affiliation, self-determination and interdependence.

### Results obtained after the categorisation and codification process

After the relevant categorization and codification process to which the documents under study have been subjected through the content analysis strategy, we came to descriptive, inferential and multivariate results through the SPSS 25 programmes. We utterly agree with Rodríguez, Lorenzo, and Herrera (2005) and Sandín (2000) that the rigorous methodology of the categorisation process is guaranteed by the consensus of judges, thereby achieving moderately high and statistically significant concordance coefficients by means of Cohen's Kappa and Fleiss' Kappa factors.<sup>3</sup>

<sup>3</sup> We do not show the results obtained because of their wide extension, although they are available to any interested reader.

## Results belonging to the intersection of the different discourses vs axiological meta-categories

In relation to the results concerning the target categories and mean targets, we pose the incidence obtained at the level of absolute frequencies by disaggregating the results concerned with Inés María Mendoza Rivera's epistolary and narrative discourse arising from each of the analyzed texts. Then, we proceeded to calculate the chi-square goodness-of-fit significance test for the two samples (contingency table) by intersecting the incidence of each of the discourses at the two levels of the meta-categories considered. Here are the results obtained:

Table 1

*Results: contingency table of the discourse variables and metacategories in the Hall-Tonna Model.*

Discourses	Mean Values	Target values	Total	$\chi^2$	Sig.
Letters 1937-38	5	48	53		
Heroic Capacity (1953)	1	66	67		
Michael's Speech (1953)	3	115	118		
The Respect (1954)	8	79	87		
New Boundaries (1953)	1	67	68		
Peace and Justice (1953)	0	73	73		
A Parable (1953)	0	97	97		
Language Protection (1953)	0	69	69		
People and Education (1949)	10	198	208	6,13	0,000
A Secret Paradise (1960)	1	110	111		
Food programme	3	297	300		
Earth Care (1960)	1	133	134		
Observance and Religious Education	4	66	70		
An Old Lullaby (1953)	3	45	48		
Your Kindness (1954)	0	52	52		
Flag, People and Children (1953)	4	213	217		
An Exemplary Institution (1954)	1	78	79		
The Destination of Puerto Rican Teachers	19	224	243		
Total	64	2030	2094		

Based on the results shown in the table and graph above, we can conclude that statistically significant differences are displayed ( $\chi^2= 6.13$ ;  $p= .000$ ). This means that the different discourses analysed are indeed linked to a metacategory, with greater incidence than to another, and that this association is not randomly. In order to visualize the existence of different associations more precisely, we set out the following biplot Cartesian plane displaying a simple correspondence analysis (SCA), in which the meta-category axiological discourse *variables* are intersected.

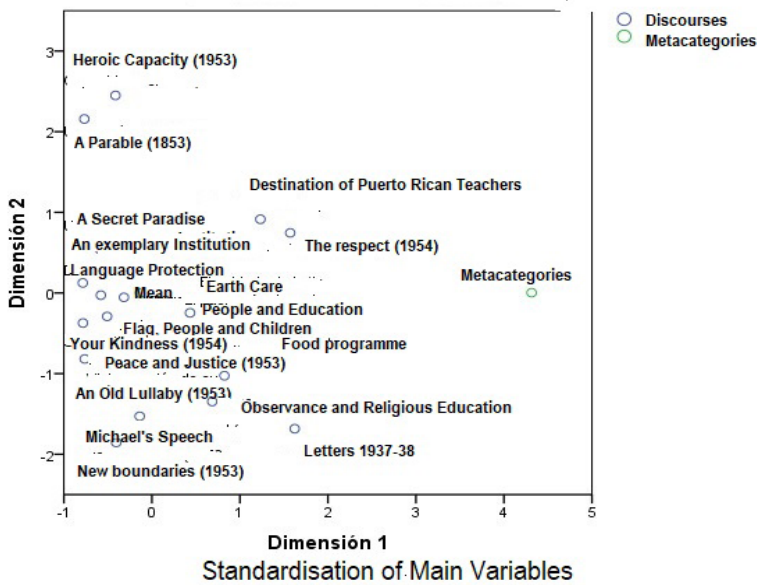


Figure 1. Biplot graph of simple correspondence concerning the intersection of the discourse variables and axiological metacategories.

In our particular case, and given that the target metacategories achieve very little representation, we value the setting of two large associations. On the one hand, one can observe the target metacategory of goals (correspondence II) and on the other, the mean metacategory linked to the rest of the discourses with greater or lesser incidence (correspondence I).

Results belonging to the intersection of the different discourses *and* axiological sub-phases

Table 2

Results: Contingency table of the discourse variables and axiological subphases in the Hall Tonna model

Discourses	SUP_ sup	SUP_ seg	PER_ fam	PER ins	AUT_ voc	AUT_ nuo	INT_ sat	INT_ nom	Total	$\chi^2$	Sig.
Letters 1937-38	1	1	8	6	10	21	6	0	53		
Heroic Capacity (1953)	5	2	7	5	12	29	3	4	67		
Michael's Speech (1953)	3	21	30	13	2	39	1	9	118		
The Respect (1954)	0	2	9	41	1	29	2	3	87		
New Boundaries (1953)	3	11	9	11	3	26	1	4	68		
Peace and Justice (1953)	1	10	17	8	3	25	4	5	73		
A Parable (1953)	0	14	26	13	1	31	1	11	97		
Language Protection (1953)	4	3	10	1	12	39	0	0	69		
People and Education (1949)	7	9	19	14	22	110	10	17	208		
A Secret Paradise (1960)	1	14	19	2	0	65	3	7	111	726.09	.001
Food programme	23	30	84	73	10	80	0	0	300		
Earth Care (1960)	0	1	15	9	0	92	3	14	134		
Observance and Religious Education	0	1	20	17	0	30	1	1	70		
An Old Lullaby (1953)	1	16	15	3	1	11	0	1	48		
Your Kindness (1954)	0	2	4	7	11	26	2	0	52		
Flag, People and Children (1953)	15	30	55	9	11	85	11	1	217		
An Exemplary Institution (1954)	1	5	0	19	13	32	0	9	79		
Destination of Puerto Rican Teachers	8	2	45	30	39	109	6	4	243		
Total	73	174	392	281	151	879	54	90	2094		

Taking into consideration the results obtained in the table and the graph above, we can assert that statistically significant differences are shown ( $\chi^2= 726.09$ ;  $p= .000$ ). In this sense, as it happens with the axiological metacategories, the different discourses analysed are related to one or several axiological subphases with a higher incidence

than others. There is empirical evidence that supports that these associations are not due to chance. In order to clearly appreciate the existence of different associations, we put forward the following biplot Cartesian plane displaying a Simple Correspondence Analysis (SCA) in which the variables *and* axiological subphases are intersected.

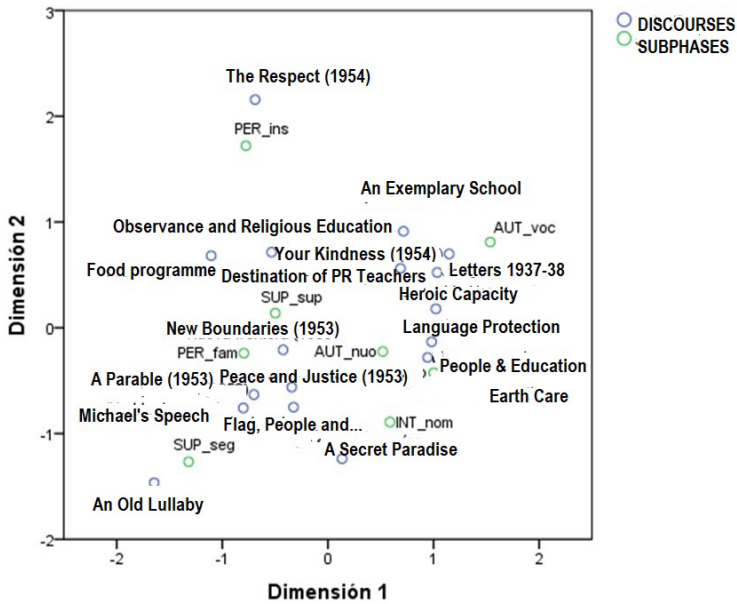


Figure 2. Biplot graph of simple correspondence concerning the intersection of the discourse variables and axiological subphases.

In this second graph, we can perfectly appreciate the setting of four associations. On the one hand, we find the correspondences 1 and 2, which are much clearer and less numerous. In correspondence No. 1, we note the linkage of the discourse “The Respect” to the Institutional Relevance factor. In correspondence No. 2, we appreciate the association between the discourse entitled “An Old Lullaby” and the Survival-Security factor. Next correspondences look much more numerous and certainly more diffuse.

In correspondence No. 3, we consider the grouping of the discourses “Observance and Religious Education”, “Food Programme”, “Peace and Justice”, “New Boundaries”, “A Parable” and “Flag, People and Children” together with the axiological subphases Survival-Survival and Relevance-Family.

Finally, in correspondence No. 4, we can see the association of the discourses “An Exemplary Institution”, “Your Kindness”, “Letters 1937-38”, “Heroic Capacity”, “People and Education”, “Language Protection” and “A Secret Paradise” with the axiological subphases Self-determination-New Order and Self-determination-Vocation as well as with Interdependence-Wisdom and Interdependence-World Order.

## Results belonging to the intersection of the different discourses *and* axiological temporal phases

Table 3

*Contingency table results of the discourses and temporal phase variables of the Hall-Tonna model*

Speeches	Base	Centre	Future	Total	$\chi^2$	Sig.
Letters 1937-38	8	36	9	53		
Heroic Capacity (1953)	7	24	36	67		
Michael's Speech (1953)	24	45	49	118		
The Respect (1954)	2	51	34	87		
New Boundaries (1953)	14	23	31	68		
Peace and Justice (1953)	11	53	9	73		
A Parable (1953)	14	40	43	97		
Language Protection (1953)	7	23	39	69		
People and Education (1949)	16	55	137	208	378.42	.000
A Secret Paradise (1960)	15	16	80	111		
Food programme	53	168	79	300		
Earth Care (1960)	1	24	109	134		
Observance and Religious Education	2	37	31	70		
An Old Lullaby (1953)	17	19	12	48		
Your Kindness (1954)	6	44	2	52		
Flag, People and Children (1953)	45	76	96	217		
A Model Institution (1954)	6	32	41	79		
Destination of Puerto Rican Teachers	10	114	119	243		
Total	258	880	956	2094		

If we consider the results listed in the table and graph above as a reference, we can determine that statistically significant differences are displayed ( $\chi^2= 378.42$ ;  $p= .000$ ). In this sense, as it has happened with the axiological metacategories, the different discourses analysed are linked to one or several axiological temporal phases with a higher incidence than others, reporting empirical evidence which assert that such associations are not due to chance. In order to plainly observe the evidence of different associations, we put forward the following biplot Cartesian plane displaying a simple correspondence analysis (SCA) in which the discourse variables are intersected with axiological temporal phases.

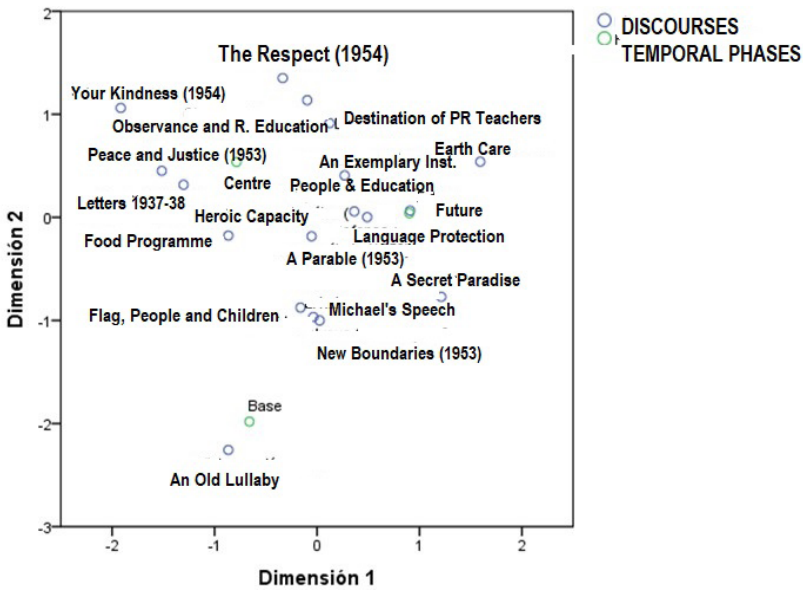


Figure 3. Biplot graph of simple correspondence concerning the intersection of the discourse variables and axiological temporal phases.

In this third graph, we observe the development of three associations. On the one hand, we find correspondence No. 3, based on the only association of the temporal moment base with the discourse “An Old Lullaby”. We also find the correspondences No. 1 and No. 2, which are much more numerous. Thus, the temporary phase Centre (correspondence 2) is linked to the following discourses: “Your Kindness”, “The Respect”, “Observance and Religious Education”, “Peace and Justice”, “Letters 1937-38”, “Destination of the Puerto Rican Teachers” and “Food Programme”.

The temporal phase Future (correspondence 1) is associated with the rest of the discourses considered, namely: “Flag, People and Children”, “Michael’s Speech”, “Earth care”, “An Exemplary Institution”, “A Parable”, “A Secret Paradise”, “New Boundaries” and “Language Protection”.

## Discussion and conclusions

The results obtained in this analysis, in relation to the implemented good-of-fit tests (contingency tables) and simple correspondence analyses, agree on highlighting those series of axiological typologies of the Hall-Tonna Model in the epistolary and narrative discourses by educator Inés María Mendoza Rivera which stand above the rest.

Regarding the target *and mean categories*, it is clear that those which prevail are the target ones. In the subphases, it is the couple self-determination-new order which stands out, the consideration that the world is a project in which it is necessary to participate. In relation to the temporal phases, the discourse is full of categories referring to the present and to a projection towards the future, seeming to ignore the past.

Each of the discourses analysed is associated, by way of correspondence, with the different categories of the Hall-Tonna model. We conclude with a framing in the educator's discourses, which are subject to ongoing evaluation and are influenced, no doubt, by the *media*, self-determination and the temporal present and future times.

With regard to the discussion of the results, we can highlight that, after reading the multiple discourses, we can actually appraise the importance of the government as an institution creating policies aimed at moving these issues forward. From her feminist position, women must be integrated into the workforce and, together with men, must think beyond borders and be part of the economic changes arising in the Puerto Rican economy, i.e. from an agrarian to an industrial one. Due to her avant-garde discourse, the results bring to light a link to the new order subcategory of the Hall-Tonna model.

Such model conceives human development based on values. Those who study the model widely try to establish a relationship between the stages of maturity in a human being and the evolution of values in relation to the personal, social and moral growth of the individuals framed within the stages making up the Value Mapping of the model (Bunes and Elexpuru, 2007). Hall and Tonna understand that values are built on each other through lived experiences. The words they identify are common to different cultures and languages and therefore reflect universal experiences.

Bunes, Mínguez, and Elexpuru (2016), in their article entitled *Values, Conflict and Organisational Development*, conduct a qualitative study in the project *Spanish Mankind* as a sort of strategy to improve the organisation.

Buxarrais and Escudero (2014) investigate a value diagnosis using the methodology of the Hall-Tonna Values Inventory with a sample of 300 students. The main objective of their research is to detect whether, depending on the area of study, there are significant differences in the setting of values framing the university community. The results show that there are no significant differences in the students' scale of values according to their area of study, but there are several ways of consolidating their ethical profile in fact. They develop a proposal on education in values for university students, considering three areas of moral development: the construction of the self, conviviality and socio-moral reflection.

We agree with Buxarrais and Escudero (2014) to go over this situation and adjust ourselves to plurality and diverse lifestyles before concluding that there is a lack of values. The fact that educational institutions work together with organisational culture changes should be a must. Teachers must integrate scientific and pedagogical procedures into student training.

Bunes and Elexpuru (2007) carry out other research on values in *Spanish Mankind*. They indicate that the Hall-Tonna instruments for measuring individual or group values provide profiles of the values identified through individual responses to a single questionnaire, whether they are personal or group values. The methodology used for the analysis of the resulting information and the material that supports it constitute a work proposal that requires both personal and group reflection, contrast with reality and the filtering of contextualised information.

As Bunes and Elexpuru (2007) rightly point out, Mendoza's work invites to reflection and contrast with reality in order to be contextualised. Our research is one of a quantitative nature based on the the technique of axiological content analysis contextualised in the historical period between 1930 and 1960.



We recommend future research on the period of widowhood (1980-1990), in which our subject matter continues to be her fight for education and the teaching of values along with the revival of the political ideas framed within the decolonisation period in Puerto Rico (Barceló-Miller, 2013). Professor Muñoz supported these ideals until 1949 when she joined Luis Muñoz Marín. Since then, she proclaimed the political and economic association of Puerto Rico with the United States of America in order to improve the living conditions of the Puerto Rican family.

During her widowhood, she remained active and firm in her stance on the limitations that the Puerto Rican education system still has and on her own convictions to what she came to call "a new beginning". We urge the encouragement of future research on Inés María Mendoza and the problematization of her background from the qualitative paradigm.

In this respect, a press release dated June 4<sup>th</sup> 1989 concludes with a quotation of hers by saying: "We must start again. The United States owes us the suffering of a century of arrogant and overbearing colonialism. Or will this be the only people in the world who refuse to be free?" (Mendoza, 1989, p. 194).

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