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### Argumentation: A Forgotten Object of Research in Mexico

### Argumentación: objeto olvidado para la investigación en México

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#### Abstract

Since the beginnings of Western culture argumentation has been a fundamental tool of thought and a component of university studies, which today are facing many challenges; some of these areas of study require the development of this skill. However, in Mexico, research on this subject is practically nonexistent. This article briefly discusses state-of-the-art research on argumentation in Latin America.

*Keywords:* Argumentation, educational research, higher education, communication skills.

## Resumen

La argumentación ha sido, desde los inicios de la cultura occidental, una herramienta fundamental de pensamiento y parte de los estudios universitarios que hoy en día enfrentan diversos retos, algunos de los cuales requieren del desarrollo de esta habilidad. Sin embargo, la investigación en México sobre este tema es prácticamente nula. En este artículo se comenta brevemente el estado del arte que guarda la investigación sobre argumentación en América Latina.

*Palabras clave:* Argumentación, investigación educativa, educación superior, competencias de comunicación.

## I. Introduction

Since fourth century B.C. Greece—almost from the very beginnings of Western culture as we know it—the practice of argumentation has formed part of human education, not only, as stated by Nietzsche (1872/2000), as a complementary part of it, but an essential one. “The instruction of ancient man usually culminated in rhetoric: it is the supreme spiritual activity of a well-educated political man—a very strange idea for us!”.

Argumentation, as understood here and since the times of Aristotle and in classical rhetoric, entails the ability to think and deliberate on particulars and contingencies, as opposed to logical thinking which is concerned with the universal and the necessary. Argument, from this perspective, is responsible not only for convincing the intellect, but also for moving the emotions towards a cause (see Beuchot 1998, 2002, 2005, 2006; Beuchot and Arenas-Dolz, 2008, Ramírez, 2001, 2003, 2008, and Perelaman 1967, among others). Based on this point of view and these authors, this is what we consider to be characteristic and valuable in argument. For this reason the rhetorical way of thinking, i.e., argumentation, was considered essential for the political and civic (moral) activity of humans, because the objects of these activities are not necessary but contingent, debatable and questionable. In contrast, the objects of science are regular and necessary and in consequence are based on proofs and demonstration rather than on arguments, and are, therefore, an indispensable part of the education of a citizen.

Consequently, from the time of ancient Greece and Rome through the Middle Ages, rhetoric, as the theory and science of argumentation, was an important element of education. The Sophists were responsible for this, leading to the inclusion of rhetoric as part of the medieval *trivium*.

However, from the inception of the modern era, around the sixteenth or seventeenth century, this way of thinking, rhetoric, began to disappear from the educational system and the intellectual environment in general, displaced by the empirical research and logical mathematical rationality that we could call “scientific argument”, which proves but does not convince, is oriented only to reason and

deals with that which is regular and cannot be otherwise.

This model of rationality, which we can characterize—albeit not without complications—as modern rationality, reached its apogee with the emergence of positivism in the nineteenth century and, in the twentieth, logical positivism. At that moment, the logic of proof, the search for universal laws and the use of evidence in support of facts, reached its high point. Nevertheless, it has been during these same centuries that the inadequateness of this “modern rationality” for explaining the facts of social life has given rise to various ways of building “new rationalities”. Thus ensued, for example, the creation of epistemic logic (Hintikka), modal logic (Lewis and Langford), quantum logic (Jauch), deontic logic (Von Wright), many-valued logic (Lukasiewicz) and fuzzy logic (Zadeh), among others, which seek a broadening of modern rationality in order to address more humanistic concerns, such as moral, educational, political and legal issues.

Among these approaches there are some that seek to recover and reformulate rationality, and movements have emerged that attempt to revive the rhetorical thinking of authors such as Perelman and Toulmin, who, at the same time and without ever having met, both published books in 1958 on argumentation, reviving some theories of classic rhetoric. This, coupled with the rehabilitation of hermeneutical thinking carried out by Gadamer in the sixties, has generated an entire movement focused on the recovery of rhetoric, culminating with authors of the caliber of Beuchot (2002, 2005 and 2006), Arenas-Dolz (2008) and Ramírez (2001, 2003 and 2008), among others.

Studies on argumentation are quite ancient. The first to dedicate profound and serious thought to it were the sophists in the 5<sup>th</sup> century B.C. Faced with a democratic and plural Greece, these theorists (including Protagoras, Gorgias, Hippias, Callicles and several others) represented a change in thinking similar to that which postmodernism has effected since the last century: they moved the field of theoretical speculation towards practical rationality; that is, they ceased worrying about metaphysical concerns and problems of pure science (natural philosophy) in order to deal once again with political, moral, religious, educational and other issues.

For centuries the term rhetoric referred to the art and science responsible for carrying out research on argumentation. However, the term gradually lost ground until it was limited to a small part of language studies that deals with the ornaments of language or, alternatively, with the part of communication studies that deals with the ways of persuading an opponent, independently of the truth of the matter. Thus we speak of political rhetoric or advertising rhetoric, among other derogatory uses of the term.

Nonetheless, we must not forget the origin of rhetoric, its historical importance and contemporary attempts to revive it.

## II. Studies on Argumentation

Currently, argumentation studies take many forms: there are the studies of Van Eemeren, Grootendorst and Krugier, in pragmadiagnostics; the theory of communicative action of Habermas and Appel; Ducrot, Anscombe and Bakhtin's theories of argumentation in language; the studies of rhetoric linked to hermeneutics in Ricoeur, Gadamer, Beuchot and Arenas-Dolz, among others; not to mention Michael Billig's rhetorical approaches in psychology and George Pólya's defense of heuristic thinking in mathematics.

We can, therefore affirm that argumentation is currently an object of attention in the field of philosophy.

For the purposes of this article, Rhetoric is considered as referring to the science that deals with the study of argumentation and we reintroduce a concept of it based on the reflections of Beuchot (1998, 2002, 2005, 2006), and Ramírez (2001, 2003, 2008) as well as Beuchot and Arenas-Dolz (2008), for whom rhetoric possesses some noteworthy characteristics:

1. Understood both as an art and a science as well as a distinct mode of rationality, rhetoric is opposed to (but does not reject) logical mathematical rationality, but rather, complements it. It arose, along with philosophical hermeneutics, as a response to positivism and the attempt to impose the logic of proof and demonstration as the only valid rationality.
2. Rhetorical thought is concerned with the contingent, while logic deals with the necessary, hence the indispensable distinction between arguing and demonstrating. One does not argue about that which is necessary, contends Perelman (1967), but about that which is controversial, which may or may not be a certain way. This does not imply, according to this theoretical perspective, losing sight of logic; on the contrary, for both Perelman and other authors, the study of logic is a prerequisite for the study of rhetoric (as it was in the medieval trivium, where rhetoric was studied after dialectic).
3. Rhetorical argument is not only directed at the intellect, but also to the emotions, or, as noted by Pascal, toward reason and the heart.
4. Argument is part of our nature as animals with *logos*, which can be translated not only as reason, but as language. Logos, as Ramírez (2001, 2003 and 2008) has pointed out, implies one as much as the other. Thus, from this perspective, it is considered inappropriate to be inclined either toward pure reason (logic) or toward pure language. Argument is both reason and language.
5. As stated above in Nos. 2 and 3, in science and in the teaching of science, students are not taught to argue, but to prove. Therefore, from the perspective of this article, it is wrong to think that science education performs the role previously held by studies of rhetoric.

6. Rhetoric is a political activity par excellence. That is, the basic mode of human coexistence is linguistic and, hence, the ability to handle language critically is essential in societies like ours.

From this perspective, Rhetoric is not merely a secondary discipline of linguistics, nor can it be considered synonymous with empty or manipulative speech. Similarly, we consider it important to make a distinction between Rhetoric as the art and science of argumentation and rhetoric (in lower case) as the ability or capacity to deliberate on what is appropriate in a given situation, i.e., the ability to argue.

Consequently, we consider that the teaching of argumentation (rhetoric) is not covered in science education (proof), although it is an essential skill to learn or develop. In the literature we find several statements to this effect, including that of Reygadas (2005):

Today, in times of absurd wars, of inventions that fail to measure their impact on the environment and on health, of deepening inequalities worldwide, it is a matter of some urgency to know how to argue—in all milieus—in favor of democracy, of the construction of a critical citizenry and of the survival of the world community (p. 4).

Similarly, educators such as Giry (2006) also note the need to learn to argue; Giry states that for new pedagogies:

The object of this method is not the acquisition of knowledge. These methods focus primarily on intellectual activities like learning to think, reflect, imagine, invent, or how to explain, argue and categorize (p.17).

Furthermore, Johnson (2003) says that “while accumulated knowledge may change, fade or become useless, the ability to think effectively remains constant” (p. 11), and this capacity to think not only concerns logical and mathematical thinking, but also, as we have maintained, hermeneutic and rhetorical thinking.

Finally, Beuchot and Arenas-Dolz (2008) point out that:

Rhetoric is a basic element of human instruction (...) we consider that the potential contained in the contributions of traditional rhetoric should be utilized in the education of the citizenry for whom current educational policies are designed (pp. 129-130).

More specifically, the 2009 curriculum for primary education in Mexico, in Chapter 5, Section 5.1 “Competencies for Life”, the second competency states:

Competencies for information management. These competencies are related to the search for information, and its identification, evaluation, selection and systematization; to thinking, reflecting, arguing and expressing critical judgments; to analyzing, synthesizing, utilizing and sharing information; to knowledge and the management of different logics of knowledge construction in different fields and different cultural contexts. (Secretaría de Educación Pública [Ministry of Public Education], 2009, p. 41).

Later, Section 5.2, “Profile of graduates of primary education”, states that “the student will, as a result of the educational process over the course of elementary and middle school, manifest the following characteristics”, with subparagraph b) specifying the following:

Use argument and reason to analyze situations, identify problems, formulate questions, pass judgment, propose solutions and make decisions. The student values the reasoning and evidence provided by others and can, in consequence, modify his or her own point of view (p. 43).

The same applies to the yearly programs, in which argumentation or other similar dialogical skills (discussion, critical thinking, etc.) appear as a constant.

Given this scenario, we were curious as to what research has been done in Mexico and Latin America on this subject.

The aim of this article is to review the research in Latin America from 1980 to date (taking into consideration that it was in the 1970s that education began to be considered a production-related good) on any topic related to argumentation, its teaching as well as students’ level or quality of argumentation, among other topics. Our purpose was to ascertain what has been achieved in this regard and, thus, at the end of the paper, have the evidence to demonstrate the paucity of such research in our country.

This review was conducted by consulting available electronic databases, mainly Redalyc, Dialnet and Ebsco for articles and books; the dissertation database of the Universidad Nacional Autónoma de México (UNAM [National Autonomous University of Mexico]), which includes not only theses and dissertations of that institution, but also those of others throughout the country; the databases of libraries at other universities, such as Universidad Pedagógica Nacional (UPN [National Pedagogical University]), Universidad Autónoma de Aguascalientes (UAA [Autonomous University of Aguascalientes]), Universidad Iberoamericana (UIA [Iberian American University]) and Benemérita Universidad Autónoma de Puebla (BUAP [Autonomous University of Puebla]), among others.

The review of these texts was carried out from a hermeneutical-rhetorical perspective. Only some of the research papers were selected for this article, particularly those that were considered most relevant or that refer to other research that we were unable to locate.

### **III. Research in the Latin American literature**

To begin with, we could mention some texts whose aim is to support the process of teaching argumentation, such as Amestoy (1995), *Procesos básicos del pensamiento* [Basic Thought Processes], or some of more recent appearance, such as Ochoa (2008), *Comunicación oral argumentativa* [Oral Argumentative Communication] or that of Jiménez (2010) *10 ideas clave: argumentación y manejo*

*de pruebas* [10 Key Ideas: Argumentation and Handling of Evidence]. It is important, however, to note that although these documents may provide some pointers for teachers on how to teach, the theoretical foundation underlying the texts is poorly developed—with the exception of that of Ochoa, whose theoretical framework and analysis of the topic is quite comprehensive—since they are, strictly speaking, manuals. It should be noted that there are other manuals such as that of Weston (2005), which, because they are not of Latin American or Spanish origin, are not considered here.

Furthermore, some recent books have addressed the issue from the educational perspective, for instance, that of Zubiría (2006), *Las competencias argumentativas: una visión desde la educación* [Argumentative Competencies: An Educational View]; Lanzadera, *et al.* (2007), *Argumentación y razonar: cómo enseñar y evaluar la capacidad de argumentar* [Argumentation and Reasoning: How to Teach and Evaluate the Capacity to Argue] and that of Ochoa (2008), *Comunicación oral argumentativa* [Oral Argumentative Communication]. In general, these works reflect on the role of argumentation in education.

Of these books, Ochoa's stands out, given that it combines both research and teaching recommendations; it includes a detailed analysis of the state of the field in which several research papers related to argumentation are reviewed. It should be pointed out that none of these papers were found in Mexican libraries or on the Internet. Moreover, by means of the author's summaries we were able to apprehend that none of this research was conducted in Mexico.

In terms of empirical research on this topic in the field of education, the literature is also limited. We can affirm that few theses or dissertations (whether undergraduate or graduate) are written on the subject in Mexico.

For example, in the library, there are only eight theses dealing with subjects related to rhetoric, two on argumentation and six on reasoning, all related to logical mathematical reasoning, which, as was already mentioned, in our view is different from rhetorical reasoning in addition to having a more limited field of action.

Meanwhile, a search of the UNAM database (which not only contains theses and dissertations from the UNAM itself, but also those of other associated universities) for theses with any term related to argumentation yielded 81 results, of which none (either undergraduate or graduate) pertained to the field of education, although some were from students in the Master's Program in Secondary Level Teaching (MaDEMS—acronym in Spanish). Most of these theses dealt with the subject from a philosophical, legal and linguistic perspective. Thus, there are theses on legal argument, on the theory of argumentation in Aristotle, relativism and argumentation, scientific argumentation and objectivity, etc.

Some theses, although not specific to the area of pedagogy, do take an approach related to teaching and education, as in the case of Huerta (2009), a student of MaDEMS, whose thesis is entitled *Diagnostic of student representations in written*

*texts; construction of the other in students of the Naucalpan Campus of the Colegio de Ciencias y Humanidades (CCH [College of Science and Humanities, acronym in Spanish]: A didactic approach for addressing argumentative text. Another is that of Cardona (2008): I knew it when I was little: Argumentative discourse in two to four-year-old children, a bachelor thesis in Hispanic Language and Literature*

Other theses we encountered include that of Prian (2007), *Didactics of argumentation: Teaching argumentation in the Escuela Nacional Preparatoria [National High School]*, who is also a student in the MaDEMS program, and that of Cárdenas (2005), *Patterns of argumentation in high school students*, a doctoral dissertation in Psychology.

Lastly, also from the UNAM database, we should mention the bachelor thesis of Pineda (2004), *Methodological proposal for teaching the writing of argumentative texts: A review of the Reading and Writing Workshop II program in the Colegio de Bachilleres [Bachalareate College]* and that of Peón, entitled *Argumentative skills of elementary students and their reinforcement*, a doctoral dissertation in Psychology.

Similar situations occur in other libraries in the country, many of which do not have a single thesis on the subject.

Despite having found the abovementioned papers, we can assert that research on argumentation and education in Mexico is meager, though we have never contended that it is nonexistent. The approaches on which these research papers are based are quite varied, and in the majority of cases the theory of argumentation underpinning the research is lacking in depth.

As far as articles are concerned, there are several that could be mentioned. In first place, in spite of being over fifteen years old, it is worth noting that No. 26 of the journal *CL & E: Comunicación, lenguaje y educación [Communication, Language and Education]*, published in 1995 was devoted specifically to the topic "Teaching argumentation". It should be pointed out that no other journal has been found that in like manner devotes an entire issue to this subject.

The abovementioned issue contains eight articles from different researchers, among which the text by Dominique Guy Bassart (1995) stands out. Entitled "Elements for teaching argumentation in elementary school", the article defends the position that students should be taught argumentation from an early age, but above all, it highlights an important trend in the study of argumentation, which is to consider it as text or discourse. Much of the research on the subject addresses argumentation from this same perspective. María Josep Cuenca (1995), for example, in an article in the same journal, points out that "argument can also be considered a type of text or discourse" (p. 23), and while this is not incorrect, when she states "argument, then, is recognized as a type of text with certain characteristics that are distinguishable from other types of text", she appears to be unduly reducing what is implied by the analysis and teaching of argumentation.

Clearly argumentation represents a special type of text, as does a medical diagnosis or an assembly diagram of a system for monitoring radiation in a nuclear reactor. Nevertheless, what does not follow is that an individual's ability to argue can be adequately examined using only a linguistic analysis, just as we cannot guarantee the competence of a physician or a nuclear engineer employing only a linguistic approach to examine the above-mentioned texts, since someone could conceivably "write" or "talk" like a physician or an engineer without being one, without possessing the actual knowledge, skills and attitudes pertaining to these professions.

From the theoretical perspective we are defending in this article, a linguistic view of argumentation is insufficient because argument is not merely discourse, it is reasoning, and a study of the underlying logic in speech that appears to be argumentative is also necessary.

Further, Cuenca (1995) states that "(...) it can be seen that argumentation is a characteristic of human discourse, *which is manifested by means of specific linguistic and discursive markers*" (p. 24, emphasis added). Following this line of thought, it would appear that a simple analysis of how a text is written would be sufficient to affirm that it is an argumentative text. Nonetheless, as previously mentioned, this would be insufficient, since the analysis of these marks does not imply that a person is actually arguing. One can use inferential and premise indicators as well as examples, analogies, etc, and not necessarily be arguing.

These discursive markers are indicators or indices (in terms of Peirce) that make us suppose that there is an actual underlying argument, but in order to determine if this is the case, an interpretive act is required: the discourse must be interpreted in order to ascertain whether there is argumentation behind it or not. It is, then, a hermeneutic problem, not just a matter of linguistics or discourse analysis (although, occasionally, for example in Ducrot, the function of discourse analysis has been defined as the interpretation of linguistic productions, and in that sense it resembles hermeneutics).

Continuing with our review, Sánchez and Álvarez' (1999) paper, *Argumentative Discourse of Venezuelan Schoolchildren*, based on a study of 800 texts, seeks to determine the level of Venezuelan students' argumentation. These texts, which the authors expressly requested from the students, were then collected and the different types of argumentation occurring in them—covering a wide range of possibilities, from texts that merely express opinions to those that are justified based on arguments of social impact—were compared. The results of their research suggest that the students do not know how to argue well.

Another paper we encountered, *A Socioepistemological View of Arguments in the Classroom: A Case of Proving by Means of Reductio Ad Absurdum*, from Crespo and Farfán (2005), studies the abovementioned process of carrying an argument to its absurd extreme as a "recourse for the validation of results in mathematics" (p. 287). Among the study's findings, what we found striking was that the process of

*reductio ad absurdum* is used by some students as a resource in the classroom, although most do not use it in arguing outside of it.

Meanwhile, other studies that were reviewed, such as that of Arriassecq and Iracheta (2006), *Analysis of Argumentative Skills Developed by High School Students in Physics Class* and Henao and Stipcich's (2008) *Science Education and Argumentation*, also explore students' ability to argue. Both articles, however, refer to logical mathematical argument (proof) rather than to rhetorical argumentation.

Ortega de Hocevar (2007), for her part, in *The Genesis of Argumentation*, expresses concern for research in this area as well as its discouraging findings: "Many are the researchers who have maintained that students from all academic levels have little development of written argumentative skills, both in comprehension and production". She refers to eleven research papers on the subject, of which, again, interestingly, none were found in libraries in Mexico City or on the Internet, nor were any carried out in Mexico, being mostly Argentinean or Chilean, with the remainder coming from France, Colombia and Venezuela.

Furthermore, Bentancur Espiñeira (2009), in *The Development of Argumentative Skills*, also mentions research such as that of Peronard, dating from 1992, and Núñez Lagos in 1999—among others not cited by Ortega de Hocevar—all of which are more than ten years old and none from Mexico. With these, we have now encountered mention of more than fifteen studies, of which none were conducted in Mexico.

Similarly, Tarabay and León have published two articles based on their research, one in 2004 titled "Argumentation in Classroom Teaching" and the other, "Argumentation as a Form of Communication in the Discourse of the University Professor", from 2007. Both seek to investigate the argumentative strategies used by teachers in the classroom. The second of these employs Habermas' theory of communicative action to understand argumentation as a specific type of communicative interaction through which the teacher engages with students, given that, essentially, in the social sciences, unlike the natural sciences, teachers do not seek to prove what they claim, but to achieve students' espousal of the arguments they propose. The findings lead one to reflect on how the relationship that the teacher establishes with the students determines, in some way, whether or not they learn how to argue. In classroom teaching, for example, as the author observes, argumentation is employed through authority, both the teacher's as well as that of experts, which does not motivate a discussion of ideas. Despite the fact that this research is quite interesting, we note, once again, that it was not conducted in this country, but in Venezuela.

Lastly, some articles published in Brazil by Selma Leitao titled *Processos de construção do conhecimento: a argumentação em foco* [Processes of Knowledge Construction: Argumentation in Focus] are noteworthy since their appropriation of the theory of Bakhtin, a philosopher of the Russian language from the early 1900s, is interesting, in contrast to the widespread use of Toulmin, Van Eemeren and

Ducrot in the rest of the research we encountered.

#### **IV. Conclusions**

In general we can argue that the amount of research conducted in Mexico on the subject of argumentation is, indeed, very paltry compared with that of other countries such as Colombia and Venezuela. Similarly, it seems pertinent to point out that most of the research that has been found so far (including the studies that we were unable to include in this article) focuses on the primary and secondary educational levels, leaving aside the study of argumentation at the undergraduate and graduate levels, which, in a way, is where it is essential to possess a good command of argumentation.

A troubling fact is that most of the research that was consulted concluded that students' level of argumentation ranged from poor to nonexistent. Presumably, this being the case in Latin America, Mexico must be in a similar situation, but of course, we cannot affirm that it is so with so little research on the subject.

Another relevant aspect is the predominance of linguistic approaches in the research, including studies that employ neo-rhetorical models such as that of Toulmin. The linguistic approach assumes that argumentation is a function of language, neglecting the logical reasoning element of it; i.e., that it is possible to write a text that looks like an argument but really isn't, as is the case with some fallacies.

Lastly, an important point is that, from the rhetorical perspective on which this study is based, the separation of scientific from rhetorical argumentation is indispensable, a distinction that also was not made in several of the texts and research we encountered.

Based then, on the premise—which was not actually defended but only mentioned in this paper—that argumentation is necessary for educating the contemporary student, it would seem that fostering research on the state of argumentation and its teaching in Mexico is necessary.

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Monzón: *Argumentation: A forgotten object of research...*

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