

Interactivity as an argumentative cultural keyword in contemporary cyberculture

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ABSTRACT

This doctoral thesis investigates the word *interactivity* within contemporary cyberculture as a candidate for the status of a cultural keyword, exploring its meanings and the values associated with it. Through an interdisciplinary approach that spans linguistics, corpus analysis, and argumentation theory, the research delves into how *interactivity* shapes discourses, communication practices, and educational contexts, revealing the cultural beliefs it evokes. As a cumulative thesis, the four core papers comprising the research were carried out over two distinct periods, with each study contributing different and complementary insights into the cultural significance of *interactivity*. Utilizing analytical tools such as Congruity Theory and the Argumentum Model of Topics, this research examines corpora of ordinary discourse, investigating conceptual and emotive meanings of *interactivity*, as well as its presumed persuasive power in different contexts. Particular attention is given to the educational context, in which *interactivity* could be strategically employed to influence beliefs and attitudes, aiming to resolve communication challenges in distance education. The thesis also explores the Brazilian educational landscape during the COVID-19 pandemic, assessing the relevance of *interactivity* as a cultural keyword over time. The research demonstrates that *interactivity* functions as a polysemous and persuasive term, frequently evoking positive values. This persistent positive connotation also highlights its status as a cultural keyword in contemporary cyberculture, illustrating how *interactivity* shapes expectations and perceptions of technology and communication in everyday life. The research concludes by emphasizing the potential for further investigation into the evolving meanings of *interactivity*, particularly considering emerging technologies and cross-cultural studies. This ongoing exploration will provide valuable insights into how *interactivity* continues to impact discourse and social practices in our increasingly digital world.

Keywords: Interactivity, Cultural Keywords, Argumentation, Linguistics, Discourse Analysis, Distance Education, Cyberculture.

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SUMMARY

1. INTRODUCTORY CHAPTER	6
1.1. THE STRUCTURE OF THE THESIS	12
1.2. TRACKING INTERACTIVITY: DEFINITIONS, CONCEPTUALIZATIONS, AND APPROACHES	13
1.2.1. Dictionary definitions	13
1.2.2. Academic definitions, conceptualizations and approaches	21
1.3. PAPERS: EXTENDED SUMMARY	29
1.3.1. (Paper 1): Cultural keywords in arguments: The case of interactivity	30
1.3.2. (Paper 2) From text to culture through corpus: Interactivity as an argumentative keyword of contemporary cyberculture	32
1.3.3. (Paper 3) Distance learning in Amazon Region: Tackling rhetorical situations in the communication context of E-TEC IFPA	33
1.3.4. (Paper 4 - integration study) Interactivity in the Brazilian educational context across the COVID-19 pandemic	35
2. INCORPORATED PAPERS	37
(PAPER 1) CULTURAL KEYWORDS IN ARGUMENTS. THE CASE OF INTERACTIVITY	37
(PAPER 2) FROM TEXT TO CULTURE THROUGH CORPUS: INTERACTIVITY AS AN ARGUMENTATIVE KEYWORD OF CONTEMPORARY CYBERCULTURE	69
(PAPER 3) DISTANCE LEARNING IN AMAZON REGION: TACKLING RHETORICAL SITUATIONS IN THE COMMUNICATION CONTEXT OF E-TEC IFPA	88
(PAPER 4 - integration study) INTERACTIVITY IN THE BRAZILIAN EDUCATIONAL CONTEXT ACROSS THE COVID-19 PANDEMIC	101
3. CONCLUDING SYNTHESIS	126
4. REFERENCES	132

1. INTRODUCTORY CHAPTER

The contemporary way of life is universally shaped by the widespread use of digital technologies, despite the digital divide still observed in certain regions. These technologies, spanning from desktop computers to wearable devices, from offline software to artificial intelligence systems, have become essential for a successful engagement in many activities in society. They play a crucial role in various aspects of human life, influencing everything from interpersonal communication to activities involving e-commerce, e-government, and e-learning.

This global phenomenon was initially referred to as the *information society* (Machlup, 1962)¹. Since then, scholars have studied it, proposing new terms and concepts to capture its various facets. Some examples include “the digital age” (Negroponte, 1995), “network society” (Castells, 1996), “cybermonde” (Virilio, 1996), “cyberculture” (Lévy, 1997), “web society” (Berners-Lee, 1999), “convergence culture” (Jenkins, 2006), “algorithmic society” (Gillespie, 2014), “post-digital society” (Cramer, 2015), “datafied society” (van Es & Schäfer, 2017), and “platform society” (van Dijck, Poell & de Waal, 2018). While reflecting the viewpoints of various scholars, all these concepts aim to delve into the intricate interplay between society and technology. They highlight different and complementary aspects and dimensions of the changes provoked by the use of digital technologies, transforming the way information is produced, disseminated, and consumed. This transformation gives rise to new forms of connectivity, collaboration, and cultural expression.

Sometime ago, desktop computers were the primary devices for accessing the internet. Now, a huge variety of portable and wearable gadgets can connect to the World Wide Web. In the past, users needed to be connected to computers with dial-up connections, but today, high broadband access, wireless connectivity, mobility, and cloud computing are the latest trends. The static webpages of yesteryear have given way to

¹ Sociologist and economist Fritz Machlup is often said to have coined the term “information society” in the mid-1960s. However, the concept gained wider attention with the 1970 report “The Information Society: Issues and Illusions” by the Trilateral Commission (Occidental Europe, North America, and Japan). The report examined social and economic changes resulting from the rapid advancement of information technology.

sophisticated web experience, emphasizing participation, and involving users in creating content, sharing information, and interacting with both other users and intelligent agents.

In various academic fields such as Anthropology, Sociology, Psychology, Pedagogy, Communication Sciences, Informatics, and others, a multitude of terms and expressions has emerged to define, describe, and explain the new technological and social phenomena that have emerged. Within this constellation of terminology, one word deserves special attention in the current thesis: *interactivity*.

I believe the appeal of the word *interactivity* makes it a serious candidate to the status of keyword in the current cyberculture, serving as a cornerstone representing the essence of human engagement with digital technologies. Indeed, the quality of “being interactive” is the very distinctive quality of new media (McMillan, 2002). In this context, where the continuous development of digital technologies redefines the dynamics of human life, interactivity emerges as a central issue not only describing the functional aspects of user experience (UX) but also embodying broader and complex social and cultural implications. The very notion of interactivity implies a reciprocal relationship between individuals and technology, going beyond mere usability to encompass a rich array of cultural values and social expectations.

In my Master's degree research, titled *The Fallacy of Interactivity: A Critique of Glocal Practices in Cyberculture* (2006)², I investigated interactivity through the lens of Media Studies, providing me with an interdisciplinary approach to the subject. This investigation allowed me to examine aspects of cyberculture, interactive media, glocal phenomena, digital divide, human-machine relationships, virtual sociability, and online democracy. My analysis revealed that, while interactivity has emerged as a strong force in the contemporary world, imbuing value into everything associated with it, it often hides deeper issues related to inequality and power dynamics. In a sense, interactivity serves as a contemporary representative of cybernetic ideals (Winner, 1950)³, carrying promises

². *A falácia da interatividade: crítica das práticas glocais na cibercultura* (Monteiro, 2006).

³ Cybernetics, as articulated by its founder Norbert Wiener, emerges as an interdisciplinary field that integrates communication, control, and the dynamics of social systems. He emphasizes the importance of humans and machines, regarded as social partners, working together to combat entropy and social degradation. By encouraging a continuous flow of information, Wiener argues that this collaboration

such as transcending human limitations (both physical and intellectual), promoting social transparency, and accomplishing democratic ideals.

However, contrary to theories celebrating interactivity, I proposed a critical approach suggesting that it gives rise to cybercultural values and practices that ultimately hinder the fulfillment of these ideals, even contradicting them. Thus, I argued that interactivity can be considered a fallacy, not in the sense that it does not exist, but rather because its existence generates social issues that obscure complexities and disparities in digital engagement. These issues include limited participation in relevant social processes due to unequal access to technology; the transformation of individuals into “machines of communication”, leading to superficial relationships; and an extensive individualism that distances people from meaningful social interactions. Furthermore, the promise of a participatory democracy often remains unfulfilled, as significant portions of the population lack the necessary technological resources to engage fully. Such dynamics ultimately underscore the limitations of the cultural and social structures generated by interactivity, revealing its potential to reinforce existing inequalities rather than resolve or transcend them. This perspective aligns, for example, with recent critiques in works such as Balbi's (2023), which explores the ideological framework of digital technologies and their societal implications. In this context, my thesis invites further inquiry into how interactivity is framed and understood within the broader discourse of cyberculture.

While the observation of everyday phenomena related to cyberculture and its representative word *interactivity* played a crucial role in my master research, there was no specific empirical study. The master thesis was supported by articulating and discussing an extensive literature review.

Building upon the insights gained from the analysis of cyberculture, interactive media, and the complex interplay between technology and society, in this Ph.D. thesis I intend to delve deeper into the multifaceted nature of interactivity, enriching the understanding of this representative word of cyberculture. In this doctoral research the focus will be on the word *interactivity* itself, seeking to trace its origins, examining

can strengthen social relations and enhances transparency, helping to prevent social issues arising from restricted, concealed, or simply unavailable information.

definitions and approaches, and scrutinizing its uses and meanings within ordinary discourse, especially the argumentative ones.

This perspective appears promising, as existing theories and approaches propose stipulative definitions, conceptualizations and taxonomies of interactivity. However, a gap remains as these frameworks often do not investigate the meanings that ordinary people attribute to interactivity or how they employ it in everyday discourse. The present thesis explores this void by analyzing ordinary discourse from various online sources, including blogs, news sites, and social networks.⁴ This research, therefore, is a contribution to the ongoing studies on interactivity, shedding light on its cultural significance. It is expected that this work will offer relevant insights into the meanings, values, and beliefs associated with interactivity, adding to the existing body of knowledge in this theme.

As the research focuses on a particular word, the concept of “cultural keyword” assumes central importance. Within the realm of digital technologies, the concept of keyword is frequently associated with practices involving tagging and retrieving information from search engines and general databases, including texts, images, music, etc. However, the understanding of keywords extends across multiple and interdisciplinary perspectives, encompassing fields from Informatics and Library Science to Linguistics, Anthropology, Sociology, and Cultural Studies. Nonetheless the academic field, in this thesis, the notion of cultural keyword is metaphorically understood as a linguistic key providing access to the knowledge embedded in individual texts or collections of texts belonging to a discourse community or an entire culture.

Therefore, in the presented scenario, is *interactivity* indeed a cultural keyword? This research question aims to verify the cultural importance of the term *interactivity* in the cybercultural context. Investigating its potential as a cultural keyword involves exploring its widespread use and the eventual body of knowledge it gives access to.

⁴ Here, it is worth mentioning the seminal work on *interactivity* by Rabaté and Laurraire (1985), titled *L'interactivité saisie par le discours*. Their analysis is based on scholarly studies, government communications, and the discourse of companies in the context of the development of telecommunication systems and services. However, they did not examine the discourse of ordinary people.

Additionally, what meanings of *interactivity* emerge from its use in ordinary discourse? This second research question focuses on uncover the varied meanings and interpretations attributed to *interactivity* as it is employed in everyday communication. Examining the diverse contextual uses and connotations of the term can provide a better understanding of how individuals conceptualize and articulate the idea of interactivity while using it.

Finally, what values and beliefs related to *interactivity* are evoked from ordinary discourse? This question seeks to identify the implicit values and beliefs related to interactivity that come to light in ordinary discourse, also revealing the basis on which individuals ground their reasoning while associating interactivity to some digital technology.

To deal with these questions, it is necessary a multidisciplinary approach that will be gradually presented in the following sections. However, it is crucial emphasizing the influential contribution of Raymond Williams (1976) in historical semantics, Anna Wierzbicka (1997) in lexical semantics, and Michael Stubbs (1996) in corpus linguistics, to the study of cultural keywords. Furthermore, the “discovery procedure” suggested by Rigotti and Rocci (2005) will play a decisive role in verifying whether *interactivity* can be considered a cultural keyword.

To delve into the meanings of the word *interactivity*, Congruity Theory, specifically as outlined by Rigotti and Rocci (2001), Rigotti (2005), and Rocci and Luciani (2016), will be instrumental in analyzing the diverse ways in which people employ and understand the significance of interactivity in their everyday communication. This semantic framework provides a structured approach to analyze the diverse ways in which the term is used, exploring its meaning within the context of its relations with other words in a sentence.

Moreover, by opening access to beliefs and values within a given community, cultural keywords frequently carry not only conceptual but also evaluative and emotive meanings (Stevenson, 1937), giving them a certain persuasive force when employed. In this way, the examination of the argumentative uses of the term *interactivity* assumes a central role in this Ph.D. thesis. The argumentative analysis will be supported by the

Argumentum Model of Topics (AMT) (Rigotti & Greco, 2019)⁵, a valuable tool for reconstructing the inferential structure of arguments. The AMT is helpful in uncovering shared values and beliefs within a discourse community, offering a systematic approach to analyze the persuasive dynamics in the use of cultural keywords like *interactivity*.

The analyses to be conducted will be based on corpora of texts specifically constructed for this research, extracted from online sources, and using tools such as the British National Corpus (BNC)⁶, WebCorp⁷, and English Corpora⁸. However, the research should not be *stricto sensu* classified as a corpus-based or corpus-driven study, as the very goal is to identify a qualitative consistency concerning meanings, values, and beliefs arising from the use of interactivity. In this sense, it combines aspects of corpus linguistics with qualitative analysis methods, such as Congruity Theory and AMT.

It is worth mentioning that given my role in coordinating distance education programs and leading the Center for Technologies in Distance Education (CTEAD) at the Federal Institute of Education, Science and Technology of Pará (IFPA) in Belém, Brazil, special emphasis will be placed on exploring the uses of the word *interactivity* within educational contexts.

In summary, this doctoral research investigates the word *interactivity*, aiming to comprehend its meanings, examine its argumentative uses, and uncover the cultural values and beliefs it evokes, ultimately determining if it can be considered a cultural keyword in the context of cyberculture and, even more specifically, in the educational scenario of distance education.

⁵ Rigotti and Greco highlight the valuable contributions and collaborative efforts of their colleagues from the Institute of Argumentation, Linguistics, and Semiotics (IALS), at the Università della Svizzera Italiana (USI) in Lugano, Switzerland. Special acknowledgment is given to Rocci and Palmieri for their significant involvement in the development of AMT.

⁶ BNC is a 100 million word collection of samples of written and spoken language from a wide range of sources, designed to represent a wide cross-section of British English from the later part of the 20th century, both spoken and written. Available at: <http://www.natcorp.ox.ac.uk/>.

⁷ WebCorp is a suite of tools which allows access to the World Wide Web as a corpus - a large collection of texts from which facts about the language can be extracted. Available at: <https://www.webcorp.org.uk/>.

⁸ These are the most widely used online corpora, and they are used for many different purposes by teachers and researchers at universities throughout the world. In addition, the corpus data (e.g. full-text, word frequency) has been used by a wide range of companies in many different fields, especially technology and language learning. Available at: <https://www.english-corpora.org/>.

1.1. THE STRUCTURE OF THE THESIS

This section offers an overview of the organizational structure that guides the investigation of the word *interactivity* in this doctoral research. It outlines the chapters, sections, and their respective contributions to the overall work. The structure is intended to systematically delve into the multifaceted aspects of the chosen word, from its presumed historical origins to its contemporary uses, examining both theoretical perspectives and empirical findings.

The thesis is organized into three main sections: introduction, papers, and conclusion.

The first section serves as a comprehensive introduction, providing context for the thesis by presenting its research questions, goals, and the theoretical and methodological approaches that will be employed. As a cumulative thesis, this initial section also includes a presentation of the papers comprising the thesis and the connections between them. Additionally, since the papers address the word *interactivity* looking into its uses and meanings in ordinary discourse, it is interesting to offer a previous topic dedicated to present the word itself, tracing its origins, as well as relevant definitions, conceptualizations and approaches developed over time in the academic context. Actually, these aspects are not addressed in the papers.

The second section corresponds to the papers in their published full-texts versions, namely: *Cultural keywords in arguments. The case of interactivity* (2009), *From text to culture through corpus: Interactivity as an argumentative keyword of contemporary cyberculture* (2014), *Distance learning in Amazon Region: tackling rhetorical situations in the context of E-TEC IFPA* (2014), and *Interactivity in Brazilian educational context during pandemic COVID-19* (integration study).

Finally, the third section is a concluding synthesis of the theme of *interactivity* as a cultural keyword in the contemporary cyberculture, integrating the insights gained from the literature review and empirical investigations, indicating key findings and their implications, as well research limitations, and potential issues and aspects for future works.

1.2. TRACKING INTERACTIVITY: DEFINITIONS, CONCEPTUALIZATIONS, AND APPROACHES

1.2.1. Dictionary definitions

Since the aim of this section is to offer an overview of definitions, concepts and approaches concerning *interactivity*, it is valuable to begin observing how some dictionaries define the investigated word. Dictionaries serve as repositories of language, providing insights into the meanings and uses of words within a linguistic community. While it is acknowledged that dictionaries may have limitations in fully capturing the nuances of words, the intention here is not to conduct an exhaustive lexicographic analysis to assess the precision of the chosen dictionaries. Rather, the goal is to compare the definitions of *interactivity* across different sources and highlight noteworthy aspects pertinent to this research.

Table 1 presents definitions of *interactivity* and *interactive* extracted from dictionaries considered for general use, representing three distinct languages.⁹

Dictionary	Entry	Definition(s)
French Le Grand Robert Online (GROB) ¹⁰	Interactivité	n. f. ÉTYM. D. i. (v. 1980); de <i>interactif</i> . 1. <u>INFORM.</u> Activité de dialogue entre un individu et une information fournie par une machine. 2. <u>PAR EXT. COUR.</u> Activité de dialogue entre un individu et une information par l'intermédiaire d'un média.
	Interactif	ÉTYM. D. i. (v. 1980); de <i>inter-</i> , et <i>actif</i> ; 1. <u>Didact.</u> Qui permet une interaction; d'une interaction. Phénomènes interactifs. —

⁹ Dictionaries selected for this analysis are primarily those intended for general usage, as they offer a broad range of meanings and employment of the term *interactivity* that could be representative of the common knowledge within a language community. The choice of the English and Portuguese languages is because the research deals with texts from these linguistic communities. The French language, on the other hand, was chosen because our research indicates that the term *interactivity* may emerged in France in the early 1980s.

¹⁰ Le Grand Robert de la langue française. Version électronique. Deuxième édition. Università della Svizzera italiana. Available at: <http://gr.bvdep.com.ezproxy.lu.unisi.ch:2048/>

		<u>Inform.</u> Programme, matériel interactif, qui permet des actions en mode conversationnel.
French Larousse (LAR) ¹¹	Interactivité	nom féminin 1. Qualité d'un logiciel dont l'exécution prend constamment en compte les informations fournies par l'utilisateur. 2. Caractère d'un média interactif.
	Interactif	adjectif 1. Se dit de phénomènes qui réagissent les uns sur les autres. 2. En informatique, doué d'interactivité. Synonyme: conversationnel 3. Se dit d'un support de communication favorisant un échange avec le public.
English Oxford Advanced Learner's Dictionary (OALD) ¹²	Interactivity	1. (computing) the fact of allowing information to be passed continuously and in both directions between a computer or other device and the person who uses it. 2. the fact of people working together and having an influence on each other.
	Interactive	mid 19th cent.: from interact, on the pattern of active. 1. (computing) that allows information to be passed continuously and in both directions between a computer or other device and the person who uses it. 2. that involves people working together and having an influence on each other.
English Cambridge Dictionary (CAMB) ¹³	Interactivity	noun [U] the involvement of users in the exchange of information with computers and the degree to which this happens.

¹¹ Available at: <https://www.larousse.fr/>.

¹² Available at: <https://www.oxfordlearnersdictionaries.com/>.

¹³ Accessible at: <https://dictionary.cambridge.org/>.

	Interactive	<p>1. involving communication between people or reactions between things that work together.</p> <ul style="list-style-type: none"> • The ocean and the atmosphere form an interactive system. <p>2. An interactive computer program involves the user in the exchange of information while the computer is in operation.</p> <ul style="list-style-type: none"> • interactive software/technology
Portuguese Novo Dicionário Aurélio Eletrônico (AUR) ¹⁴	Interatividade	<p>[De <i>interativo</i> + <i>-(i)dade</i>.] Substantivo feminino.</p> <p>1. Caráter ou condição de interativo.</p> <p>2. Capacidade (de um equipamento, sistema de comunicação ou de computação, etc.) de interagir ou permitir interação.</p>
	Interativo	<p>[De <i>inter-</i> + <i>ativo</i>.] Adjetivo.</p> <p>1. Relativo a, ou em que há interação.</p> <p>2. <u>Inform.</u> De, ou relativo a sistemas ou procedimentos computacionais, programas, etc. em que o usuário pode (e, por vezes, necessita) continuamente intervir e controlar o curso das atividades do computador, fornecendo novas entradas (de dados ou comandos) à medida que observa os efeitos das anteriores.</p> <p>3. <u>P. ext. Comun.</u> Diz-se do meio de comunicação que permite a o destinatário interagir, de forma dinâmica, com a fonte ou o emissor: <i>mídia interativa</i>, <i>programa interativo de TV</i>; <i>videoconferência interativa</i>.</p>
Portuguese	Interatividade	<p>s.f. ETIM <i>inter-</i> + <i>atividade</i>.</p> <p>qualidade de interativo</p> <p>1. meio pelo qual duas ou mais pessoas ou coisas funcionam em conjunto, permutando influxos.</p>

¹⁴ Novo Dicionário Eletrônico Aurélio. 8ª ed., 2019.

Dicionário Eletrônico Houaiss (HOU) ¹⁵		2. INF capacidade de um computador reagir à inserção de dados por parte de um usuário.
	Interativo	<i>adj.</i> ETIM inter- + <i>ativo</i> . 1. relativo a interação. 2. em que ocorre interação. 3. <u>COMN VÍDEO</u> que permite ao indivíduo interagir com a fonte ou o emissor. 4. <u>INF</u> que funciona pela interação com o usuário através da troca de informações e de dados; conversacional.

Table 1: *Interactivity* and *interactive*: dictionary definitions.

Before examining the definitions of *interactivity* and *interactive* presented in Table 1, it is interesting and useful to consider the origins of these words, as they are relevant for better understanding the definitions themselves.

Table 1 shows that only the French dictionary GROB and the English OALD provide a reference date for the words. While GROB indicates around 1980 for the appearance of both *interactivity* and *interactive*, the OALD dates only the origins of the adjective *interactive* to the mid-19th century, suggesting a longer history for the term in the English language.

This discrepancy may challenge the widespread understanding that the terms *interactivity* and *interactive* emerged in the context of the advancements in computing and digital media technologies, probably in the last two decades of the 20th century, facilitating new forms of interaction between individuals and machines.

The reference date given by GROB coincides with the publication of one of the earliest systematic studies on the theme of *interactivity*, the *Bulletin d'Institut de l'Audiovisuel et des Télécommunications en Europe* (IDATE) titled *Interactivité(s)*, published in July 1985.¹⁶

¹⁵ Dicionário Eletrônico Houaiss da Língua Portuguesa. Available at: <https://houaiss.uol.com.br/>.

¹⁶ This *Bulletin d'IDATE* offers thirty-two contributions divided into six sections: (derives d'une notion; lieux et outils; usage sociaux; du praxéologique à l'imaginaire; création(s), écriture(s); de nouveaux modèles du social?). There are authors who try to find out the origins of the term *interactivity* and how it has been used since its coinage, and others who are interested in defining *interactivity* in a useful way to understand and conceptualize a given set of phenomena they observe.

The most detailed and extensive investigation published in this Bulletin is that by Rabaté and Lauraire, who explore the emergence and growing prominence of the term, alongside many other multidisciplinary aspects.

Rabaté and Lauraire (1985, p. 20) reported that they only find instances of *interactivity* in English texts translated from French, but they did encounter the adjective *interactive*.¹⁷ The expressions they found, such as “interactive system”, “interactive program”, “interactive disc”, and “interactive video”, indicate a clear association with computing and media. Given that *interactive* was coined in English in the 19th century, Rabaté and Lauraire’s findings suggest that its use may have been limited until the 1980s, when the term gained relevance and became more widely used, especially in the context of emerging digital technologies.

The authors note that although neologisms result from lexical creativity, word derivations follow specific laws of morpho-syntax. This is the case for *interactivité*, a quality noun deriving from words of different grammatical classes but with the same lexical bases: *action-actif-activité*; *interaction-interactif-interactivité*. Also in English: *action-active-activity*; *interaction-interactive-interactivity*.

Indeed, the word *interactivity* is based on a two steps derivation through the application of two suffixes of Latin origin to a verbal compound formed by a Latin root (*to act*, Lat. *agere*, sup. *actum*) and by an equally Latin prefix (*inter-*).

First, the suffix *-ive* (Lat. *-ivus*, Fr. *-if/ive*, En. *-ive*) is attached to a verbal base to form a deverbal adjective:

¹⁷ It is worth noting that in other English-language dictionaries consulted for this research, such as the Merriam-Webster Dictionary, the Collins English Dictionary and the Longman Dictionary of Contemporary English, there is not a specific entry for *interactivity*. They only mention *interactivity* in the *interactive* entry, but without giving any further explanation.

Fr. *coopérer*>*coopératif/ive*; *créer*>*créatif/ive*; *réfléchir*/*réflexif/ive*.

En. *cooperate* >*cooperative*; *create*>*creative*; *reflect*>*reflective*.

The meaning of the resulting adjective is variable: “which has the capacity to V” or “which has the tendency to V” or simply “which V”:

- A reflective helmet (capacity to V).
- A very cooperative student (tendency to V).
- A creative text (simply, V).

Second, the suffix *-(i)ty* (Lat. *-(i)tas*, Fr. *-(i)té*) is attached to an adjectival base to form an abstract noun, typically meaning “the quality of being Adj.”

Fr. *égal*>*égalité*; *complexe*>*complexité*; *sensible*>*sensibilité*

En. *equal*>*equality*, *complex*>*complexity*, *sensitive*>*sensitivity*

Thus, the derivation of *interactivity* can be reconstructed as follows:

Fr.

1. *inter-agir* (V)
2. *inter-agir* (V) + *-if/ive* (V/Adj) = *inter-act-if/ive* (Adj)
3. *inter-act-if/ive* (Adj) + *-ité* (Adj/N) = *inter-act-iv-ité* (N)

En.

1. *inter-act* (V)
2. *inter-act* (V) + *-ive* (V/Adj) = *inter-act-ive* (Adj)
3. *inter-act-ive* (Adj) + *-ity* (Adj/N) = *inter-act-iv-ity* (N)

Rabaté and Lauraire (1985) explore the evolution and substantivization of the term *interactivity*, particularly within the context of French media development: “If the notion of interactive programs indicates the adjectival use of the lexical unit, the substantival use seems to be mainly a feature of French” (p. 21).¹⁸ They propose a hypothesis that the substantivization of interactivity reflects its significance in French media strategy, especially in the context of cable network development and the adoption of optical fiber technology. They suggest that interactivity has become a slogan term of

¹⁸ “Si la notion d’interactive programs atteste de l’emploi adjectival de l’unité lexicale, celui du substantif semble donc, quant à lui, être surtout le fait du français” (Rabaté & Lauraire, 1985, p. 21).

French cable networks, embodying a distinct brand identity, and conclude: ““Interactivity”” appears as the slogan term defining the brand image of cable networks ‘à la française’”¹⁹ (p.21).

Turning to the definitions in Table 1, when comparing the dictionaries consulted in the different languages, there are common points in defining *interactivity*. They all mention the exchange of information, communication and the capacity for mutual interaction between different entities, highlighting the relation between interactivity and technology. Indeed, those definitions related to Informatics and Communication offer clearer delineation of the concept, making it easier to grasp the essential aspects of the investigated word. On the other hand, broader definitions using terms like “phénomènes qui réagissent les uns sur les autres” [phenomena that react to one another], “caráter ou condição de interativo” [character or condition of being interactive] and “qualidade de interativo” [quality of being interactive] lack specificity and may not help to understand what the lexicographer means by *interactivity*.

The imprecision resulting from broader definitions may lead to varied interpretations, which generates polysemy in relation to *interactivity*. These multiple possible meanings, arising from the vagueness of general definitions, allows for diverse understandings and applications of the concept. For instance, the definition of *interactive* in Cambridge Dictionary (1. involving communication between people or reactions between things that work together) produced the example “The ocean and the atmosphere form an interactive system”, which substantially differ from those uses related to interactions between user and technologies.

Wierzbicka (1996, p. 270) criticizes polysemy in dictionary definitions, underscoring the importance of clarity and specificity in defining the entries: “if a word is genuinely polysemous, then each of its meanings should be stated separately, and each definition should be able to defend itself”. According to her, it is necessary to avoid the generalization in defining words. This might prevent false polysemy, and therefore unnecessary additional meanings.

¹⁹ “L’“interactivité” apparaît comme le mot-slogan définissant l’image de marque des réseaux câblés ‘à la française’” (Rabaté & Lauraire, 1985, p. 21).

When multiple definitions exist across dictionaries, it may indicate a degree of polysemy, which can lead to confusion in understanding the concept. To tackle this situation, Wierzbicka (1996) says that dictionary definitions should aim to capture “the invariant concept which is part of the native speaker’s tacit knowledge about their language and which guide them in their use of that word”. By providing clear and separate meanings for each definition, dictionaries can enhance clarity and accuracy in conveying the nuances of a certain entry. In the end, “the process of constructing a lexicographic definition is – or should be – a search for truth” (p. 264).

Following Wierzbicka and trying to capture the invariant of all definitions in Table 1, terms like dialogue, exchange of information, and “mode conversationnel” [conversation mode] converge on a shared concept. Notably, the predominant themes align closely with the realm of Informatics, Communication, and Media, which is characterized by terms such as machine, media, “logiciel” [software], computer, “sistema de comunicação ou de computação” [communication or computing system], and “procedimentos computacionais” [computational procedures], highlighting their central role in defining interactivity.

The polysemy and vagueness surrounding the word *interactivity* will be observed and addressed in the papers comprising this thesis, considering texts found in ordinary discourse of individuals. Additionally, a semantic analysis will be presented to better understand what people have in mind when referring to interactivity. By examining everyday language usage, this thesis aims to reveal the various interpretations associated with interactivity, ultimately contributing to a deeper understanding of the concept as perceived and articulated by individuals in different settings.

Now, moving from the exploration of dictionary definitions, the next section will briefly present academic studies that provide a panoramic view of conceptions and approaches to interactivity over time. These works complement and extend the definitions found in dictionaries, offering insights into the evolving understanding of definitions and meanings of *interactivity* across various disciplines and research traditions.

1.2.2. Academic definitions, conceptualizations and approaches

Since the appearance of the word *interactivity*, scholars have been trying to describe it and clarify its meaning. Over time, researches belonging to different fields have been carried out resulting in many conceptualizations, definitions, approaches and classifications based on degrees, levels, etc. Not by chance, while Bucy (2004) says that it is an “elusive concept”, Guénau (2005) refers to an “unfound definition”. Indeed, *interactivity* encompasses a range of interpretations that can vary based on individuals and the specific contexts in which it is considered.

Due to the large number of scholars who have conducted research on interactivity attempting to conceptualize it from various personal interests and academic perspectives, it will be presented here a few contributions that seek to systematize and synthesize the diverse conceptions and approaches regarding interactivity, based on extensive studies. These contributions offer a comprehensive understanding of the varied ways in which interactivity is conceived and understood within academic discourse.

The initial contribution is the study by Rabaté and Lauraire (1985) published in the *Bulletin d'IDATE* titled *Interactivité(s)*, which has frequently served as a foundational reference for subsequent studies on interactivity. The authors explore the concept of *interactivity* as a prominent keyword within the context of telecommunications and media discourse, focusing on its emergence, evolution, and diverse interpretations. Their analysis encompasses a corpus of texts, especially academic studies, governmental documents and communications, and the discourse of telecommunication companies.

Rabaté and Lauraire (1985) explain that they fundamentally “[...] cared more about identifying diversity to better highlight a kind of unique matrix, a force circumscribing the heterogeneous” (p. 72).²⁰ Therefore, aiming to capture the various perspectives and interpretations surrounding the concept of interactivity, they summarize

²⁰ “[...] c'est qu'au fond il nous importait plus de repérer la diversité pour mieux faire ressortir une sorte de matrice unique, force circonscrivant l'hétérogène” (Rabaté & Lauraire, 1985, p. 72).

the generic definitions which they found within four “contours notionnels” (notional frameworks) (p. 24):²¹

1. Receiving, but also intervening; intervention on content; spectator intervention; transformation of the spectator into an actor.
2. Individualized dialogue with connected services; dialogue with the network hub; communication between viewer and transmitter.
3. The possibility for two interlocutors to speak, see each other, and communicate freely; reciprocal actions in dialogue mode with users or, in real-time, with devices; each communicator responds to the other(s).
4. Not only does the “viewerspectator” receive information, but they also provide responses over the network through a feedback channel; each participant in the communication receives and responds to messages produced by the others.

In short, the interlocutor is simultaneously or successively the sender and receiver of messages. Rabaté and Lauraire (1985, p. 24) propose the following diagram to represent these initial efforts to define interactivity²²

²¹ “1. Recevoir, mais aussi intervenir; intervention sur le contenu; intervention de la part du spectateur; transformation du spectateur en acteur. / 2. Dialogue individualisé avec les services connectés; dialogue avec la tête du réseau; communication entre téléspectateur et émetteur. / 3. Possibilité pour deux interlocuteurs de se parler, de se voir et de se communiquer ce que bon leur semble; actions réciproque avec en mode dialogue avec les utilisateurs ou, en temps réel, avec des appareils; chacun des communicants répond à l'autre, aux autres. / 4. Non seulement le “câblospectateur” reçoit des informations, mais il apporte des réponses sur le réseau par une voie de retour; chacun des participants à la communication reçoit des messages produits par les autres et y répond” (Rabaté & Lauraire, 1985, p. 24).

²² We prefer to present this diagram in French, as published. However, here is an English version: 1. The dialogue/the communication/the message exchange } between { human interlocutors/human interlocutors and machines/users and services/abonné et tête de réseau. 2. The possibility of { acting/intervene { on/in { the software/the content (Rabaté & Lauraire, 1985, p. 24).



Figure 1: Definitions of *interactivity* identified by Rabaté and Lauraire.

Here, it is worth mentioning the semantic analysis that will be presented in the first paper comprising this thesis, published in the *Cogency Journal of Reasoning and Argumentation*. The results of applying the Congruity Theory to a corpus of texts where *interactivity* and *interactive* are used by ordinary people can be compared with this seminal diagram by Rabaté and Lauraire, even though over time, people have associated *interactive* with elements and contexts that were neither found nor anticipated by their research. These new uses probably stem from the widespread positive cultural value that *interactivity* has acquired since its initial use.

Interestingly, Rabaté and Lauraire (1985, p. 72) do not propose a definition: “[...] even if we wished, we certainly do not have the power to decisively attribute a definitive meaning to the term and avoid the diversity of its reappropriations”²³.

On the other hand, there are scholars who suggest a definition of *interactivity* after reviewing conceptualizations and approaches from various fields such as communication, media studies, computer science, sociology, psychology, and so forth. While it is an extremely challenging task, their effort is to define interactivity in a way that encompasses the various perspectives encountered.

One prominent contribution in this regard is the work of Jensen (1998), who developed a conceptual framework by tracing concepts of interactivity from media and communication studies: “[...] interactivity may be defined as: a measure of a media’s potential ability to let the user exert an influence on the content and/or form of the mediated communication” (p. 201).

²³ “[...] c’est que, le voudrions-nous, nous ne disposons certes pas du pouvoir d’attribuer de manière décisive un sens définitif au terme, et d’éviter la diversité de ses réappropriations” (Rabaté & Lauraire, 1985, p. 72).

Indeed, Jensen's concise definition of interactivity is only introductory, as he complements it with four sub-concepts in an attempt to capture the multidimensionality of the concept of interactivity: “[...] the various important aspects of the concept of interactivity can to a great extent be reduced to four dimensions which can be understood using the communication patterns: transmission, consultation, conversation and registration” (Jensen, 1998, p. 201).²⁴

- **Transmissional interactivity:** Refers to a media's potential ability to allow users to select information from a continuous stream without a return channel (teletext, multicasting, etc.).
- **Consultational Interactivity:** Refers to a media's potential ability to allow users to choose from preproduced information in a two-way system with a return channel, based on their requests (video-on-demand, CD-ROM, world wide web etc.).
- **Conversational Interactivity:** Refers to a media's potential ability to allow users to produce and input their own information in a two-way system, whether in real-time or stored (video conferencing, e-mail, etc.).
- **Registrational Interactivity:** Refers to a media's potential ability to allow users to register information, adapting or responding to their needs and actions (surveillance systems, intelligent agents, etc.).

Framing interactivity as “a measure of a media’s potential ability”, Jensen suggests considering technological functionalities to define and classify interactivity, emphasizing the central role of technology in enabling different degrees of user influence within mediated communication contexts.

Another scholar who proposes a definition of interactivity is Kiouisis (2002). After examining several “explicit definitions of interactivity rather than implied or tacit conceptions” (p. 358), his work is an attempt to “[...] bring some consensus to how the concept should be theoretically and operationally defined” (p. 355). Although he makes it

²⁴ Jensen bases his definition of *interactivity* on Bordewijk and Kaam’s (1986) matrix for communication patterns regarding teleinformation services: transmission, consultation, conversation, and registration.

clear that the emphasis of his work is on the field of communication, his research also considers non-communication perspectives from psychology, sociology, and computer science. Furthermore, to organize and delineate his approach, Kiouisis classifies the definitions found according to the object emphasized by scholars, namely technology, communication setting, and perceiver.

Kiouisis (2002, p. 368) suggests a list of consensual elements and meanings encompassing interactive experiences:

- Two-way or multiway communication.
- Role interchangeability among participants (sender/receiver).
- Third-order dependency among participants (interactions in which subsequent messages build upon and are shaped by prior interactions).
- Communicators can be humans or machines.
- User manipulation of content, form, and pace of a mediated environment.
- User perception of different levels of interactive experiences.

These elements are integrated, and Kiouisis (2002, p. 372) formulates a comprehensive definition of *interactivity* that encompasses three major dimensions: structure of technology, communication context, and user perception.

Interactivity can be defined as the degree to which a communication technology can create a mediated environment in which participants can communicate (one-to-one, one-to-many, and many-to-many), both synchronously and asynchronously, and participate in reciprocal message exchanges (third-order dependency). With regard to human users, it additionally refers to their ability to perceive the experience as a simulation of interpersonal communication and increase their awareness of telepresence.

Kiouisis's definition of *interactivity* captures its multifaceted nature by emphasizing the technological capacity to facilitate communication among participants in various ways and different time settings. The notion of reciprocal message exchanges, involving third-order dependency, highlighting the continuity and interconnections of interactions within mediated environments. Furthermore, he extends the definition to encompass human subjective experience, underscoring users' ability to perceive the interaction as a remote interpersonal communication.

Finally, it is valuable to present McMillan's (2002) work, a renowned scholar in the field of communication studies. McMillan draws insights from multiple disciplines including communication studies, information science, and computer-mediated communication, exploring various theoretical perspectives to examine different models of interactivity. Although the author does not offer her own definition of interactivity, in her extensive interdisciplinary study, she investigates how diverse research traditions conceptualize and measure interactivity, focusing on three key dimensions: users, documents (or content), and systems.

The user-to-user tradition is related to how people interact with each other. This tradition clearly precedes the emergence of the so-called new media and is focused on the studies of human communication (interpersonal interaction, symbolic interaction, social interaction, and interaction as feedback). Within this research tradition, McMillan (2002, p. 209) observes that "[...] the concept of interactivity is closely tied to the discovery of new tools for facilitating old techniques of human communication", corresponding to what is known as computer-mediated-communication (CMC).

The user-to-document tradition refers to the interaction between users and contents (or creators of contents) in a given media or computing system. This kind of "[...] interactivity applies to both old media and new media and involves both perceived interaction with content creators and actual creation of content" (McMillan, 2002, p. 213). Currently, the term *user-generated content* (UGC) helps to understand what this tradition focuses on.²⁵

The user-to-system (or user-to-medium) research tradition is devoted to "[...] the interaction between people and the computer (or other type of new media system) itself." This tradition is rooted in the studies on *human-computer interaction* (HCI) (McMillan, 2002, p. 217).

McMillan (2002, p. 209) suggests that "[...] these three research traditions do provide a basic framework for investigation of the past, present and future of interactivity".

²⁵ UGC refers to any form of content, such as text, images, videos, or other media, that is created and shared by ordinary users of social media, websites, forums, or other online platforms, rather than by professional creators or organizations. Examples of UGC include social media posts, comments, reviews, blog posts, photos, videos, memes, and so forth.

However, she herself notes an “arbitrary distinction”²⁶ between these traditions, as they often overlap. Additionally, she emphasizes the importance of the concept of “*control*” in relation to the users’ actions in all traditions.

With respect to the characteristics pointed out by researchers regarding interactivity, McMillan (2002) groups them into three approaches: interactive feature, perceived interactivity, and interactive exchange.

The first approach (interactive feature) focuses on “the property and/or feature of the message and/or the medium” (McMillan (2002, p. 207). Interactivity is conceived as a technical characteristic of a certain medium which enables users to engage in two-way communication and/or take control over the system. In this perspective, interactivity has also close correlations with other technological characteristics such as bandwidth, response time, choices variety, user-friendliness, among others.

Perceived interactivity, the second approach, relies on the perception of users, i.e., whether and how individuals perceive interactivity based on their qualitative experiences in communication settings. In this case, interactivity is such a psychological variable dependent on subjectivity: what one participant perceives as an interactive experience may not be considered as such by others.²⁷

In the third approach, interactivity is related to the exchange of information among participants in a communication system, emphasizing how they share information and alternate roles as senders and receivers. This approach underlines dialogical and conversational aspects and closely aligns with the study of social interaction in traditional social theory.

Finally, concluding her study, McMillan provides a table summarizing and crossing the three research traditions and the three approaches to interactivity.

²⁶ For example, when users interact with content creators, all the three traditions should come into play.

²⁷ Here, it is worth to mention the current trend of User Experience (UX) studies, which focuses on design and evaluate interfaces based on user-centered perspective and usability.

	Interactivity features	Perceived Interactivity	Interactive exchange
User-to-user	Chat room	Perception that presence of chat space makes a site interactive	Participating in an online chat
User-to-document	Customer review	Perception that customers reviews enhance interactivity of site	Posting a product/service review
User-to-system	Web-based forms	Belief that Web-based forms will elicit a response	Filling in a Web-based form

Table 2: Bringing together characteristics and traditions of interactivity (McMillan 2002, p. 221).

In summary, each scholar approaches interactivity from a slightly different angle, using varied frameworks to define it and differing in the dimensions they emphasize. While there are differences in the presented approaches, definitions, and conceptualizations, these scholars share a common understanding of interactivity as a multifaceted phenomenon influenced by technology and user engagement in mediated communication contexts.

The work of Rabaté and Lauraire lays a foundational framework for understanding interactivity delineating its various dimensions within media discourse, emphasizing the transformation of spectators into participants in the dynamics of media communication. Despite being proposed over forty years ago, their framework continues to serve for mapping various attempts to define and conceptualize *interactivity* up to the current days, except for the subjective aspect of perceiving interactive experiences.

Jensen, Kiouisis, and McMillan offer broader and more nuanced perspectives on interactivity within the evolving landscape of media and communication studies, expanding the initial contours identified by Rabaté and Lauraire. Each perspective contributes providing insights to the broader discourse on interactivity within communication studies and related fields.

In the following sections, this thesis presents studies that examine the uses of the term *interactivity* in everyday life. This approach aims to enrich the understanding of the cultural significance and contextual nuances associated with the concept of interactivity. By exploring how ordinary people use and discuss this concept beyond academic definitions and approaches, valuable insights can be gained into its practical implications

and social relevance. Examining everyday language is crucial because it reflects how people perceive, interpret, and employ the concept in their daily lives, shedding light on its multifaceted meanings and applications.

1.3. PAPERS: EXTENDED SUMMARY

Before presenting the papers, it is pertinent to explain that this thesis originates from two distinct research periods. The first phase took place from 2008 to 2010 and resulted in three published papers; in the second phase, from 2021 to 2024, an integration study was developed to integrate the two periods, updating the research, and consolidating the previous findings while also uncovering new insights.²⁸

As will be shown below, the first two papers contribute to understand the complex interplay between texts, language, and culture, exploring the uses of the word *interactivity* within ordinary discourse and giving insights into its multifaceted conception within contemporary cyberculture. Drawing upon theoretical frameworks and empirical analysis, these studies offer semantic and argumentative analysis of *interactivity* as a cultural keyword, exploring its meanings and cultural connotations as well as shared values and beliefs associated with it.

While in the first two papers the investigation into *interactivity* involves cyberculture in a broad sense, in the last two the research focus on the field of education, specifically e-learning and distance education. This is due to a professional interest, since I head a Center for Distance Education in Brazil, as mentioned before. Actually, these latter two papers are situated within the Brazilian context.

Particularly, the third article does not deal with the word *interactivity* itself. Instead, it tackles a communication challenge within a Brazilian distance education program: the lack of interactive communications among teachers, tutors, and students. This issue is approached as a situation that can be addressed through argumentative discourse, offering an additional perspective to the research while maintaining a

²⁸ This gap occurred especially due to an overload of work because of the classes and the task assigned to me to build a Center for Distance Education at the Federal Institute of Pará - IFPA, where I work as a teacher.

connection with the previous articles regarding the interplay between language, argumentation, and culture.

Considering that it is a delayed doctoral thesis, it is essential to verify whether the results obtained previously remain valid after such a long time. Indeed, Cowton (2019) draws attention to the examination of three main factors that should be taken into account to assess the ongoing relevance of a delayed doctorate: the academic literature, the empirical world, and the old data. These factors will be addressed in the last paper specifically developed to connect the two periods of this research. This integration work examines the cultural keyword *interactivity* in the Brazilian educational context during the COVID-19 pandemic.

In the following, there is a concise overview of each article, providing a cohesive understanding of the research conducted.

1.3.1. (Paper 1): Cultural keywords in arguments: The case of interactivity

The first paper, co-authored with Professor Andrea Rocci, is *Cultural keywords in arguments: The case of interactivity*, and was published in 2009, in *Cogency: Journal of Reasoning and Argumentation*. The paper explores the relationship between cultural keywords and arguments, with a focus on the term *interactivity* within the context of contemporary cyberculture.

The paper starts from the works of Williams (1959; 1976) in historical semantics, Wierzbicka (1997) in lexical semantics, and Stubbs (1996; 2001a; 2001b; 2008) in corpus linguistics to illuminate the conceptualization of keywords and their significance in cultural contexts. Despite the relevant contribution of these scholars, none of them indicates a test procedure to verify whether a certain word can be considered a cultural keyword. To fill this void Rigotti and Rocci (2005) suggest a “discovery procedure” which, in the paper, is applied in the case of *interactivity*.

To shed light on the supposed role of interactivity as a cultural keyword, the paper adopts a two-step investigation based on corpus data: firstly, a semantic analysis is conducted attempting to grasp the meanings of interactivity attributed by people in

ordinary discourse; secondly, an examination is carried out on how interactivity is utilized in argumentative contexts.

The methodological use of a corpus is necessary for this investigation due to the assumption that *interactivity* is a cultural keyword of an entire (cyber)culture. Consequently, the scope of the research cannot be limited to the analysis of a single text or a few isolated examples. Instead, a broader exploration is required to ascertain consistency in its usage, whether in expressing conceptual meanings, evoking values and beliefs or supporting points of view. This is referred to as the “argumentative prosody” of a keyword in the paper.

For the semantic analysis, the Congruity Theory, particularly expounded by Rigotti (1993), Rigotti and Rocci (2001), Rigotti, Rocci and Greco-Morasso (2006), offers a systematic representational method to delineate and better understand how individuals conceptually interpret and indeed employ the word *interactivity* in their everyday communication.

Moreover, since cultural keywords represent values and beliefs of a certain community or society, they are generally embodied with a persuasive power resulting not only from their main conceptual meaning (denotation) but also from a secondary, non-representational meaning (connotation) referred to “emotive meaning” by Stevenson (1937; 1938; 1944). Given the significance of this aspect in understanding the relationship between keywords and arguments, the paper also addresses this issue.

The second step of the investigation is based on Rigotti and Rocci (2005), who suggest examining the use of a word in arguments to verify its status as a cultural keyword. They propose to consider as serious candidates to the status of cultural keywords those words that play a two-fold role in an enthymematic argument, functioning as logical mediators and as communicative indicators of cultural common ground (Clark, 1996).²⁹

In this way, to test whether *interactivity* can be considered a cultural keyword in cyberculture, a corpus was built with argumentative texts extracted from the web using the online tool WebCorp. The search for texts was carried out using the argumentative

²⁹ As explained in the paper, enthymemes are syllogisms in which one premise is unstated, but the interlocutors can recover it from their communal common ground. In the Aristotelian tradition, these missing premises are endoxa, i.e., generally shared and accepted opinions in a given community.

indicator *because* and the string *because it is (not) interactive*, seeking texts where the word *interactivity* is used as an argument to support a certain standpoint.

Finally, since the analysis points to the polysemy and vagueness of *interactivity*, and a recurrent positive evaluation of the cultural keyword, the paper draws attention to the rhetorical techniques of dissociation (Perelman & Olbrechts-Tyteca, 1958; van Rees, 2009) and “persuasive definition” (Stevenson, 1938) that can be readily applied to the case under investigation.

1.3.2. (Paper 2) From text to culture through corpus: Interactivity as an argumentative keyword of contemporary cyberculture

Considering the insights gained from the first study, the second paper explores the path from text to culture, examining how the argumentative uses of cultural keywords can help to recover shared values and beliefs within a community, and contributing to reconstruct the cultural common ground regarding *interactivity* within the landscape of contemporary cyberculture. This second paper, titled *From text to culture through corpus: Interactivity as an argumentative keyword of contemporary cyberculture*, was published in 2014 in *Semiotica - Journal of the International Association for Semiotic Studies*. It is a refined version of the work presented in the International Conference on Semiotics: From Observation to Text, from Text to Culture, held in Tallin University, Estonia, in 2010.

Central to our investigation are three research questions: firstly, it is investigated how the argumentative uses of cultural keywords makes it possible the recovery of shared values and beliefs within a discourse community. Secondly, it is explored the cultural values and beliefs related to *interactivity* that emerge from ordinary discourse. Lastly, it is examined the inferential principles upon which individuals base their arguments regarding *interactivity*.

This second paper is an expansion on the previous work. In this way, it is adopted the same theoretical framework to introduce cultural keyword and their relationship with argumentation. Scholars such as Williams, Wierzbicka, Stubbs and Stevenson are mentioned again.

The novelty lies in the claim that employing cultural keywords to retrieve *endoxa* from a corpus provides a useful methodological approach for gaining insights into a cultural community. In this way, the discovery procedure suggested by Rigotti and Rocci is not only used to confirm the *interactivity* status of a cultural keyword but also to collect a constellation of *endoxa* related to it. The persistent positive evaluation of interactivity aligns with the findings of the previous paper, as expected.

To move beyond the generalized optimistic “aura” surrounding *interactivity*, the Argumentum Model of Topics (AMT) (Rigotti & Greco, 2019) supports the examination of argument schemes upon which people base their evaluation on the keyword at stake, considering both inferential-procedural and material-contextual dimensions. While the first dimension warrants logical soundness, the second provides cultural effectiveness.

The constellation of positive *endoxa* and the recurrence of arguments from efficient cause observed in the corpus have encouraged us to suggest a meta-discourse to synthetically express the set of opinions, values and beliefs concerning *interactivity* belonging to the cybercultural common ground.

Considering the positive connotation with which the keyword *interactivity* is endowed and since the AMT is an analytical tool but not evaluative (Rigotti & Greco, 2019), the paper also recommends critically treating the argumentative reasoning involving interactivity. This should be done by means of critical questions intended: to validate the inferential principle (*maxim*) on which the argument is grounded; to verify whether the *endoxon* is really shared and acceptable by the interlocutors; and to evaluate the material element (*datum*) used in the reasoning is indeed evidence.

1.3.3. (Paper 3) Distance learning in Amazon Region: Tackling rhetorical situations in the communication context of E-TEC IFPA

While the first two papers extensively explore the meanings of *interactivity* within the context of cyberculture, examining its various uses and significance as an argumentative cultural keyword, the third paper expands this perspective by addressing broader issues related to interactivity within a specific educational context. This shift in focus represents an expansion of the research scope, moving from linguistic and cultural

analyses to an applied investigation of interactive communication within an educational setting. This complementary approach offers a more comprehensive understanding of interactivity, incorporating both theoretical explorations and practical applications.

Actually, the third paper arose from a double motivation: first, the importance of the keyword *interactivity* and the values and beliefs embedded in it in the context of cyberculture; second, a communicative issue I had to deal with as the coordinator of E-TEC IFPA, a distance education program in Brazil; this paper, titled *Distance learning in Amazon Region: Tackling rhetorical situations in the communication context of E-TEC IFPA*, was presented in the 13th European Conference on e-learning (ECEL-2014), held at Aalborg University (Copenhagen, Denmark) and published in the conference proceedings. It addresses the lack of interactive communication among teachers, tutors, and students within the E-TEC IFPA program, exploring potential solutions by means of argumentative discourse aimed at changing beliefs and attitudes.

The study is basically based on a combination of two frameworks: the conception of “rhetorical situation”, as developed by Bitzer (1968), and the model of social communication context proposed by Rigotti and Rocci (2006).

According to Bitzer, a rhetorical situation emerges when there is an exigency to change beliefs and attitudes by means of discourse. That is the case for the lack of interactive communication within the investigated distance learning program. The paper shows that this issue can be addressed through the implementation of adequate discourse capable of influencing decisions and bringing about changes in beliefs and attitudes of teachers, tutors, and students.

This rhetorical situation is better understood and analyzed utilizing the model of communication context presented by Rigotti and Rocci. This model facilitates the identification of institutionalized factors, such as communicative practices, professional competences, shared goals, and mutual commitments, as well as interpersonal aspects, such as stories, relationships, myths, and rites. Additionally, communication roles and flows are considered, all contribute to a comprehensive understanding of the rhetorical exigencies, audiences, and constraints related to the lack of interaction between stakeholders.

By integrating these two frameworks, the paper offers a comprehensive exploration of the multidimensional aspects related to the lack of interactive communication within E-TEC IFPA, while also providing valuable insights on exigencies, audiences, and constraints that should be considered when constructing argumentative discourses aimed at changing beliefs and attitudes of stakeholders.

1.3.4. (Paper 4 - integration study) Interactivity in the Brazilian educational context across the COVID-19 pandemic

Finally, the last paper comprising the thesis is a study aimed at integrating the two research phases, separated by many years. Indeed, its main goal is to assess an ongoing interest in *interactivity* as a research subject, as well as to confirm whether it can still be considered a cultural keyword in the current stage of cyberculture. As a delayed doctorate, it is essential to examine what remains valid since the research was initiated, including the academic literature, the empirical world, and the collected data (Cowton, 2019). Additionally, the previous results themselves should be validated and compared with new findings to determine how the research represents a current and relevant contribution to studies involving discourse analysis, cultural keywords, and argumentation within the Communication Sciences.

Despite being a work aimed at validating the previously conducted research, the continued relevance of its theoretical perspectives and methodological approaches, this study introduces a few innovations.

It was decided to collect a new corpus that would evidence a portion of the contemporary world in which the word *interactivity* supposedly manifests a cultural significance. Given the professional interests in distance education already mentioned and recognizing the challenges posed by the COVID-19 pandemic, particularly in the realm of teaching and learning, this situation was taken as a research opportunity. Consequently, a corpus focusing on the Brazilian educational context during the pandemic has been compiled, providing fresh data for this new study and the overall research. Not only is the corpus new, but its construction also introduces a methodological point compared to the earlier compilations. While the previous corpora were generic and collected based on

argumentative indicators, this new corpus is more specific and constructed using snowball sampling, particularly focusing on texts from educational contexts.

Another methodological innovation is the incorporation of insights from computer-aided corpus linguistics to enhance the investigation. The utilization of AntConc software reveals statistical data, including the frequency of occurrences and collocates co-occurring with *interactive* in the corpus, which aids the semantic analysis carried out by the Congruity Theory.

Furthermore, the integration study applies the AMT tool to grasp ideas, values, and beliefs related to *interactivity* that belong to the common ground of the Brazilian educational community. Since the texts for the corpus of this work were not necessarily collected using *interactivity* as an argument to support certain standpoints, the study reveals that in some argumentative moves, interactivity appears as a standpoint to be defended. This adds new insights to the research.

2. INCORPORATED PAPERS³⁰

(PAPER 1) CULTURAL KEYWORDS IN ARGUMENTS. THE CASE OF INTERACTIVITY³¹

1. Introduction

Cultural keywords are words that are particularly revealing of a culture's beliefs or values. As such, they are typically associated with evaluative *connotations*. In this paper we look at the relationship between keywords and arguments, taking the derivationally related words³² *interactive* and *interactivity*³³ as cases in point. In the following pages, we first outline the view – first put forth in Rigotti and Rocci (2005) – that in order to decide whether a certain word is indeed a cultural keyword one should look at how exactly this word is used in arguments in a corpus of texts representative of the cultural community under consideration. As we will see, this approach not only offers a previously lacking decision procedure to test candidate keywords, it also offers us a deeper theoretical insight of what a keyword is by connecting it with the notion of *endoxon* from Aristotelian rhetoric.

³⁰ The numbering of footnotes, figures, and tables, as well as the citation style have been modified from the originally published papers to ensure consistency throughout this thesis. The citation style used in this thesis follows the guidelines of the American Psychological Association (APA, 7th edition).

³¹ Andrea Rocci wishes to acknowledge the support of the Swiss National Science Foundation (SNSF) for this work as part of the project *Endoxa and keywords in the pragmatics of argumentative discourse*. (Grant SNSF PDFMP1_124845/1).

³² From a morphological viewpoint the relation between *interactive* and *interactivity* is a simple case of semantically unmarked, or “cold”, derivation where an abstract *name of a property* is derived from the corresponding adjective as in: *hostile* > *hostility*, *futile* > *futility*, *rare* > *rarity*. However, things are complicated by the fact that *interactive* is itself a deverbal adjective, derived from the verb *to interact*. From this same verb stems the deverbal noun *interaction*, with which *interactivity* is indirectly related. The different derivation path is reflected in the different semantic classes to which these abstract nouns belong: *interactivity* is a stative, uncountable, property name, while *interaction* is a non-stative, countable, event name. For a basic discussion of morphology in relation to semantics see Rigotti and Cigada (2004, pp. 147-172, 207-210) and Polguère (2008).

³³ Rabaté and Laurraire (1985, p. 21) had noted that French *interactif* was much more used than *interactivité* and hypothesized that the noun derived also diachronically from the adjective. This assumption coincides with Oxford Dictionary of English in which *interactivity* is not present as a specific entry but it appears as a derivative of *interactive*. Moreover, it is still interesting to remark that in spite of the fact that both terms were coined to cope with the development of the new media, *interactive* became the adjectival form associated with *interaction* as well.

Starting from this conception of keywords, we go on to argue that if, on the one hand, looking at argumentation lends precious insights to research on keywords conducted within lexical semantics, linguistic anthropology or cultural studies, on the other hand, the study of argumentation can similarly benefit at various levels from paying attention to cultural keywords.

First, keywords can be used by argumentation analysts to validate their hypotheses about the *reconstruction* of tacit premises in natural enthymematic arguments.

Second, the evaluative connotations attached to keywords deserve a close scrutiny in the *evaluation* of the quality of arguments. These connotations may point to complex systems of cultural beliefs, that are actually mobilized in the audience in working out the structure of the argument, yet because of their very prominence they can also provide “shallow” suitable premises for the enthymeme, discouraging further elaboration in the audience. Additionally, keywords can be the target of rhetorical strategies that exploit their polysemy or vagueness, through *equivocation* or *persuasive definition*, so that their connotations (and the readily available premises that come with them) are abusively appropriated by the arguer. Conversely, an arguer can employ the strategy of *dissociation* on a vague or polysemous keyword in order to restrict the applicability of an argumentatively relevant connotation.

2. Research traditions in the study of keywords

Before we develop the argument sketched above with the help of the words *interactive* and *interactivity*, it is worth pausing briefly³⁴ on how scholars from various areas of linguistics, anthropology and cultural studies have tried to capture the haunting but elusive notion of cultural keyword and have defined a series of partially overlapping notions of keyword.

³⁴ A much more comprehensive literature review on cultural keywords can be found in Bigi (2006).

The *key* metaphor is easily grasped intuitively and, to some extent, provides a common schema, masking the diversity of concepts associated with this term: *keywords* are in some sense *representative* of a body of knowledge to which they are associated, and thus can be used to provide some sort of *access* to this body of knowledge – be it an individual text, a corpus of texts belonging to the same discourse genre, or discourse community, or a whole culture. Stubbs (2008, p.1) provides a broad characterization of the family of notions that interests us here: “Keywords are words that are claimed to have a special status, either because they express important evaluative social meanings, or because they play a special role in a text or text type”.

An early, influential, contribution to the study of keywords can be found in the works of Williams (1959, 1976). For him keywords are “[...] significant binding words in certain activities and their interpretation; they are significant, indicative words in certain forms of thoughts” (Williams, 1976, p. 20). Williams composed a dictionary of keywords, including mostly learned, specialized words such as *alienation*, *class*, *democracy*, *industry*, which is meant to illuminate the understanding of the crucial arch-keywords *culture* and *society*. Williams refers to his work as “historical semantics” and argues that it can illuminate our understanding of social and cultural realities as the change in the use of some words corresponds to changes in the way people think about ordinary life. Interestingly, Williams (1976) says that every word included in the dictionary has “virtually forced itself” on his attention “in the course of some argument”, yet he does not provide a method for identifying keywords other than his subjective choice, nor does he systematically elaborate on their relation with arguments. More generally, the recourse to textual evidence in elucidating keywords is quite limited in Williams, as he only relies on dictionary examples.

A more linguistic take on the analysis of cultural keywords, rooted in lexical semantics and the anthropological linguistic tradition is represented by the work of Wierzbicka (1997). Wierzbicka’s research deals with the semantic analysis of areas in the lexicon where highly language specific distinctions reflect specific ways of living as well as “ways of thinking”. Further, these distinctions have, historically, shaped their

communities and perpetuate the ways of living they reflect. The domains covered by Wierzbicka's analyses range from social and political values, to ethics, folk-psychology and ethnic identity, all of which she examines with respect to a number of European and extra-European languages. According to Wierzbicka (1997, p. 22), linguistic semantics provides a rigorous methodology for decoding culture specific meanings and, consequently, for elucidating the tacit assumptions which are linked with them. In fact, her work is based on a formal (though naturalistic) system for the representation of linguistic meanings called Natural Semantic Metalanguage (NSM)³⁵. Many of the words analyzed by Wierzbicka, both prestigious, like *liberty*, and colloquial like the typically Australian verb *whinge* contain an embedded evaluative connotation. Consider, for instance, her characterization of *whingeing* in Australian culture, p.

What exactly is 'whingeing'? Clearly, it is a concept closely related to that expressed by the word complaining. But, first, complain is neutral, and does not imply any evaluation of the activity in question, whereas whinge is critical and derogatory. Furthermore, complain is purely verbal, whereas whinge suggest something that sounds like an inarticulate animal cry. Being purely verbal, complaining can be seen as fully intentional, whereas whingeing can be only seen as semi-intentional and semi-controlled. Finally, whingeing, like nagging and unlike complaining, suggests monotonous repetition. (Wierzbicka, 1997, p. 215)

Basically, the word *whinge* represents a morally condemned behavior, which runs directly counter to the traditional Australian colonial ethos characterized by the values of toughness, gameness, resilience, "die-hardness", comradeship, and good humor (Wierzbicka, 1997). This whole characterization is seen as embedded in the word meaning and made painstakingly explicit in the NSM semantic analysis of the complex semanteme *whingeing*:

³⁵The NSM was developed during 30 years by A. Wierzbicka, in collaboration with Cliff Goddard and others. The NSM makes a strong hypothesis on the universal nature of human concepts. It posits a finite inventory of basic universal human concepts, semantic primes (Wierzbicka, 1996), which are lexicalized in all the languages of the world. The primes provide a natural metalanguage for semantic decomposition of complex meanings, and a touchstone and metric for evaluating differences across cultures.

(1) *whinge* (e.g. *X was whingeing*)

(a) for some time, X was saying something like this:

something bad happened to me

(b) X was saying it as people say things

(c) when they want to say something like this:

(d) something bad is happening to me

(e) I feel something bad because of this

(f) I can't do anything ("about it")

(g) I want someone to know this

(h) I want someone to do something because of this

(i) I think no one wants to do anything

(j) I want to say this many times because of this

(k) people think: it is bad if someone does this

(Wierzbicka 1997: 215-216)

While the method of semantic analysis followed by Wierzbicka is very explicit, the process of keyword selection remains largely intuitive³⁶. Wierzbicka (1997) does mention a series of indicators that may help keyword selection (sheer frequency of occurrence, frequency of occurrence in a particular domain, frequency of occurrence in book titles, songs, proverbs, sayings, richness of the phraseological patterns in which the word occurs), but she also contends that the true justification of the choice of a keyword is given *a posteriori* by the insightfulness of the results of its semantic analysis. As regards the linguistic evidence used to support the analysis, it is still largely limited to dictionaries and other kinds of meta-linguistic texts, and does not involve systematic recourse to a corpus of culturally relevant texts.

Another major approach to the study of cultural keywords is the one developed by Stubbs. In several publications addressing the subject of keywords (Stubbs, 1996, 2001a, 2001b, 2008), he discusses different aspects of the notion. Stubbs' contribution is noteworthy for our investigation because it addresses the issue of the persuasive power of

³⁶ Cf. Wierzbicka (1997): "there is no objective discovery procedure for identifying key words in a culture".

keywords. At its core, Stubbs' approach is the direct descendant of Firth's (1935) proposal of a "systematic study" of the "contextual distribution of sociologically important words" – words which Firth called "focal" or "pivotal". For Stubbs the analysis of cultural keywords proceeds mainly through the examination of the recurrent linguistic contexts in which these words occur: typical collocates of keywords will provide evidence of their "cultural connotations". Through a study of recurrent collocation patterns, positive or negative "semantic prosodies" associated with a word can be discovered, providing evidence of the evaluative connotations attached to a word.

Stubbs places it within the study of *discourse* in the sense that Foucault gives to this word: "In phrases such as 'academic discourse', and 'racist discourse', 'discourse' means recurrent formulations which circulate in a discourse community." (Stubbs, 2001b, p. 166). These recurrent patterns embody "shared meanings", "particular social values and views of the world" (Stubbs, 1996, p. 158). As Stubbs puts it "Such recurrent ways of talking do not determine thought, but they provide familiar and conventional representations of people and events, by filtering and crystallizing ideas, and by providing pre-fabricated means by which ideas can be easily conveyed and grasped" (Stubbs, 1996, p. 158).

It is particularly interesting, here, to consider the role played by cultural keywords and by recurrent patterns of discourse within argumentation. Stubbs (1996) opposes a logical/rational mode of argumentation to a mode of argumentation based on keywords. Examining a series of political speeches of British politicians, Stubbs (1996) observes how logically defective, if not outright fallacious, arguments derive their force from being part of "a discourse which calls up a set of linked key words, symbols and beliefs" and from the fact that they depend on a set of premises, which are *unstated* and *probably unconscious*" (Stubbs, 1996, p. 162, we italicize).

3. Evaluative connotations and the persuasive power of keywords

The evaluative component of the meaning of many cultural keywords and its alleged persuasive power deserves particular attention in an investigation of the

relationship between keywords and arguments. Also the fact that this evaluative meaning is to be considered a *connotation* of the word deserves some consideration. The term connotation has been used in widely divergent manners in philosophy, linguistics, stylistics and semiotics³⁷. What remains constant is the idea that connotations are additional, secondary meanings that are distinct and somewhat separate from the main meaning of the linguistic expression, be it conceptualized as the cognitive meaning, the denotation, or the truth-conditional meaning of the expression.

When Stevenson (1937, 1938, 1944) introduced the notion of *emotive meaning*, he had in mind words that seem endowed with a persuasive power of their own similar to those that we have been considering cultural keywords here. *Culture*, *dictator*, *democracy* are among the examples used by Stevenson. These words are endowed, alongside their conceptual meaning, with an emotive meaning, which Stevenson (1937, p. 23) defines as follows:

The emotive meaning of a word is a tendency of a word, arising through the history of its usage, to produce (result from) *affective* responses in people. It is the immediate aura of feeling which hovers about a word. Such tendencies to produce affective responses cling to words very tenaciously.

For Stevenson this kind of meaning is wholly non conceptual, non representational. As a consequence the way in which these words persuade the hearer is totally unlike rational argument: it “depends on the sheer, direct emotional impact of words [...] A redirection of the hearer’s attitudes is sought *not by the mediating step of altering his beliefs*, but by *exhortation*, whether obvious or subtle, crude or refined.” (Stevenson, 1944, pp. 139-40).

With such a radical separation between the evaluative connotation and the representational content of words one cannot imagine that the evaluative component of keywords may play a role in an argument: we can only imagine that keywords yield their raw force to the persuasiveness of an argument from the outside at the level of rhetorical choice. Moreover, it becomes difficult to think of more specific and articulated evaluations attached to keywords that might go beyond the raw emotion and connect to a network of

³⁷ For a review, see Rigotti, E., & Rocci, A. (2005). Denotation vs. connotation. In K. Brown (Ed.), *The encyclopedia of language and linguistics* (2nd ed., Vol. 3, pp. 436–444). Elsevier.

cultural values. As we will see later (§ 9), however, the analyses of Stevenson become useful when examining pathological situations, when evaluative connotations cling to polysemous or vague words irrespective of their denotative values.

As we have seen above, Stubbs (1996, 2001) proposes to look at the evaluative connotations carried by a keyword through the window of the *semantic prosodies* of the word in a corpus, which is seen as a more or less faithful approximation of the notion of *discours* elaborated by Foucault (1971). In this way the persuasive power of keywords coincides with the pressure to conform to the socially dominant discourse, and can be considered separate from rational argument. This view certainly contains a grain of truth as the persuasive power of repetition as a rhetorical technique cannot be discounted completely.

While this account of connotation and of its persuasive power does not completely eschew representations, it does not take into account the use of representations in reasoning, focusing instead on their involvement in sub-rational processes based on repeated association. As noted in Rigotti and Rocci (2005), relying just on this approach risks offering a dangerously simplified image of cultural reproduction. When processing the discourses circulating in a cultural community, language users do not simply register representations and remain impressed by their repetitions, they draw complex interpretive inferences, and, in the case of argumentative discourse they are able to reconstruct the inferential path proposed by the arguer.

In fact, Stubbs (1996, p. 162) does briefly comment on the reliance of keyword based arguments “on a set of premises, which are *unstated* and *probably unconscious*” but he does not develop an account of the relation between keywords and implicit premises. An account of this relation, on the contrary, forms the core of the present paper and, as we will see in the final sections of the paper, patterns extracted from corpus data can have an important role in illuminating this relationship.³⁸

³⁸ A somewhat similar line of investigation is pursued by O’Halloran (2009). While largely sharing “the spirit” of the position expressed by Rigotti and Rocci (2009), O’Halloran laments that their work lacks a proper empirical component and sets out, in his contribution to develop an approach that combines the reliance on a corpus as a proxy to cultural common ground with consideration for discourse structure

The treatment of evaluative meanings in Wierzbicka's work differs markedly from the notions of emotive meaning and connotation that emerge from Stevenson and Stubbs. As we have seen with the example of *whingeing*, the evaluative component is not only treated as representational, but even embedded within the semantic analysis of the word. Wierzbicka's analyses typically contain clauses like the following:

(2)

(a) people think: it is bad if someone does this (*whingeing*, Wierzbicka, 1997, pp. 215-216)

(b) everyone thinks: this is good (*liberty*, p. 154)

(c) it is bad if someone cannot think this (*freedom*, p. 154)

(d) people think: this is good (*omoiyari*, p. 280)

There are three aspects of this treatment that deserve comment: the representational nature of the connotations, the structure of the representation, and their inclusion in the semantic content of the word.

That connotations can be represented propositionally and are not simply some non-representational psychological force acting on the hearer is essential for having them entering reasoning and argumentation. In this respect, our approach follows Wierzbicka.

As for the form of these evaluative clauses, it is interesting that the properly evaluative component (let us call it: "x is good/bad") is often subordinated to a modal preface specifying the source of the evaluation ("people think"). This specification, in fact, allows us to distinguish the particular connotations associated with cultural keywords from what we might call expressive meanings (Potts, 2007), which implicate an individual, often immediate, evaluation on the part of the speaker, like the word *bastard* in the following example:

and inferential processes. The account of the keywords *interactive* and *interactivity* presented in the following sections is spurred, in part, by this criticism by O'Halloran.

(3)

He dumped me! That bastard!

bastard (x) = “I think x is bad”

Moreover, the characterization of the source of the evaluative proposition as common belief is also important in view of the role this proposition might play as a premise in an argument, as it indirectly specifies its epistemic status, its degree of acceptability or plausibility (Cf. Rocci, 2006, p. 429).

The straightforward inclusion of the evaluative proposition in the semantic analysis appears more problematic. The problem stems, in part, from a general feature of the NSM style of lexical semantic analysis, which, contrary to other approaches (Seuren, 1985; Fillmore, 2003; Rigotti, Rocci & Greco-Morasso, 2006), does not set apart the proper semantic entailments of a lexical predicate from their presuppositions or from other kinds of inference (such as conventional implicatures) that may be triggered by the use of a word. It is dubious that this kind of evaluative propositions could be treated as semantic entailments of the word. If they were, an utterance such as (4.a) would contain an outright contradiction, just like (4.b):

(4)

(a) Nobody thinks *liberty* is a *good* thing.

(b) *Many surfers *killed* by sharks are still *alive* to tell their stories.

If we hear someone asserting (4.a) we may think they hold very strange beliefs that are patently empirically false, but we would not say that their assertion is contradictory or self defeating. On the contrary, if we hear (4.b) we think that the speaker not only happens to be wrong, but cannot possibly be right no matter what the statistics about shark attacks on surfers say. The falsity of (4.a) is an empirical matter, while the falsity of (4.b) is a semantic matter. For this reason we cannot consider “everyone thinks: this is good” as *part of the meaning* of *liberty*, at least not in the same way in which we consider “becoming not alive” as part of the meaning of *being killed*.

4. Keywords, enthymemes and endoxa

Rigotti and Rocci (2005) have suggested that in order to test whether a given word is a cultural keyword one should look at the role it plays in arguments. The proposed test adopts the model of the *enthymeme* inherited from Aristotelian rhetoric as a means of reconstructing natural language arguments and involves checking both (a) the logical role played by the candidate keyword in the reconstructed syllogistic structure of the enthymeme and (b) its role in triggering the pragmatic inferences required to supply the implicit parts of the syllogistic structure. Let us first illustrate the model with a rather trivial attested example³⁹:

(5) Polynices should not be buried because he is a traitor.⁴⁰

The first step in reconstructing (5) as an argument is recognizing that the speaker – who is, say, King Creon of Thebes – is advancing the standpoint *Polynices should not be buried* and presents the proposition *He is a traitor* as an argument in support of it. In order to make the standpoint follows from the argument we need to provide a suitable major premise, such as:

(6) Traitors should not be buried

Thus, we obtain the following syllogism:

(7)

Major Premise: Traitors should not be buried

Minor Premise: *Polynices is a traitor*

Conclusion: *Polynices should not be buried.*

It is important here that our readers set aside any repugnance for the simplicity of the example and for the seemingly “mechanical” nature of the syllogistic reconstruction and bear with us in examining the logical role played by the term *traitor* in the syllogism,

³⁹ The example is, intentionally, very similar to the invented one used in Rigotti and Rocci (2005).

⁴⁰ Example extracted through WebCorp. Most of the attested examples used in this paper have been obtained simply by exploiting the Internet as a corpus through the excellent WebCorp (Cf. Renouf *et al.* 2007), a suite of tools for linguistic data search freely available at www.webcorp.org.uk. The main tool functions as a meta-search engine. WebCorp facilitates the formulations of linguistically relevant queries on a series of standard search engines (such as Google), collects the results and present them in an useable concordance format to the user.

as well as its role in the pragmatic processes that are essential for bringing about said reconstruction and for anchoring it to the cultural context.

4.1 Keywords are *termini medi*

From a logical viewpoint, the word *traitor* in (7) plays the role of *terminus medius* of the syllogism. A *terminus medius* (middle term) is a term that occurs in both premises but not in the conclusion. In order to ensure the validity of the syllogism the middle term has to be taken at least once in its full extension (e.g. *all those who...*)⁴¹. Example (7) belongs to a very common deductive pattern traditionally called *Figure I* of the syllogism. In the Figure I the *terminus medius* occurs in the subject of the major premise and in the predicate of the minor premise:

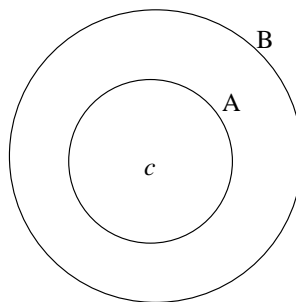
(8) Underlying structure of (7), where the predicate **A** is the *terminus medius*.

Major premise: $\forall (x): \mathbf{A}(x) \rightarrow B(x)$

Minor premise: $\mathbf{A}(c)$

Conclusion: $B(c)$.

The pivotal role of the predicate A is perhaps even more evident if translated in set-theoretic terms: A is a (proper or improper) subset of B, and *c* belongs to A. Therefore we must conclude that *c* also belongs to the superset B.



Interestingly, in the case of an enthymeme this logical centrality is matched by a crucial communicative role.

⁴¹ Failing to do so would result in the fallacy of *undistributed middle*.

4.2 Keywords guide and justify the construction of contextual premises

Enthymemes are not just syllogisms with missing premises. They are first of all enthymemes whose premises are *endoxa*. In Aristotle the adjective *endoxos* (from *en* ‘in’ and *doxa* ‘opinion’ or ‘fame’) refers to propositions that are in the common opinion and, as a consequence are generally accepted within a community. In the *Topics*, Aristotle gives an articulated definition of the *endoxa*:

[*endoxa* are those opinions] which commend themselves to all, or to the majority, or to the wise – that is or to all of the wise or to the majority or to the most famous and distinguished of them (*Topics*, I 100b, pp. 21-23).

It seems that for Aristotle the possibility of leaving implicit some of the premises was a consequence of this more fundamental quality of endoxicality:

[the enthymeme] is deduced from few premises, often fewer than the regular syllogism; for if any one of these is well known, there is no need to mention it, for the hearer can add it himself (*Rhetoric*, I, 1357a)

As Bitzer (1959, p. 407) puts it, “to say that the enthymeme is an ‘incomplete syllogism’ - that is, a syllogism having one or more suppressed premises - means that the speaker does not lay down his premises but lets his audience supply them out of its stock of opinion and knowledge”.

Let us observe more closely how endoxical premises are recovered in enthymemes. Where does the premise *Traitors should not be buried* come from? Speaking of “implicated premises”, pragmaticists Sperber and Wilson (1986, p. 195) say that they are “supplied by the hearer, who must either retrieve them from memory or construct them by developing assumption schemas from memory”. In discussing the role of keywords in enthymemes this distinction has interesting consequences. In the first case we can imagine that the presence of the word *traitor* in the explicit minor premise triggers the recovery by the hearer of a proposition like the following in the cultural common ground⁴²:

⁴² For a precise definition of the notion of *common ground* see Clark (1996, pp. 92-121). On cultural common ground see Danesi and Rocci (2009, pp. 137-172).

(9) According to Theban law/custom: traitors should not be buried.

which is enough to conclude that *Polynices should not be buried*⁴³. This is the most straightforward case. Many enthymemes, however, cannot be realistically modeled as a simple case of retrieval. For instance, a hearer may be unable to access a proposition like (9) in the cultural common ground and yet be able to work out the missing premise of the syllogism. For instance, the hearer could have easy access to a culturally shared proposition such as (10):

(10) People think: treason is a heinous crime

And then use (10) and other culturally available propositions to provide a backing for the logically sufficient proposition *Traitors should not be buried*. In these more complex cases it is important to distinguish between the *computation* of the missing premises and their *justification* in the cultural common ground⁴⁴. Working out a missing major premise supplying the logical minimum for making the syllogism work is often an easy task for the interpreter, and one that can be sometimes achieved, at least in some cases, in the absence of any background propositions. The possibility of interpreting *paradoxical* arguments attests to that. For instance, if we read the following statement in Charles Baudelaire:

(11) Le commerce est naturel, donc il est infâme

(*Mon coeur mis à nu*, par. XLI, Baudelaire 1975-76: 703)

(Trade is natural, therefore it is vile)

We can provide a formally valid major premise providing the logical minimum:

(12) All that is natural is vile/ abominable

Also, in interpreting Baudelaire's argument we do not have to think that he gives to the word *natural* a different meaning: we only have to hypothesize that Baudelaire subscribes to a very unusual set of values or entertains very peculiar beliefs about nature.

⁴³ Note that the *should* in the conclusion expresses here the same deontic modality of the Theban law/custom expressed by the modality in the major premise.

⁴⁴ We take this distinction from the studies on the functioning of presupposition accommodation. Kamp (2001: 58) speaks of *presupposition computation* and *presupposition justification*.

The premise retains, however, an extremely shallow, “*ad hoc*” quality, because it is likely the result of a wholesale accommodation, which is not justified by any *endoxon* in the cultural common ground. We are able to reconstruct the logical role of *natural* as a *terminus medius*, but the logically sufficient major premise and the *endoxa* evoked by the word remain completely disconnected. Obviously, the argument is unlikely to be persuasive.

In the end, what happens behind the major premise of the syllogism appears to be the most interesting part of the story, as well as the most difficult to investigate. The richness of the *endoxa* evoked by the keywords and the quality of their inferential connection with the implicit major premise may vary enormously.

In a recent paper on the use of the Japanese cultural keyword *kyosei* in the corporate discourse of Japanese multinational companies, Filimon (2009) suggests that, in different circumstances, the same keyword may prompt different processing strategies in the hearer, and proposes linking keywords research with psychologically informed models of persuasion. When the cultural common ground is rich and the motivation to critically scrutinize the argument is high (high sufficiency threshold), the justification process might involve systematic processing based on a complex set of beliefs evoked by the keyword; while in the case of a limited cultural common ground and when the hearer is not motivated to effortful extended processing, the most accessible evaluative connotations may provide a “quick and dirty” justification for a major premise satisfying the logical minimum.

In the following pages, we look at the argumentative use of the keywords *interactive* and *interactivity* and we propose a complementary line of investigation into the quality of implicit premise justification, centered on the relation between the denotative meaning of the concerned keyword and the evaluative connotation it evokes.

5. Applying the model

Before moving to our case study, however, it is worth summarizing the approach that we have outlined above developing the proposal of Rigotti and Rocci (2005):

- Cultural keywords are words that are particularly revealing of a culture's belief system and values. As such, they are typically associated with "evaluative connotations".
- The "evaluative connotations" do not express online evaluations of the speaker, but have the pragmatic and epistemic status of cultural *endoxa* in Aristotle's sense.
- In order to test whether a given word has the status of a cultural keyword one needs to examine its use in arguments in a corpus of texts representative of the cultural community under consideration.
- We can consider serious candidates for the status of keywords, those words that play the role of *terminus medius* in an enthymematic argument, providing access, at the same time, to a cultural *endoxon* which either directly supplies the required major premise, or contributes to indirectly justify it, at least in part.

The core idea behind the testing procedure is simple: the presence of certain beliefs or values in a culture and their importance within it, is best attested by the finding that these beliefs or values *are indeed used*, maybe tacitly, by the members of the relevant cultural community to justify their positions in an argument.

Obviously, in order to provide meaningful results, the procedure needs to be applied to a corpus of culturally relevant texts. The first applications of the model (Bigi, 2007, 2008; Filimon, 2009) have been in-depth analyses of individual argumentative texts. Such analyses are important to flesh out and refine the model and can also offer relevant insights into the word investigated, provided that they independently make a case for the relevance of the chosen example (see, for instance, Filimon, 2009). It seems clear, however, that, in order to make a convincing case for a keyword, larger-scale explorations are needed, and are indeed underway⁴⁵.

⁴⁵ In the context of the SNSF project *Endoxa and keywords in the pragmatics of argumentative discourse*, Agatha Filimon and Andrea Rocci are investigating the argumentative use of cultural keywords in two large corpora of corporate annual reports and sustainability reports. Márcio Wariss Monteiro is expanding the corpus investigation of the words *interactive* and *interactivity* for his Ph.D.

Establishing the *key-ness* of a word through the extensive application of the above testing procedure will be a matter of degree, rather than a categorical decision. Moreover, the degree of key-ness will be best regarded as resulting from multiple dimensions, factoring in not only the *frequency* of the use of the word as a *terminus medius*, but also the *hierarchical position* of the uses within the overall argumentative structure of the texts, the *consistency* in evoking the same *endoxon* or the same constellation of related *endoxa*, and also their *sufficiency*, that is their capacity of providing a premise that does not need further explicit support. We can illustrate the dimension of sufficiency with an example of use of the word *interactive* in a *Wall Street Journal* article discussing the commercial future of e-book readers:

(13) Amazon had been hoping to target the [academic] market with its 9.7-inch screen Kindle DX e-book reader, for example, but schools said the device wasn't sufficiently *interactive* and lacked basics such as page numbers and color graphics. (WSJ, 1/22/10)

What is striking in this example is that the author presents the word *interactive* as sufficient to evoke an argument without further specification. Unlike the case of page numbers and color graphics, it may be not at all obvious what should be the kind and degree of interactivity that is sufficient for e-book readers to hope to supplant traditional textbooks – which are, by the way, usually not considered interactive devices at all. Despite this difficulty, *interactive* is deemed *sufficient* to evoke an argument and is not elaborated upon in the paper.

6. What is interactivity?

It is really not easy to find an unequivocal definition of the word *interactivity*. In fact, since the term was coined in the early 1980s many authors have been trying to

thesis, which will also include a study of keywords in a corpus of Brazilian political speeches and policy documents concerning the introduction of digital television in Brazil.

conceptualize it.⁴⁶ These attempts involve quite different ideas and taxonomies resulting in a practical impossibility of proposing a single definition. Trying to find some convergence, we can sum up the theoretical definitions and approaches we have found in the literature by saying that there are basically three types of *interactivity*: *user-to-user*, *user-to-machine* and *user-to-content*. Moreover, with respect to frameworks to deal with interactivity, basically we have found three approaches in which interactivity is conceived: as a *medium property*, as an *exchange process* and as the *result of a perceptual experience*.⁴⁷ According to the overwhelming majority of scholars, the notion of interactivity is *related to new media* and involves some kind of technological-mediated setting. Interactivity is often seen as the *novelty that adds value to new media*. It is said to be a new media founding principle, cornerstone, bedrock, central/key concept, and so forth (Lister et al., 2009; Dewdney & Ride, 2006). The quality of “being interactive”, in comparison with precedent media (press, broadcast etc.), conveys the idea of more *freedom*, more *participation* and *engagement*, more *equality of powers*, more *transparency*, more *possibilities to intervene in media contents*, more *decentralization*, more *entertainment* and so forth. It is these “more...”, which we find in the literature, that make *interactivity* an interesting candidate for the status of cultural keyword in what we could call the contemporary global *cyberculture*.

Cyberculture could be defined as the contemporary sociocultural organization in which digital technologies play a crucial role. In this perspective, cyberculture should not be reduced to technological aspects neither should it be related only to what goes on in the

⁴⁶ The term interactivity was created in French (*interactivité*) by the beginning of the 1980s to designate a new technological-mediated communicative phenomenon. See Rabaté and Laurraire’s (1985) pioneer research.

⁴⁷ The first type (user-to-user) corresponds to CMC (computer-mediated-communication); the second (user-to-machine/media/system) is based on HCI (human-computer interaction); and the third (user-to-content/document) is associated to the possibility of changing content in a given computer/media system). In the first approach (medium property) interactivity is conceived as a technical characteristic closely related to other technological properties like multimedia, user-friendliness, hypertextuality; the second (exchange process) is focused on dialogical and conversational dimensions and generally the process is mediated by some infotechnological device; in the third (result of a perceptual experience) interactivity relies on users’ perception, it is such a psychological variable that depends on subjectivity. See McMillan (2002) for a review of multiple research traditions on *interactivity*.

so-called virtual environments. Actually, “cyberculture involves all the most socially important phenomena that arise in the contemporary world insofar as nowadays the predominant objects, procedures and processes depend in some extent on digital technologies” (Trivinho, 2001, p. 60, our translation⁴⁸). This same idea of cyberculture – despite quite different approaches – can be found in many other authors (Lemos, 2002; Lévy, 1997) and sometimes it comes up as *network society* (Castells, 1996), *cyberworld* (Virilio, 1996), *information society* and so forth.

In order to cast light on the presumed role of *interactive* and *interactivity* as cultural keywords we will proceed with a two-step investigation, both based on corpus data. First, we will try to have a better grasp of the functioning of different denotative meanings of the predicate *interactive* by applying certain techniques of semantic analysis based on Congruity Theory⁴⁹ – a particular approach within a broad tradition of linguistic semantics⁵⁰. Then we will move to examine the behavior of the words *interactive* and *interactivity* in argumentative contexts to find confirmation of the positive *endoxa* that are associated with them by spotting them in action.

7. The predicate *interactive*: polysemy and vagueness

In Congruity Theory the semantic contribution of virtually every content word in a language can be represented in terms of a predicate opening one or more slots to be filled by its *semantic actants* (Mel’čuk, 2004) – also known as “arguments”⁵¹. To analyse the meanings of a lexical item means, first of all, to establish what kinds of predicates it

⁴⁸ “A cibercultura está implicada em tudo o que de mais socialmente importante vem à luz no mundo contemporâneo, na medida em que todos os objetos, procedimentos e processos doravante predominantes dependem, em alguma medida, da matriz informática da tecnologia” (Trivinho, 2001, p. 60).

⁴⁹ For a systematic presentation of Congruity Theory, see Rigotti (1993); Rigotti and Rocci (2001); Rigotti (2005); Rigotti, Rocci and Greco-Morasso (2006).

⁵⁰ It would be beyond the scope of the present paper to mention all the approaches with which Congruity Theory is, in various ways, related. However, the reader can be directed to Mel’čuk (2004), to Seuren (1985 and 1988) and to the first volume of Charles Fillmore’s collected works (Fillmore, 2003) as outstanding examples of the kind of semantic work with which Congruity Theory most closely relates.

⁵¹ In fact, the word *argument* is the most widely used in the semantic literature. Here we prefer to use the term (*semantic*) *actant* to avoid the possible confusion arising from the homonymy with *argument* as a term of argumentation theory.

can manifest. Predicates predefine the number and the semantic types of their possible actants imposing presuppositional conditions on their actant slots. If these conditions are not satisfied by the filler of the slot an *incongruity* arises. At the same time, if two uses of a lexeme impose incompatible conditions on their actant slots or differ in the number of conceptually required actants we can say that the lexeme is polysemous and manifests different predicates. These incompatibilities can be established through appropriate semantic tests, such as the well known *zeugma test* (Cruse, 2000), which allows us to see when different uses of a word depend on *diverging incompatible requirements* as in (14) – as opposed to *generic* or *vague* requirements.

(14) *Neither **Louis** nor **the word processor** were able **to read** the document.

Examining corpus evidence can be of help in discovering which kinds of actants can be selected by a given lexical item. In order to establish the kind of actants that can be selected by *interactive* we examined 100 occurrences extracted from the British National Corpus. Examples (15-24) show how puzzling the variety of uses of *interactive* is. The following ten occurrences are representative of the uses we found.

(15) **Interactive** media reformulates human interaction, minimalizing differences, maximizing control.

(16) The processor is scheduled in such a way that **interactive** machines get processor time more frequently than non-interactive (batch) machines

(17) But its game-oriented appeal will introduce basic **interactive** technology into thousand of homes.

(18) Twelve **interactive** computer terminals allow visitors to take an electronic walk through Pompeii's forum, amphitheatre, villas and baths, seeing from various perspectives.

(19) It is envisaged that the educational use of futures tools and techniques will require new, **interactive**, forms of software.

(20) In fact the brain has considerable anatomical scope for being **interactive**.

(21) Maintaining beautiful hair means finding a range of caring products and sticking with them **interactive** ingredients in products from shampoos through to mousses and sprays are formulated to complement each other, leaving your hair in maximum condition.

(22) Knowledge, rather, is an emergent of an **interactive** process between a collectivity of subjects and the objects that constitutes their environment.

(23) Tomorrow the Company hits Sandbach, where, at the Crown Hotel, patrons can see the **interactive** drama, which creates a pastiche of the Hollywood Wild West.

(24) All these lead to a decentralization of an organization's activities and the requirement of an **interactive** communications system.

In all the occurrences reviewed, *interactive* selects only one actant, i.e. it is always a one place predicate – which we can write as INTERACTIVE (x_1). In the broader scene other participants (e.g. *subjects, objects, visitors, hair* etc.) can be named and are even obligatorily conceptually present, but the narrow actancial frame of the predicate either spotlights only one participant (*brain, computer terminal*) or takes the whole situation as its actant (*process, drama*). Thus we can distinguish two broad classes of actant frames:

(a) x_1 = individual

(b) x_1 = process / system

In (a) the actant is often a piece of hardware or software, a technology as in (15-19), but there are also occurrences where x_1 is not a technology, such as *brain* in (20) and *ingredients* in (21). While (20) selects an actant which is able to process information, (21) does not. The involvement of human actors in the broader scene is likewise not obligatory as the whole scene may take place at a sub-human level (20), or refer to an entirely non-human situation (21). As for (b), the processes can be similarly non-technological as in (22) and (23). Thus, (a) and (b) should be split into at least 5 tentatively distinct actant frames:

- (a.1) x_1 = technological element, capable of exchanging information
- (a.2) x_1 = non-technological element, capable of exchanging information
- (a.3) x_1 = non-technological element, not capable of exchanging information
- (b.1) x_1 = technological information exchange process/system
- (b.2) x_1 = non-technological information exchange process/system.

By applying the zeugma test across these frames we obtain results like (25) and (26) characterized by a more or less pronounced repugnance to the zeugma, which would corroborate the hypothesis of a polysemy of *interactive*:

(25) * It was an excellent hotel room: the digital TV set and the shower gel were both interactive.

(26) ?? The learning process should be interactive, just like the touch screen.

If we move from the conditions on the actant slots imposed by *interactive* to the proper semantic entailments of the predicate we are faced with a difficulty: in each of the frames outlined above, it is very difficult to sort out what are the necessary and sufficient conditions for *interactive* to be predicated truly. For instance, within (a.1) the possibility for the user to intervene to modify content is sometimes presented as a *necessary* condition for considering a technology interactive:

(27) The only downside to this method is that it isn't interactive (the user will not be able to complete any form-fields or modify the document in any way).
(Example extracted through WebCorp)

One can wonder, however, whether this is a *sufficient* condition of interactivity. Someone could very well say that completing form-fields is not enough:

(28) That's not interactive: it's just a fillable form.

or, to cite an authentic example: choice between pre-scripted options may not seem a *sufficient degree* of intervention in the media content to truthfully predicate *interactive*:

(29) And everybody who's ever tried to use live actors in an interactive piece has only come up with multiple choice. That's as good as you can get, is multiple

choice, basically. It's multiple choice, it's not interactivity. (Example extracted through WebCorp)

This seems to suggest that not only is the word *interactive* polysemous and that it selects fairly incompatible actant frames, but also that, within each frame the predicate expressed is scalar and *vague*.

In general, being able to discover polysemy – which is frequently observed in investigations of cultural keywords – and resolve it into distinct semantic representations can play an important preliminary role in argument analysis and evaluation, as it allows us to uncover fallacies of *equivocation* and semantic shifts in arguments. It can also play a role in evaluating rhetorical strategies such as *dissociation* (van Rees, 2009), and *persuasive definition* (Stevenson, 1938), which aim to partially restructure the semantic system. The study of polysemy is important to cast light on the relationship between the denotations of cultural keywords – in our case *interactive* – and its argumentatively relevant connotations.

8. Because it's interactive. Using corpus data to test keywords

We now move to test the status of keyword of the lexeme *interactive* by examining its behavior in arguments. In order to constitute a suitable corpus of occurrences of *interactive* in an argumentative context, we extracted texts from the World Wide Web by means of WebCorp including appropriate *argumentative indicators* in the query. According to van Eemeren, Houtlosser and Snoeck-Henkemans (2007) argumentative indicators are linguistic expressions or textual patterns that function as signs that a given argumentative move might be in progress. They need not be decisive signs or be directly connected with the move. It suffices that they exhibit, for whatever reason, a significant correlation with such a move. At this stage of our investigation it is sufficient to use relatively straightforward indicators, and the choice fell on the most obvious: the connective *because*.

Given the possible reading of *because* as introducing an argument, we can search for the string *because it's interactive* and obtain a number of examples where *interactive* appears as the main predicate of a proposition presented as an argument in support of a standpoint – which usually appears as the proposition connected by *because*. It should be stressed here that what is meaningful in the results of this particular kind of probe of the uses of a predicate in arguments is not that we actually find these uses, nor that we find them in great number, but rather that we find a special *consistency* in the standpoints argued for. Adapting a term from corpus linguistics, we might call this consistency the *argumentative prosody* of the keyword. For instance, if we extract a string such as *because it's triangular* to investigate the use of the predicate *triangular* in arguments we find that it happens to be used to support all kinds of unrelated standpoints, as illustrated by examples (30-33).

(30) My question would be, does it hold up a lot of stuff? I'm concerned about the design **because it's triangular**. Maybe it could only accommodate people who travel light. (Extracted through WebCorp)

(31) It's an awkward area to deal with **because it's triangular** and has boundaries on each side: a chainlink fence, a brick garage and concrete stairs. (Extracted through WebCorp)

(32) And the pond, it must have been artificial **because it's triangular**. (Extracted through WebCorp)

(33) She said, this Empro pencil, however, didn't need to be sharpened and so easy to use **because it's triangular shaped!** (Extracted through WebCorp)

If we were to reconstruct the enthymematic structure of these arguments we will find very diverse major premises in which the denotation of *triangular* happens to play a role, like *There are no triangular natural ponds* for (32) or *Triangular shapes do not make spacious containers*⁵² for (31), and so on. Interestingly, in all the examples *triangular*

⁵² This is, of course, a rough and ready commonsense formulation of an *endoxon*, not a meaningful statement in Euclidean geometry!

retains the same denotative meaning. There is no polysemy and very little vagueness. If we look at the results of *because it's interactive* we are confronted with a completely different picture:

(34) Users are attracted to the WWW **because it is interactive**, because it is easy to use, and because it combines graphics, text, sound, and animation into a rich communications medium. (WebCorp)

(35) The use of computers in lessons is fun for my age group **because it is interactive**. My age normally like using computers. (WebCorp)

(36) Businessman Pg Anak Hj Awadi Pg Anak Latifuddin expressed his interest with the e-government's initiative, especially in the area of education. "The incorporation of ICT into the school curriculum by the Ministry of Education is good for children **because it is interactive**", he said. (WebCorp)

(37) Podcasting is an important tool that is used in the business world... It can serve as an advantage **because it is interactive**. There are more than just words to read, there is also someone or something to listen to. (WebCorp)

(38) I like this piece **because it is interactive** but does not require the user to do very much - only enter his or her name and the name of the piece. (WebCorp)

(39) Using the Promethean board is fun **because it is interactive** and we don't have to waste time. (WebCorp)

(40) Tilos Radio improves democracy **because it is interactive** (WebCorp)

In the case of *interactive*, the standpoint argued for is unfailingly a positive evaluation: *attraction, fun, likeability, goodness, advantage, improvement of democracy*, etc. Examples (34-40) are only a small selection representative of the patterns that are repeated all over the sample of 153 occurrences that we examined. If we look for the string *because it is not interactive*, on the other hand, we land as expected on an uninterrupted series of standpoints expressing negative evaluations, such as those in (41-43):

(41) The TV is not an appropriate learning tool **because it is not interactive**.
The child in front of the TV is totally passive. Children learn mainly by doing.
(WebCorp)

(42) I don't think direct emailing system, as Obama's team is using, is effective
because it is not interactive. (WebCorp)

(43) When the N Generation goes to school, it finds itself trapped in an off-line
space that is deadly boring. Teacher talk is boring **because it is not interactive**
and only reinforces the rigidities of face-to-face conversation that the N
Generation wants to free itself from. (WebCorp)

Most of the examples can quite easily be reconstructed as enthymemes where the
word *interactive* plays the role of *terminus medius*. We will provide just an example of
reconstruction using (35), reproduced below:

The use of computers in lessons is fun for my age group **because it is
interactive**.⁵³

Reconstructing the underlying syllogism, we get:

Major premise: (*endoxon*): **Interactivity** is fun. (for our age group)

Minor premise: (*datum*): The use of computers in lessons is **interactive**

Conclusion: The use of computers in lessons is fun (for our age group).

In most cases, the major premise of the syllogism seems to be directly supplied
by a very generic and readily available evaluative *endoxon* evoked by the keyword:

People think: interactivity is good/fun/attractive

Interestingly, it is very difficult to go beyond that in the reconstruction, even if
we look at the broader co-text of each example. Typically, the arguers do not feel the need
to provide further support or a rationale linking the denotative meaning of interactivity

⁵³ It might be useful to provide a minimum of context for this example. We have a student who writes a text called "My ideal teacher". In a certain moment she says that "teachers should not be boring", and while remembering one of her teachers who used to propose games in classroom, she states that the use of computers in lessons is fun because it is interactive. Nothing else can be grasped from the co-text in order to help us to understand what she means by interactive in this argument.

with the evaluation. Very often what they mean by *interactivity* remains remarkably vague, such as in (36).

In some cases the use of the word *interactivity* remains completely puzzling at the level of denotation. For instance, it is not at all clear in (37) why one should consider interactive to listen to audio recordings (*podcasting*) – or, in (43), why exactly face to face conversation should be presented as rigid (!) and contrasted with interactivity.

In sum, what we find is that *interactive* is used consistently in the examples to effect the shallow recovery of a small constellation of related evaluative *endoxa* that readily provide a sufficient major premise notwithstanding the vagueness of the denotation.

The vagueness of the predicate *interactive* and, more specifically, the difficulty to establish *minimal conditions* for something to be truthfully called *interactive* – which we discussed in the previous section – suggested a further foray of corpus exploration aimed at examining the use of *interactivity* in argumentative strategies based on dissociation.

9. Concerning real interactivity: keywords and dissociation

Dissociation, as a rhetorical technique was first discussed by Perelman and Olbrechts-Tyteca (1958). Van Rees (2009, p. xi) summarizes their treatment as follows:

[...] through dissociation, a notion that originally was conceived as a conceptual unity is split into two new notions, each of which contains only part of the original one, one notion containing the aspects of the original notion that belong to the realm of the merely apparent, the other containing the aspects of the notion that belong to the realm of the real.

As observed by van Rees (2009, p. 15), a dissociation amounts to more than a simple conceptual distinction, as it always involves the introduction of a *new definition* of the “real” notion, and the establishment of an *evaluative hierarchy* between the two notions. These features make dissociation very close to the rhetorical technique that Stevenson (1938, p. 331) calls *persuasive definition*:

A “persuasive” definition is one that gives a new conceptual meaning to a familiar word without substantially changing its emotive meaning, and which is used with the conscious or unconscious purpose of changing, by this means, the direction of people’s interests.

For Stevenson (1938, p. 333), persuasive definitions become both easier and more powerful when applied to a particular class of words:

There are hundreds of words which, like “culture”, have both a vague conceptual meaning and a rich emotive meaning. The conceptual meaning of them all is subject to constant redefinition. The words are prizes which each man seeks to bestow on the qualities of his own choice.

Having observed that *interactivity*, and, in particular, the adjective *interactive* are highly polysemous and vague words that are nonetheless associated with persistent positive connotations, it is natural to consider them as privileged targets of rhetorical maneuvers based on persuasive definition and on dissociation aimed to appropriate their connotations, to claim exclusive ownership of them, or to deny access to them to the antagonist. We decided to investigate this matter, again, by using a simple argumentative indicator to construct a suitable query to extract corpus examples. This time it was: *That’s not real interactivity* and a few other syntactic variants of this expression.

This allowed us to collect a striking variety of examples where, as expected, *interactivity* is the target of dissociations. However, instead of briefly presenting a larger sample of these uses, we prefer here to focus on a single striking example, considered in the context of the online discussion where it appears:

(44) The person ‘conversing’ with Milo believes it because they want to believe it. All it takes is for someone to step even slightly outside the bounds of the simulation for suspension of disbelief to be shattered. **That’s not real interactivity**, it’s the illusion of interactivity – the lack of meaning and substance clearly shows that they’re well into uncanny valley territory.⁵⁴

⁵⁴ Extracted through WebCorp, original URL <http://www.ausgamers.com/forums/consoles/thread.php/2751146>).

Example (44) appears in a post in an Australian forum dedicated to (computer) gaming in response to a video showing a virtual boy (Milo) “interacting” with a real girl. The video sequence is part of a technology demonstration of Peter Molyneux’s *Project Natal* – a Microsoft technology development project aimed at creating “interactive” games involving fictional characters that possess “emotional AI” and are thus able to react properly to the users’ facial expressions, tone of voice and gestures. In introducing the demonstration sequence, game designer Peter Molyneux says:

(45) I want to say one thing to you: that’s the word **interactive**. Surely, we’ve been making **interactive** games for twenty years, haven’t we? Or, thirty years. Well, no. I don’t think we have. Because that thing in our hands, that thing that has evolved in our hands, that got more and more complex, got more and more buttons, actually has been the biggest barrier to what we want to create. Because what we want to create is a connection to our words.⁵⁵

In (45) Peter Molyneux makes a dissociation putting the minimal conditions of *real interactivity* at a very high level, never reached before, and identified vaguely with the possibility of having a “connection” with a virtual world. He focuses on the nature of the interface between the user and the system: the artificial nature of the interface is a barrier to “real” interactivity. So, only a natural interface that adapts to the user’s facial expressions, tones of voice and gestures can ensure true interactivity. The dissociation involves a persuasive definition, because Molyneux focuses the attention of the audience on facial expression, tone of voice recognition, gaze coordination, and not, for instance, on whether the virtual boy Milo is able to answer meaningfully to unscripted questions by the user – which apparently he is not (Grant, 2009). Interestingly, the poster of (44) does not directly question Molyneux’s dissociation or his persuasive definition of interactivity. Instead he goes one step further and makes another dissociation between *real interactivity* and the *illusion* of it. He associates illusory interactivity with the so-called *uncanny valley* (Mori, 1970) – the strongly unpleasant emotional effects provoked by very realistic

⁵⁵ The video containing both Molyneux’s speech and the demonstration sequence is available on YouTube, at http://www.youtube.com/watch?v=HluWsMlfj68&feature=player_embedded (January 29, 2010). The transcription is ours.

simulations of human life that nevertheless fail to be fully believable and remain recognizable as “counterfeit”.

Observing the facility with which the participants in the discussion move the bar of the minimal conditions of *interactivity* in these explicit negotiations of the denotative meaning of the word helps to cast a brighter light on a number other examples encountered in the previous section – such as (37) and (43) where no explicit dissociation and redefinition are present but implicit shifts of denotative meaning effected by the arguer for strategic reasons: to extend to *podcasting* the positive connotations of interactive media in (37), or – rather outrageously – to boldly deny these same connotations to face-to-face conversation in (43).

10. Conclusions and perspectives

In this paper we have tried to show, through the analysis of the words *interactive* and *interactivity*, the productivity of a notion of cultural keywords as *termini medi* in enthymematic arguments pointing to implicit premises that are *endoxa* in the cultural common ground. Although the analysis could be still sharpened by the recourse to additional corpus evidence collected through the recourse of a wider variety of argumentative indicators, we believe that what we have offered is sufficient to support the claim that this notion of cultural keywords has a double relevance:

From the viewpoint of anthropological semantics, it offers a principled and concretely applicable procedure to test a candidate cultural keyword, gaining in the process not only important insights on its “raw” persuasive force, but also a clearer picture of the set of values and beliefs it evokes.

From the viewpoint of an argumentation scholar aiming to establish an accurate reconstruction of an argument relying crucially on unexpressed premises, it offers a method for empirically checking on a culturally relevant corpus that the implicit premises he attributes to the arguer are indeed recoverable or at least partially justified in the cultural common ground.

In fact, we believe that this article also makes a methodological point, which has perhaps a broader import: argumentation scholars interested in analyzing and critically evaluating real texts should pay more than a cursory attention to lexical semantics, and must also rely on rich corpus data collected and queried using methods inspired by corpus linguistics.

As regards *interactivity*, these methods have led us to conclude that the keyword is polysemous and vague, and yet displays the same connotation across its uses, evoking simple evaluative *endoxa*, which provide access to suitable major premises that are recovered, so to say, at a very shallow level. This analysis is confirmed by the ease with which dicussants make interactivity the target of dissociation strategies.

It would be certainly too strong and simplistic to hurry and say that a massive fallacy of equivocation, operating at an intertextual level, ensnares all talk of interactivity in the contemporary information society. Yet, we believe that this exploratory analysis opens up interesting possibilities with respect to the critical scrutiny of cultural *endoxa*.

As authoritative accepted opinions, as defined by Aristotle, *endoxa* function as social values that are bound to guide actions and decisions in human affairs. It is precisely because of this social significance that studying *endoxa* is crucial to argumentation theory. Amossy (2002a) has recently observed that modern attitude towards *endoxa* is, to say the least, ambivalent. There certainly are those who continue the Aristotelian line, like Perelman and Olbrechts-Tyteca (1958) and Amossy (2000b) herself, and present it as the ideas and beliefs that constitute the indispensable common ground of a given society, fundamental not only to construct basic interpersonal interactions, but also, at a larger scale, the whole life of a cultural community. Yet, the negative strand seems to be the prevalent one. Terms like *commonplace*, *idée reçue*, *cliché*, *stereotype* all refer to the *endoxon* with a broadly negative connotation. And, from Flaubert's *idées reçues* to Barthes' *myth* (2000 [1957]) and Foucault's *discours* (1971), *endoxa* are equated with ready-made thoughts and cultural constructions tacitly accepted and broadly repeated, close to a kind of dominant ideology that hinders ordinary people from developing their own ideas. In this case, *endoxa* is considered banality and may lead to alienation.

Looking back at what we have done in this paper we can see that, rather than advocating a wholesale rejection of the *endoxa*, we have moved from the Aristotelian recognition that *endoxa* represent an indispensable starting point for argumentation within any cultural community, and ended up developing some theoretical and methodological tools that have showed to be relevant for critically evaluating their quality. Much remains to be done, but the direction seems promising.

(PAPER 2) FROM TEXT TO CULTURE THROUGH CORPUS: INTERACTIVITY AS AN ARGUMENTATIVE KEYWORD OF CONTEMPORARY CYBERCULTURE

1. Introduction

Culture is said to be one of the hardest matters to cope with, especially because of the elusiveness of the concept itself. Since its first scientific definition in Tylor's *Primitive culture* (2010 [1871]), the concept has been renegotiated and redefined many times. In fact, Stevenson (1938) points out *culture* as one of those words susceptible of frequent changes in their meaning.

In looking at the relation between keywords, texts and culture, it is natural to refer to tradition of the Tartu-Moscow Semiotic School, whose conception of culture is inextricably related to texts – although not exclusively verbal ones. According to Lotman and Uspensky (1978, p. 218) culture is not simply “an aggregate of texts”, but mainly “a mechanism creating an aggregate of texts”. Texts, therefore, are to be considered “as the realization of culture”. This means that texts produced within a given community manifest beliefs, knowledge, values etc., which in one way or another are representative and insightful in view of a better understanding of the community itself. It is in this sense that Danesi and Rocci (2009, pp. 144-149) come up with the notion of hypertext to refer to culture, i.e. texts are – explicitly or implicitly – linked one to the other so that values and beliefs of a given cultural community can be traced following these intertextual relations. “The metaphor of hypertextuality [...] is a concept that is particularly useful as an analogue in describing how the cultural common ground is structured and how it is evoked [...]” (Danesi & Rocci, 2009, p. 145).

Particularly, what I propose in this paper is a theoretical and methodological approach to cast light on culture by investigating how keywords can support inferential processes to recover implicit premises (shared values and beliefs) from the cultural common ground of a given community. This proposal suggests to start from the particular (keyword), passing through a corpus of texts generated within a certain community, and finally reaching the whole (shared common ground of the community).

To follow this path from text to culture, I will examine the words *interactivity* and *interactive* as hypothetical cultural keywords of contemporary cyberculture.

In what follows, I will first present the theoretical perspectives I adopt to carry out this investigation. Then I will develop the methodological part, which consists in a) searching for argumentative uses of *interactivity/interactive* and construct a representative corpus from relevant texts; b) retrieving *endoxa* from the corpus to decide whether or not *interactivity/interactive* can be considered cultural keywords; c) reconstructing inferential processes in which some of the recovered *endoxa* take part in order to analyze on which bases people's reasoning concerning *interactivity/interactive* are founded.⁵⁶

2. The study of keywords

Basically, the notion of *keyword* can be grasped alluding to a metaphor. Words can be considered keywords insofar as they function as a key to give access to a body of knowledge generally expressed by a single text or a corpus of texts belonging to a certain discourse community or even an entire culture.

Among a variety of studies of keywords, the most prominent research trend is the one based on the idea that keywords are words through which cultures and societies could be analyzed and understood. Keywords, therefore, to some extent, give insights into a culture's beliefs and values. It is exactly in this sense that they should be called *cultural keywords*.

An early and influential study on keywords is Williams' *Keywords: a vocabulary of culture and society* (1976). He defines keywords as "[...] significant binding words in certain activities and their interpretation; they are significant, indicative words in certain forms of thoughts" (Williams, 1976, p. 20). Williams characterizes his work as an inquiry into a vocabulary aimed to shed light on the interpretation and understanding of cultural and social realities. Actually, in order to contribute to the understanding of the arch-keywords *culture* and *society*, Williams composed a dictionary by choosing keywords like *class*, *bureaucracy*, *alienation*, *democracy*, *revolution* etc. According to him, these words

⁵⁶ The methodological approach presented here represents the most recent update of the initial proposal of Rocci and Monteiro (2009).

imposed themselves to his attention in the course of some argument “because the problems of its meanings seemed [...] inextricably bound up with the problems it was being discussed” (Williams, 1976, p. 15). However, he does not clarify this relation between keywords and arguments nor does he indicate a method for identifying keywords.

The contribution of Wierzbicka (1997) is also important to the study of cultural keywords. She considers that “‘Key words’ are words which are particularly important and revealing in a given culture” (p. 15). Her approach is more linguistic than that of Williams since it is based on a specific theory of lexical semantics. According to her, words have culture-specific meanings and so they reflect specific ways of thinking and living. This means that “The evidence for the reality of cultural norms and shared conceptions is provided by language and, in particular, by the meaning of words” (p. 22). She deals with the semantic analysis of lexical units from many languages (Polish, English, Latin, Russian, German, Japanese etc.) belonging to different domains (politics, ethics, cultural psychology, ethnic identity etc.) “for decoding culture specific meanings and, consequently, for elucidating the tacit assumptions which are linked with them” (p. 22). As for Williams’ work, in Wierzbicka’s approach there is a lack of a method oriented to identify cultural keywords. If on the one hand she points out some clues to choose these keywords like the frequency of use in a certain semantic domain, or in book titles, songs, proverbs, sayings etc., on the other hands she says that “There is no finite set of such words in a language, and there is no ‘objective’ discovery procedure for identifying them” (p.16). For Wierzbicka, the selection of cultural keywords should be justified after an in-depth study showing that they really lead to significant insights into the culture under examination.

Another significant approach to the study of keywords is offered by Stubbs (1996, 2001, 2008), who emphasizes the usefulness of computer aided corpus analysis to investigate keywords. As characterized by Stubbs (2008, p. 1), “Keywords are words that are claimed to have a special status, either because they express important evaluative social meanings, or because they play a special role in a text or text type”. According to him, such evaluative connotations associated with keywords can be

observed by examining recurrent collocations patterns in which they occurs. These recurrent patterns embody “shared meanings” and “particular social values and views of the world” (Stubbs, 1996, p.158).

Considering these approaches, we notice that identifying keywords will always rest on intuition and subjectivity without a discovery method.

3. Cultural keywords in arguments

Since cultural keywords are meant to give insights into cultures, it may be the case – and generally it is – that they are loaded with “emotive meanings” (Stevenson, p. 1937) that give them a certain persuasive force to play a substantial role in argumentative discourse. Noting this particularity, Rigotti and Rocci (2005, p. 127) argue “that looking at the role played by words in argumentative texts researchers in cultural keywords can find, if not an ‘objective discovery procedure’, certainly a significant ‘test bed’”. In what follows, this is the perspective I will adopt to verify if *interactivity* can be said a cultural keyword of contemporary cyberculture.

Rigotti and Rocci’s proposal consists in reconstructing natural language arguments following the Aristotelian tradition related to enthymematic syllogisms. For Aristotle (in *Rhetoric* [1954]), an enthymeme is a type of syllogism in which premises could be left implicit by the speaker once they are well-known so that the hearer is perfectly capable of adding them himself. However, an enthymeme is not simply a syllogism with unexpressed premises, but a syllogistic structure in which the unexpressed premises are what Aristotle calls *endoxa*, i.e. cultural shared values and beliefs usually accepted within a given community.

Rigotti and Rocci (2005, p. 130) illustrate their method by giving the example below, which is a quite simple case but useful to introduce the method.

He’s a traitor. Therefore he deserves to be put to death.

Considering the speaker’s communicative goal is to defend the standpoint *he deserves to be put to death* by putting forward the argument *He’s a traitor*, this argumentative move should be reconstructed as follows:

Major premise: *Traitors* deserve to be put to death (unstated)
Minor premise: He is a *traitor*
Conclusion: He deserves to be put to death

Rigotti and Rocci remark that this syllogism makes sense, both logically and communicatively, only if the hearer is able to retrieve the unstated major premise *Traitors deserve to be put to death* (which is presupposed to be shared by the speaker and the hearer), otherwise it would not be possible to make the standpoint *He deserves to be put to death* (conclusion) follows from the argument *He is a traitor* (minor premise).

The authors also highlight the crucial role played by the word *traitor* in both the logical and the (pragmatic) communicative structure of the argument. From the logical viewpoint, *traitor* appears in the subject of the major premise and in the predicate of the minor premise, playing the role of *terminus medius* in the syllogistic structure. From the communicative point of view, it plays an essential role in the recovery of the unstated major premise. In fact, the retrieval of the unexpressed premise is only possible because there is an accessible shared knowledge related to *traitor* – in this case *Traitors deserve to be put to death*.

With this theoretical schema Rigotti and Rocci (2005, p. 131) present their working hypothesis for identifying cultural keywords: “We propose to consider as serious candidates to the status of cultural keywords the words that play the role of *terminus medius* in an enthymematic argument, functioning at the same time as pointers to an *endoxon* or constellation of *endoxa* that are used directly or indirectly to supply an unstated major premise”.

As we will see, this method will not only allow us to verify if *interactivity* is indeed a cultural keyword, but also will help to find out shared values concerning *interactivity* by retrieving a constellation of *endoxa* related to it.

4. *Interactivity* as a case in point

Starting from an interest in the socio-cultural arrangement engendered by the widespread use of information and communication technologies (ICT) in the contemporary world, I have noticed the prominence of the words *interactivity* and

interactive, which are generally associated to what is known as cyberculture (or information/network society, digital age/culture and so forth) and especially in texts concerning new media. Actually, interactivity is said to be a new media founding principle, bedrock, central/key concept, and so forth (Lister et al., 2009; Dewdney & Ride, 2006). That prominence has motivated me to investigate these words, their uses and meanings, as well as their supposed importance. I have assumed, therefore, the hypothesis that *interactivity* and *interactive* are cultural keywords of the cybercultural community, by which I mean a set of people grounded on a system of shared beliefs, practices, values, skills, knowledge etc., with regard to ICT and its uses in everyday life.⁵⁷

4.1. Testing keywords using corpus

To verify the hypothesis I have proposed and based on the theoretical framework I have presented, I will analyze a relevant corpus of texts in which *interactive* acts as an argument put forth for supporting standpoints. The corpus will be composed by using a method that was introduced in a precedent work (Rocci and Monteiro 2010) and has been developed since then. It consists in extracting occurrences from the World Wide Web through the online linguistic data search tool WebCorp (www.webcorp.org.uk). The selection of texts for the corpus takes into account queries formulated with argumentative indicators, which are linguistic signs (expressions or textual patterns) meant to indicate that an argumentative move might be in progress (van Eemeren, Houtlosser & Snoeck-Henkemans, 2007).

The following examples, therefore, are representative of a corpus of 150 occurrences collected using the strings *because it is interactive* and *because it is not*

⁵⁷ This notion of cybercultural community is based on Trivinho (2001) and Clark (1996). Trivinho characterizes cyberculture saying it “[...] involves all the most socially important phenomena that arise in the contemporary world insofar as nowadays the predominant objects, procedures and processes depend in some extent on digital technologies” (Trivinho, 2001, p. 60, our translation). Clark in turn defines cultural community as “[...] a collectivity of people that is grounded on a shared system of beliefs, practices, nomenclature, conventions, values, skills, and knowledge”. Undoubtedly, this notion of cybercultural community implies a bewildering complexity involving people from all over the world, who participate in the community in many ways and forms, according to personal necessities and interests, and particularly conditioned by what they have to really engage in the community (hardware, software, Internet access, computing knowledge and skills etc.).

interactive. In this case, I have considered the argumentative indicator *because* as introducing an argument whose core is the adjective *interactive*.

- (1) There is a wide network of people sending YouTube videos out. I think it's very exciting, **because it is interactive** and it is their television.
- (2) Children will enjoy the [Maryland Science Center] museum **because it is interactive** and not as boring as a museum where they can only observe and not interact with the exhibits.
- (3) I think it [blogs] is an important part of e-democracy **because it is interactive** and because it is attracting interest.
- (4) The incorporation of ICT into the school curriculum by the Ministry of Education is good for children **because it is interactive**.
- (5) The touchscreen will be a lot more effective than any brochure **because it is interactive** and has engaging visual sights and sound.
- (6) I like this toy **because it is interactive** and relatively safe to leave with your dog while you are not home.
- (7) Tilos Radio improves democracy **because it is interactive**, Tilos Radio is accessible and most importantly, Tilos Radio belongs to its audience.
- (8) Children love fruit dip **because it is interactive**, and they get to choose how much is used.
- (9) This particular [online magazine] format is exciting **because it is interactive** – it allows students to post comments and video blogs responding to articles and topics of the month.
- (10) PowerPoint presentation is the best promotional resource **because it is interactive**, could be educating and entertaining.
- (11) I don't think direct emailing system, as Obama's team is using, is effective **because it is not interactive**.

- (12) Watching television, **because it is not interactive**, does not keep your mental skills sharp.
- (13) When the N Generation goes to school, it finds itself trapped in an off-line space that is deadly boring. Teacher talk is boring **because it is not interactive** and only reinforces the rigidities of face-to-face conversation that the N Generation wants to free itself from.
- (14) Traditional media can never create the HCO [highly customized offers] **because it is not interactive**, but the internet is designed to make the HCO possible.
- (15) People who use EMail to communicate believe they collaborate when in reality EMail is not very collaborative **because it is not interactive**.

It was expected that the occurrences were associated with ICTs once the word *interactivity* was created, in the early 1980's, to designate a new technological-mediated communicative phenomenon as suggested in the pioneer research by Rabaté and Laurraire (1985). By and large, this is true for the collected corpus as can be seen in examples (1), (3), (4), (5), (9), (10), (11), (13), (14) and (15). Interestingly, even though the occurrences (7) and (12) are not related to ICTs, they show the importance of attributing the value *being interactive* to media like Radio and TV, which is not considered interactive a priori. The occurrences (2), (6) and (8) do not have to do with ICTs and this arguably indicates different meanings and uses of *interactivity/interactive*.⁵⁸ In fact, especially the *pet toy* in (6) and the *fruit dip* in (8) are weird uses of interactive – just like other occurrences found before (interactive brain, shampoo, salad etc.).

Let's take example (9) and reconstruct it as an enthymematic syllogism:

- (9) This particular [online magazine] format is exciting **because it is interactive** – it allows students to post comments and video blogs responding to articles and topics of the month.

⁵⁸ I address readers to Rocci and Monteiro (2009), where they find a semantic analysis of *interactive* and insights on its polysemy and vagueness.

Major premise: **Interactivity** is exciting. (unexpressed *endoxon*)

Minor premise: This [online magazine] format is **interactive**

Conclusion: This [online magazine] format is exciting

The reconstruction shows that *interactive* fulfills the two-fold role indicated in Rigotti and Rocci's model for verifying whether or not a given word should be said a cultural keyword. On the one hand, *interactive* is the *terminus medius* giving the logical consistence to the syllogism, and on the other hand, it is the trigger for the retrieval of the *endoxon* *Interactivity is exciting* – which is indeed shared value, otherwise it would not be possible to conclude the reason why the speaker states *This [online magazine] format is exciting*.

Applying the same procedure for the other occurrences, we will notice that in most cases the major premise corresponds to a very generic and readily available positive *endoxon* evoked by the keyword *interactive*. This strikingly positive evaluation is representative of the entire corpus and can be represented by *People think interactivity is exciting (enjoyable, effective, important etc.)*. Conversely, as we can observe in examples (11) to (15), the occurrences collected with the string *because it is not interactive* show exactly the opposite, i.e. negative evaluations.

Curiously, while *interactivity* and *interactive* are clearly loaded with positive connotations, very often what speakers mean by *interactivity* remains largely vague. Why does the Minister of Education say ICT are interactive (4)? Why should one think You Tube is interactive (1)? Do the speakers in (1) and (4) have the same reasons to say that ICT and You Tube are interactive? What about the pet toy in (6)? Why is there interactivity on a radio station (7) but there is not on TV (12)? Why does one consider that a blog is interactive (3) and another says that email is not (11) (15)? Even if we look into the context of some of these examples it is hard to definitely conclude what motivates one to attribute *being interactive* to something. Overall, *interactive* is mentioned as if everybody knew what *interactivity* is. This lack of further clarification suggests the sufficiency of these words and is an additional indicator to confirm its status of cultural keyword.

Working on large corpora, it might be the case that finding numerous occurrences of argumentative uses of a certain word is not enough for claiming it is a cultural keyword.

The sufficiency (no further clarification) of words as well as their frequency (number of occurrences) and hierarchical position (central/peripheral) are complementary criteria to be verified in single texts belonging to corpora.

4.2 Retrieving and analyzing *endoxa* to gain insights into culture

In Aristotle, the adjective *endoxos* (from *en* [in] and *doxa* [opinion or fame]) refers to propositions that are in the common opinion and, as a consequence, are generally accepted within a community. In Topica (1960), Aristotle defines *endoxa* as those opinions “which commend themselves to all, or to the majority, or to the wise – that is or to all of the wise or to the majority or to the most famous and distinguished of them”.

Amossy (2002a) observes that recent studies may not explicitly use the term *endoxa* to refer to shared values and beliefs. Furthermore, she identifies two perspectives on dealing with *endoxa* in contemporary researches: one approach is strongly critical and the other is likely to remark the constructive functions of *endoxa*. The critical perspective presents *endoxa* as ready-made thoughts and cultural constructions tacitly accepted and broadly repeated reflecting a dominant ideology and hindering ordinary people from developing their own ideas. In this perspective, *endoxa* are deemed to be banality and may lead to alienation. Flaubert’s *idées reçues*, Barthes’ *myth* (2000 [1957]) as well as the notions of *cliché* and stereotype are representative of this approach. On the other hand, there are those, like Perelman and Olbrechts-Tyteca (1969 [1958]), Rigotti and Greco-Morasso (2009) and Amossy (2002b) herself, who in one way or another follow the Aristotelian tradition. For them, *endoxa* are not inevitably considered harmful values diffused by dominant ideologies, but, fundamentally, shared ideas and beliefs constitutive of the indispensable encyclopedic knowledge of a given cultural community and necessary to construct basic interpersonal interactions and the whole life in society.

“Communal common ground” is the terminology with which Clark (1996, p. 102) describes this “shared system of beliefs, practices, nomenclature, conventions, values, skills, and knowledge” that identifies a given cultural community. In other words, the communal common ground is all that one can take for granted in interacting with other people of the same community because s/he knows that all the members of his/her cultural

community are aware of what s/he has omitted. As Tardini (2005, p. 284) remarks, “*Endoxa* operate at the level of the communal common ground of a cultural community” and the very role of cultural keywords is to activate the mechanism of bringing back what is left out by the speaker in a communicative process.

Therefore, bearing in mind the importance of natural language texts to transmit and perpetuate values and beliefs, I suggest that the retrieval of *endoxa*, by means of cultural keywords, from a relevant corpus is a feasible methodological strategy to gain insights into a given cultural community. Collecting *endoxa* activated by a certain keyword leads to discover – or at least to make explicit – what people think about the keyword itself and provide some clues to better understand the community it represents.

Let’s consider the following *endoxa* evoked by *interactivity* in the corpus:

- Interactivity is very exciting (You Tube, online magazine)
- Interactivity is enjoyable (museum, fruit dip)
- Interactivity is good (ICT)
- Interactivity is an important part of e-democracy (blog)
- Interactivity provides more effectiveness (touch screen vs. brochure)
- Interactivity improves democracy (Tilos Radio)
- Interactivity is a effective promotional resource (PowerPoint presentation)

I think it is not necessary to provide much more examples to conclude that there is a recurrent pattern of *endoxa* evoked by *interactivity* indicating an undeniable positive evaluation of this cultural keyword. Furthermore, what seems interesting and useful to go further in the understanding of this cybercultural shared value is to go beyond the pervasive optimistic idea in order to find out on what kind of reasoning schemes people consciously or unconsciously rely their evaluation of the cultural keyword under investigation.

This next methodological step will be supported by the Argumentum Model of Topics (AMT) (Rigotti & Greco-Morasso, 2009), which is a tool devoted to the analysis,

evaluation and construction of argumentative discourse.⁵⁹ The AMT, as its nomenclature suggests, is founded on the rich ancient and medieval rhetorical tradition concerning the study of Topics. In the framework of the current studies on argumentation theory, the AMT can be particularly seen as a contribution to the researches on argument schemes (Rigotti & Greco-Morasso, 2009).

To explain how the AMT can support the analysis of arguments I will show the reconstruction of the example (9) because this is one of the few occurrences in which there is an explicit reasoning justifying what the arguer means by *interactive*.

This particular [online magazine] format is exciting **because it is interactive** – it allows students to post comments and video blogs responding to articles and topics of the month.

⁵⁹ Additional developments, applications and examples of AMT can be found in Bigi (2007), Palmieri (2008), Rigotti (2009a, 2009b), Greco-Morasso (2009), Filimon (2009), Rigotti and Palmieri (2010).

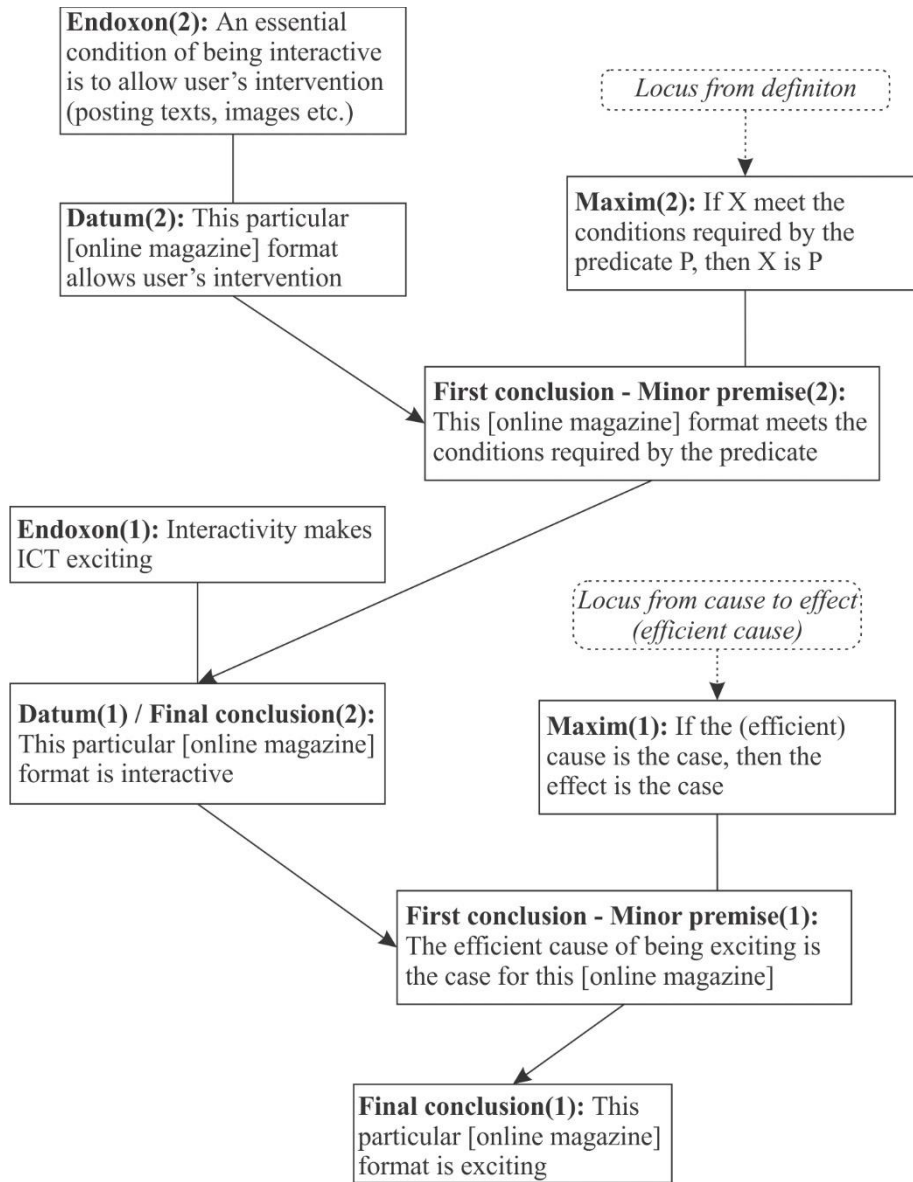


Figure 2: Reconstruction of example (9) using AMT.

Initially, I will focus only on the first part of example (9) *This particular [online magazine] format is exciting because it is interactive* to show how a single argumentative move can be reconstructed on the basis of the AMT. So, let's take a look at Figure 2 and firstly focus on those elements labeled (1).

As we can observe in Figure 2, the argumentative move to defend the standpoint *This [online magazine] format is exciting*, which is the *Final Conclusion(1)*, is reconstructed taking into account two intertwined syllogisms forming an inferential

structure where the topical component (right side) is based on a *Maxim*, and the culture-bound component (left side) is based on an *Endoxon*. Rigotti and Greco-Morasso (2009) explain that while the topical component “guarantees the inferential consistency” and “ensures the inferential force”, the endoxical dimension “provides the persuasive effectiveness” of the argumentative reasoning. This is to remark that the logical consistency is necessary but it is not sufficient to create successful arguments. The logical mechanism, therefore, should be crossed with a relevant endoxical component.

In the AMT, *maxims* are inferential principles, of the form $p \rightarrow q$ (*modus ponens*), engendered by a system of *loci*.⁶⁰ *Loci* (or *topoi* in Greek) are ontological relations like cause-effect, whole-parts, definition-defined etc. that give rise to one or more general laws (*maxims*) that activate inferential processes on which arguments are grounded. *Loci* could be metaphorically conceived as repositories from which arguments are selected to support a certain standpoint. It is in this sense that we can say *argument from authority*, *from opposition*, *from definition*, and so forth, i.e. argument belonging to the *locus* from authority, opposition, definition etc. (Rigotti & Greco-Morasso, 2009).

In example (9), the *Maxim(1)* is generated by the *locus from cause to effect*, particularly *from efficient cause*, and is formulated as the principle *If the (efficient) cause is the case, then the effect is the case*. Now, in order to have a coherent syllogism for the topical component of the argumentative structure (i.e. to conclude the *Final conclusion* from the *Maxim*) it is necessary a *Minor Premise* – in our case it is *The efficient cause of being exciting is the case for this [online magazine] format*. However, it is not self-evident that the efficient cause in question (interactivity) leads to the effect (being exciting) avowed in *Final conclusion(1)*. Thus, it is crucial for the *Minor Premise(1)* of the topical component to be connected with a shared knowledge or value (*Endoxon*) for the speaker and the addressee with respect to interactivity – in our case it is *Interactivity makes ICT exciting*. Here, the topical component intertwines with the endoxical dimension providing logical consistency and persuasive force to the standpoint.

Once we have seen how a single argumentative move can be reconstructed on the bases of the AMT, we should follow the same reasoning to reconstruct the

⁶⁰ For the taxonomy of loci of AMT, see Rigotti and Greco (2009).

argumentative structure for the standpoint *This particular [online magazine] format is interactive*.

Considering the whole example (9), we have a two-level argumentative chain forming a complex inferential structure as illustrated in Figure 2. While the first level supports the main standpoint *This [online magazine] format is exciting*, the second one supports the standpoint *This particular [online magazine] format is interactive*, which coincides with *Datum(1)*. So in this case *Datum(1)* becomes *Final conclusion(2)*.

While in level (1) the inference is grounded on the *locus from efficient cause*, in level (2) the inferential structure stems from the *locus from definition*. Actually, the arguer supports the standpoint defining what s/he means by interactive, which is based on the *Endoxon(2)* *An essential condition of being interactive is to allow user's intervention* and backed up by the *Datum(2)* *This particular [on line magazine] format is interactive*.

What seems interesting is the fact that the argumentative move we observe in this example could be considered a kind of reasoning pattern with respect to interactivity. If we apply the AMT to reconstruct other examples from the corpus we will attest that a substantial part of the occurrences rest on *arguments from the efficient cause* (sometime with more than one level), which means that in general people attribute to interactivity positive effects like excitement, interest, effectiveness, enjoyment, powerfulness etc.

The AMT, therefore, is very useful not only to the retrieval of *endoxa* concerning a certain cultural keyword, but also to find out how people reason while involving cultural keywords and their *endoxa*. This means that the AMT is a valuable tool to gain insight into cultures by making possible the reconstruction of the cultural common ground of a given community.

Taking into account the representative constellation of *endoxa* retrieved from the corpus and following the insight that texts “[...] are not perceived as isolated but as linked one to the other in various ways and forming, together with many other texts, a coherent whole, a sort of macro-text [...]” (Danesi & Rocci 2009, p. 145), it is reasonable to hypothesize the existence of a sort of hypertext concerning interactivity in the common ground of the cybercultural community. Such complex of intertwined ideas with respect

to interactivity revealed by explicit and implicit intertextual relations in the corpus could be expressed as follows:

Interactivity is a property or a quality attributed to a vast assortment of new technologies (including hardware, software, Internet etc) that in one way or another is said: 1) to provide advantages in view of more effective results as regard to working, domestic or entertaining activities; 2) and to elicit feelings of interest, excitement and satisfaction from these activities, which most times are compared with the use of or experiences with, so to say, “traditional” media (like paper books, radio, TV etc).

In addition to the foregoing examples (5), (12) and (14), the opposition *new vs. traditional media* can be observed in the occurrences (16) and (17), which illustrate and corroborate this hypothesized hypertext largely favorable to whatever is said to be endowed with interactivity.

- (16) The e-learning is as effective, or more so, than a traditional classroom setting, **because it is interactive**. You can communicate with the teacher and other students online.
- (17) The TV is not an appropriate learning tool **because it is not interactive**. The child in front of the TV is totally passive. Children learn mainly by doing.

Obviously, I acknowledge that this fascinating idea about interactivity might not be unanimous, but it unequivocally corresponds to the predominant point of view within the cybercultural community. In the corpus, as a matter of fact, only the example bellow suggests some apprehension about interactivity, but it is not really a negative evaluation. It is more a doubt than an outright negative judgment.

- (18) Writers are worried by the internet **because it is interactive** and they have therefore limited control on how they are read and what happens to their writing.

From an analytical point of view, this unanimous positive connotation of interactivity should be critically treated, mainly because of the vagueness and polysemy involving this cultural keyword. This means that not only is the argumentative reconstruction necessary, but it is also fundamental to analyze under which conditions the argumentative reasoning is valid. In the structure proposed by the AMT, it must be verified whether or not the *if...then* condition determined by the *Maxim* is really accomplished in its relation with the *Minor Premise* in order to achieve the *Final Conclusion*. Additionally, since the *Minor Premise* of the topical dimension is also the *First Conclusion* of the endoxical component, it is also necessary to validate the *Datum* – is the *Datum* true? – and the *Endoxon* – is the *Endoxon* actually acceptable?

Such criticism might seem banal considering the example (9) whose content is just an opinion that will not lead to serious implications. I would say that this is the case for the majority of the examples in the corpus. However, if we consider political discourses in which interactivity is said to be an efficient cause to engender democracy – another puzzling cultural keyword – this analytical task becomes necessary, mainly because one can take advantage of these keywords in order to manipulate audiences.

For instance, in example (7) interactivity and democracy came up intertwined in the argumentative move *Tilos Radio improves democracy because it is interactive* (cf. Figure 3). The reasonableness of the argumentative reasoning promoting Tilos Radio should be scrutinized by looking into the *Datum* and the *Endoxon*. Thus, we should ask *Is Tilos Radio really interactive?* and *Is actually acceptable by the arguer and the audience that interactivity improves democracy?* The truth condition of these two premises must be attested; otherwise we could say that some manipulation is at work. Since *endoxa* are generally not stated because it is presupposed that they are shared and accepted by all the people involved in the communicative process, it becomes easy to manipulate by inducing the audience to tacitly accept ideas that are not really shared. In the Tilos Radio case, we could say that there is a manipulative accommodation in the course of the argumentative move if the *Endoxon Interactivity improves democracy* is not indeed a shared and accepted belief for both the arguer and the audience.⁶¹

⁶¹ See Greco (2003) for more details about manipulative cases of accommodation.

It is not my goal here to go further into this analysis, for which I should cope with complex political matters involving cultural keywords like *democracy* and *interactivity*. Instead, I prefer to emphasize how the AMT can be helpful to give insights into cultures by 1) the retrieval of *endoxa* evoked by cultural keywords in a corpus of argumentative texts, and 2) the reconstruction of argumentative moves in which these keywords come up. Once *endoxa* are retrieved and argumentative moves are reconstructed, then it is possible to go further in the analysis in order to verify the legitimacy of the elements of topical and endoxical dimensions. Methods and approaches to deal with this latter analysis may vary according to the matters of *endoxa* and *data*.

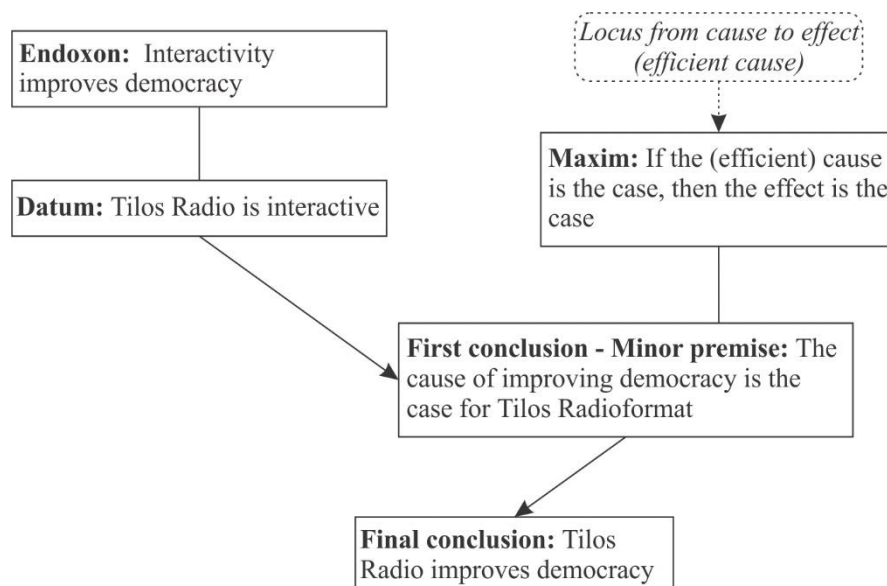


Figure 3: Reconstruction of example (7) using AMT.

5. Concluding remarks

In this paper I have shown the importance of keywords to gain insights on shared values and beliefs of a certain cultural community. Actually, the study of the uses of *interactivity/interactive* as cultural keywords in a corpus of argumentative texts reveals that the theoretical perspective and the methodological procedures proposed here compose a promising approach to grasp what people usually think of a certain issue by giving reasons of their thoughts and opinions. What I have proposed is a method to follow the

path from text to culture by investigating keywords (and the texts in which they occur) in order to reach *endoxa* belonging to the communal common ground of a given community. As a matter of fact, retrieving and looking into *endoxa* is crucial to understand the cultural communities where they circulate once they are shared and accepted authoritative opinions bound to guide actions and decisions in social life. To do this investigation the AMT has proved its usefulness not only to support the retrieval of *endoxa*, but also to reveal the bases on which people ground their (argumentative) reasoning involving a certain *endoxon*.

In the case of *interactivity*, the retrieval of *endoxa* leads us to notice how this cultural keyword is endowed with a strong positive connotation. Moreover, the analysis of texts where *interactive* appears as argument to support a standpoint reveals that people mostly think of *interactivity* in terms of *efficient cause*, i.e. in relation with some kind of gain. These methodological procedures, in fact, has helped to cast light on the understanding of *interactivity* and its uses, giving the possibility of hypothesizing a meta-discourse concerning *interactivity*.

It remains to be better verified what motivates people to say “something is interactive”, i.e. which ulterior arguments they use to justify the attribution of “being interactive” to something. This could be done, for example, examining texts collected with strings like “it is interactive because” or “therefore it is interactive”. On the other hand, strings like “it is interactive but” and “but it is interactive” may indicate 1) in the first case, what one expects from something that is said to be interactive; 2) in the second case, an attempt to highlight the positiveness (interactivity) of something that has been negatively evaluated.

Interestingly, in the case of *interactivity* the approach and the tools used in the investigation instigate to go far beyond what has been discovered. Taking account of other argumentative indicators (*therefore, and, but* etc.) and formulating new strings to collect other types of occurrences of *interactive* may open new perspectives for studying the cultural keyword *interactivity* and could be valuable to refine and enrich the presented approach.

(PAPER 3) DISTANCE LEARNING IN AMAZON REGION: TACKLING RHETORICAL SITUATIONS IN THE COMMUNICATION CONTEXT OF E-TEC IFPA⁶²

1. Introduction

This paper was motivated by an actual necessity of tackling a communication problem observed in the context of a Brazilian distance learning Program for which I had just been invited to coordinate. After a few days leading the program, I noticed a lack of interactions between teachers, tutors and students directly involved in the courses.

Knowing that instructor-student interactions is a fundamental aspect for distance learning implementation, acceptance and development (Holmberg, 1989; Piriälä & Yli-Luoma, 2007; Selim, 2007; Nehme, 2010; Riaz, Riaz & Hussain, 2011), I decided to analyze the situation in order to search for solutions immediately. After discovering breakdowns in the technological infrastructure of some Program's telecenters and realizing that it would not be possible to change it easily, I focused on situations that could mitigate the problem, namely change in beliefs and attitudes concerning e-learning. Actually, e-learning implementation does not rely only on technological solution, but on social and behavioural contexts (Tarhini, Hone & Liu, 2013).

In this way, this paper is aimed at better understand and analyze actual problems involving communicative practices in distance learning and how to tackle those situations where it emerges the necessity of changing beliefs and attitudes by means of discourse.

The model of *communication context* suggested by Rigotti and Rocci (2006) and the conception of *rhetorical situation* as defended by Bitzer (1968) will be combined in order to support the analysis of the problematic situation at issue. Thus, after an outline of the Brazilian distance learning Program in question and the presentation of Bitzer's theory and Rigotti & Rocci's model, both approaches will be combined in order to map the actual

⁶² I wish to acknowledge the support of the Instituto Federal de Educação, Ciência e Tecnologia do Pará (IFPA), more specifically its Pró-reitoria de Pesquisa e Pós-graduação (PROPPG) for giving me opportunity to present this paper.

communication context where emerges the lack of interactions to be tackled and to elicit those relevant elements that should be taken into account to solve the problem.

The approach we propose in this paper might help people in charge of e-learning programs/courses to map the complex social communication context of their programs considering both institutionalized and interpersonal aspects involved in communicative practices occurring in their programs/courses.

2. The E-TEC IFPA Program: a Brief Presentation

E-TEC Brazil Network is a governmental program promoted by the Brazilian Ministry of Education aimed at subsidizing the development of technological and professional education by means of distance learning. The program is intended to expand and democratize professional education by offering technical courses especially for those people living in the countryside or in the outskirts of major metropolitan areas. Actually, the ultimate purpose of the program is the economic and social development of these marginal areas.

E-TEC Brazil Network covers all the 26 Brazilian states and the Federal District supporting the implementation of approximately 257 courses in 841 *E-TEC telecenters* in partnership with 49 educational institutions. One of these partner institutions is the Federal Institute for Education, Science and Technology of Pará (IFPA), which serves about 1,500 students enrolled in 6 courses offered in 10 E-TEC telecenters. This partnership will be called E-TEC IFPA henceforth.

IFPA acts in the state of Pará, situated in the North Region of Brazil, an area notably marked by unfavorable socioeconomic conditions and poor technological infrastructure. Moreover, the state of Pará is part of the wide and peculiar Amazon Region. In this context, therefore, distance learning is extremely challenging due to factors like scarce access to technologies (computers, mobile devices, software, Internet etc.), telecenters with limited and deficient bandwidth, distance between E-TEC IFPA Central Office and telecenters, lack of adequate transportation systems to visit some telecenters and deliver material to be used in the courses (equipments, books, DVD etc.), low educational level of students from countryside enrolled in the program and so forth.

Even though E-TEC Brazil Network is meant to be a distance learning program, the model implemented by IFPA is more likely a blended learning because in general all the courses are composed by 80% of computer-mediated activities on Moodle (video lessons, assignments, emails, forums, chats etc.) and 20% of local activities at telecenters. It is worth emphasizing that IFPA is an institute mainly devoted to professional education and the specific necessities of the courses offered – namely Informatics, Metallurgy, Urban Sanitation, Fishing, Aquaculture and Tourism – require spending some time and efforts in practical/laboratory classes led by teachers or tutors at telecenters.

Taking into account these circumstantial conditions, especially the lack of a satisfactory technological infrastructure, it is natural to expect that communications problems occur during the courses. They do exist. However, online interactions between participants in the context of E-TEC IFPA are not only hampered by this infrastructural condition. There are also problems in the communication between teachers, tutors and students arising from aspects not concerned to technological matters. Some of them, we will see, can be considered *rhetorical situations* according to Bitzer's (1968) classic definition, i.e., situations where it emerges an exigency to change beliefs and attitudes by means of discourse. This kind of situation is what really interest to this paper.

3. Bitzer's Rhetorical Situation

Taking into account that rhetoric is a way of producing effective changes in reality through the mediation of discourse, Bitzer (1968, p. 6) says:

Rhetorical situation may be defined as a complex of persons, events, objects, and relations presenting an actual or potential exigence which can be completely or partially removed if discourse, introduced into the situation, can so constrain human decision or action as to bring about the significant modification of the exigence.

Bitzer remarks that any rhetorical situation is a kind of invitation to a response. Thus, he argues rhetoric is situational, i.e., a rhetoric discourse arises as a response to a given situation which, according to the rhetor, must be changed. In other words, the situation calls the discourse into existence and gives its rhetorical significance: "[...] so

controlling is the situation that we should consider it the very ground of rhetoric activity [...]” (Bitzer, 1968, p. 5).

According to Bitzer, prior to the creation and presentation of discourse, any rhetorical situation is constituted by three elements: *exigence*, *audience* and *constraints*.

“Any exigence is an imperfection marked by urgency; it is a defect, an obstacle, something waiting to be done, a thing which is other than it should be.” (Bitzer, 1968, p. 6). However, an exigence is not rhetorical if cannot be changed (e. g. death or natural disasters) or can be modified by means other than discourse.

Once rhetorical situations demand discourses intended to modify reality by influencing people to change beliefs and/or attitudes, it is expected an audience to be addressed. Hence, the audience of a rhetorical discourse corresponds to “those persons who are capable of being influenced by discourse and of being mediators of change”. (Bitzer, 1968, p. 8).

Finally, constraints are the third constituent of a rhetorical situation. Bitzer says that persons, events, objects, and relations have the power to constraint decisions and actions needed to modify a given exigence. He gives examples of standard sources of constraints: beliefs, attitudes, documents, facts, traditions, images, interests, motives and the like (Bitzer, 1968, p. 8).

Bitzer (1968) emphasizes that a rhetorical situation invites not only any response, but a fitting response whose elements (theme, matter, purpose, style) are usually prescribed by the situation itself (pp. 10-11). Also, he argues that there is a “propitious moment” to put forward a fitting response. The rhetor, therefore, needs to look carefully at a given situation in order to grasp its very exigence and choose the fitting audience, be aware of relevant constraints involved in the rhetorical situation under analysis, and must stay alert, otherwise he loses the right moment and the situation may decay or become even more complicated (p. 13).

Observing the complex implementation and development of E-TEC IFPA courses, the lack of online interaction between teachers, tutors and students may be the main setback noticed in the context of E-TEC IFPA. This is a very complex problem involving shortcomings related to the poor and defective technological infrastructure

found in rural areas of Amazon Region. Such exigence, however, cannot be said rhetorical once it is not possible to change it by means of discourse. On the other hand, investigating this communication problem, it emerges exigences that could be affected by discourse, like misconception about distance learning and disinterest in implementing chats and forums as well as participating in them.

Considering adequate communication between stakeholders as a crucial factor for the success of distance learning – both in terms of motivation/persistence (Holmberg, 1989; Simpson, 2004; Tello, 2007; Nehme, 2010) and learning outcomes (Pirilä & Yli-Luoma, 2007) –, Rigotti and Rocci's *communication context model* will help us to identify and relate relevant institutionalized and interpersonal factors that should be observed in order to tackle those rhetorical exigencies related to scarce interactions between participants of E-TEC IFPA.

4. Rigotti and Rocci's Social Communication Context Model

Rigotti and Rocci (2006) propose a model of *social context of communication* intended to help understanding, constructing and evaluating communicative events. The model is founded on an interdisciplinary perspective highlighting that “communication context not only constitutes an essential factor in the process of production and interpretation of speech acts, but also is integral to the constitution of meaning itself” (p. 157). In other words, without considering the context in which communicative processes take place, it would be much more difficult – actually impossible in some cases – to have success in communicating or get a satisfactory comprehension of communicative events.

The authors advert, however, the model “is not aimed at including every kind of information that can enter the common ground, nor every kind of dimension that can be relevant for interpreting utterances”. For instance, material situations and temporal-spatial coordinates of communication events do not figure in the model (Rigotti & Rocci, 2006, p. 170).

Rigotti and Rocci synthesize a context of communication in the following graphical representation:

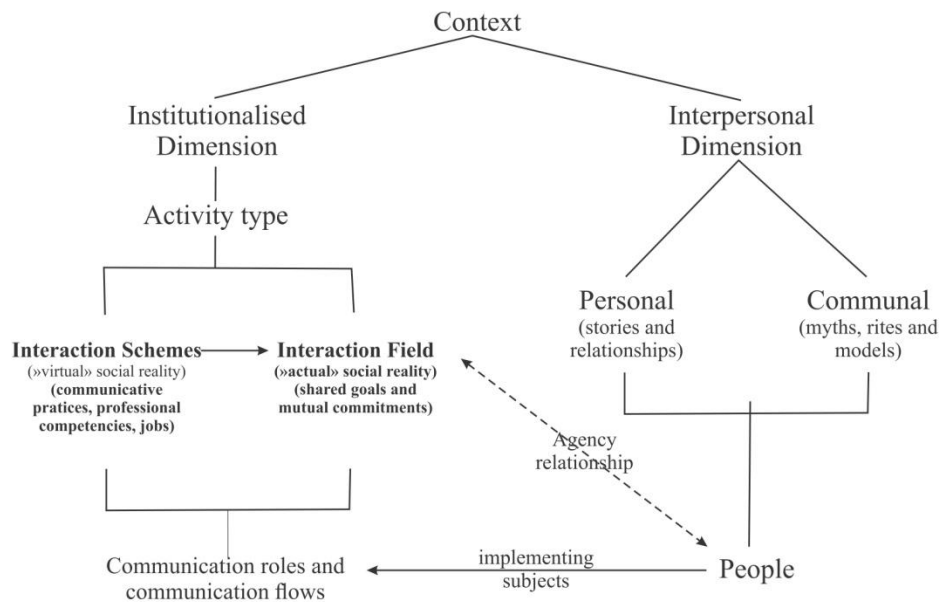


Figure 4: The communication context (Rigotti & Rocci 2006)

Figure 4 shows two dimensions that must be taken into account to a better comprehension of communicative events: the *institutionalized* and the *interpersonal dimensions*

The institutionalized dimension is essentially characterized by the notion of *activity types*, which was introduced by Levinson (1992, p. 69) as “a fuzzy category whose focal-members are goal-defined, socially constituted, bounded, events with constraints on participants, setting and so on, but above all on the kinds of allowable contributions”. In Rigotti and Rocci’s model, in turn, activity types are the result of the implementation of interactions schemes within interaction fields.

Interaction field is the actual social reality where communicative practices take place. It is defined by specific hierarchically organized shared goals which generate social roles and define the mutual commitments of them (Rigotti & Rocci, 2006, p. 172).

Interaction schemes, in turn, can be understood as “culturally shared recipes for interactions”, i.e., schemes of those communicative practices which structure and organize a given interaction field (Rigotti & Rocci, 2006, p. 173).

The actual context of communication arises exactly from this intertwined relation between interaction scheme and interaction field:

In order to obtain an actual context I need to map an interaction scheme onto an interaction field where real commitments are present. To do so the roles of the interaction scheme need to be made to correspond to compatible roles in the interaction field. (Rigotti & Rocci 2006, p. 173)

In the model, Rigotti and Rocci (2006) also show that “The implementation of interaction schemes within interaction fields generates a network of roles that are linked to each other through corresponding communication flows” (p. 174). According to them, communication flows can be understood as “the repeated, stable occurrence of an interaction scheme between certain roles in an interaction field” (p. 174).

Rigotti and Rocci’s model points out that institutionalized roles are implemented by individual or collective subjects having their own interests, desires and goals, which may be aligned or not with institutional interests and goals. Conflicts between individual and institutional interests and goals give rise to cases of “agency relationship” in which the subjective dimension generally tends to have priority over the institutional one (Rigotti & Rocci 2006, p. 174). Indeed, since individuals normally act in different interaction fields and belong to varied cultural communities (nation, religion, language etc.), the subjective dimension always exceeds the institutionalized role played by them in a given interaction field.

In this way, Rigotti and Rocci underline the attention that must be paid to the interpersonal dimension of a context of communication. They remark that personal and communal aspects should be taken into consideration to better understand this interpersonal dimension. The personal aspects are related to interpersonal relationships between individuals who play institutionalized roles, their common experiences and shared stories. The communal aspects, in turn, concerns the proper culture of the interaction field, with their myths, rites and models (Cantoni, 2004).

5. Rhetorical Situations in the Communication Context of E-TEC IFPA

After presenting Rigotti and Rocci’s model of social communication context and Bitzer’s conception of rhetorical situation, we propose to combine both theories in order

to shed light on an actual communication problem in the context of E-TEC IFPA, namely the lack of interactions between teachers, tutors and students.

Regarding the specific situation to be analyzed, Rigotti and Rocci's model allows to map the complex context of the Program and to identify relevant elements to compose argumentative discourse intended to change the situation at issue.

According to Rigotti and Rocci's model, in order to deal with this rhetorical situation concerning E-TEC IFPA, a rhetor should be aware of the intertwined social reality corresponding to the institutionalized partnership between E-TEC Brazil Network and IFPA, and also of personal relationships between people involved in the Program and their cultural background.

Considering E-TEC IFPA as an interaction field, its main shared goal is to offer and develop technological and professional education by means of distance learning. In this way, some social roles (content producer, teacher, tutor, coordinator and so forth) were created specifically to achieve this goal. These social roles and their respective commitments are legally established on documents of the Brazilian Ministry of Education listing a series of tasks, attributions, rights and duties that must be observed for the adequate implementation of the Program. Furthermore, students enrolled in the Program also have their rights and duties established by IFPA, the educational institution to which they are directly associated.

Regarding interaction schemes, there are schemes arranging interactions intended to manage and organize the Program strategically, like consulting, deliberation, problem-solving, mediation and so forth. However, what really interest to this paper are those schemes structuring interactions which are supposed to involve teachers, tutors and students. Since we have the institutionalized roles of teacher and tutor, it is important to note that teaching and tutoring are different interaction schemes, even if both roles are meant to be involved in interactions with students. This means that it may be necessary to address different discourses to teachers and tutors in order to change the lack of interactions we are dealing with.

In E-TEC IFPA, the most frequent communication flows should be those related to teaching and tutoring, which encompass online synchronous and asynchronous

practices (video lesson, web conference, email, forum, chat etc.) as well as local practices (laboratory and practical classes). These recurrent interaction schemes “select” the communication roles (participants) of those practices. For instance, video lessons followed by web conferences or chats are communicative practices supposed to involve teachers and students, as well as tutorial forums and chats are supposed to involve tutors and students. Conversely, in practice these communication tools are not used as they should be.

As said before, E-TEC IFPA is more likely a blended learning. For each course/subject, there are 80% of computer-mediated activities on Moodle and 20% of local activities at telecenters. In reality, the 80% of computer-mediated activities can be considered ineffective most of the time. Students usually access Moodle at the beginning of each course/subject to download the material they have to study (texts, exercises, videos etc.), which remain available for 3 or 4 weeks. After that, they normally access it again only to post those compulsory assignments. The fact is for the great majority of the students, what really interest is the 20% of local activities at telecenters, when they have more opportunities to talk with teachers/tutors. This is because tools like forum and chats are rarely used in order to establish communication with students. Since these communicative practices are not promoted regularly, students have no reason and motivation to access Moodle frequently (Pirilä & Yli-Luoma 2007). In sum, Moodle becomes a mere repository of files to be downloaded. This is a typical example of “conservative innovation” according to Cysneiros (1999), i.e., the use of new technologies without implementing new methods to teach and learn.

To grasp the entire complexity of the E-TEC IFPA communication context it is not sufficient to look at the institutionalized dimension. Relationships and stories involving people playing institutionalized roles should be taken into account too. Actually, subjective factors involved in communicative practices are really relevant especially because “Such stories may also turn out to influence the institutional dimension” (Rigotti & Rocci 2006, pp. 174).

Interpersonal aspects are more difficult to grasp because in general they are not explicit. In this way, in order to elicit relevant elements from the interpersonal dimension

of the E-TEC IFPA communication context we asked teachers, tutors about the lack of online interactions on Moodle, especially those via chats and forums.

Knowing that one of the most critical success factors for e-learning acceptance and implementation is instructor's attitude towards interactive learning and teaching via online technologies (Freedman, Tello & Lewis, 2003; Selim, 2007), we asked teachers and tutors why they were not planning and implementing online activities on Moodle like chats and forums to interact with students.

The most frequent answers from teachers are: a) problems with technological infrastructure in telecenters do not allow students to participate in synchronous activities like chats and web conferences; b) inexistence of documents or instructions defining that they do have to use these online educational resources (chat, forum etc.) in the development of the courses; c) the engagement of students is inexpressive in terms of quantity and quality when chats and forums are proposed; d) the communication with students via forum and chats are not teachers' attribution of teachers, but of tutors.

Tutors, in turn, rapidly dodged the question by saying that their profile on Moodle does not allow to create chats and forums hence such resources should be implemented by teachers. Furthermore, according to tutors, problems with technological infrastructure in telecenters like interruptions of internet access hinder the use of these online tools.

Finally, asking students why they do not effectively interact with teachers and tutors participating in chats and forums, they mentioned: a) prolonged interruptions of internet signal; b) many of them cannot go to a telecenter frequently; c) many of them revealed a deliberate refusal to engage in online interactions, instead they prefer to ask questions and clear doubts while attending face-to-face classes at telecenters; d) there is no motivation to participate specially in online forums since teachers and tutors rarely give feedback for questions, doubts and assignments.

First of all, taking into account what is said by actual subjects playing communication roles involved in the interactions schemes of teaching and tutoring, we can say that problems with the technological infrastructure are at the base level of a *hierarchy of communication barriers* in distance education: nothing else matters if

communication cannot be established (Berge, 2013). For what we propose in this paper, this situation will not be considered since it is not rhetorical. Furthermore, these problems do not really prevent the development of the courses. What really is at issue is the fact that the lack of online interactions persist even if the technological infrastructure is functional.

The actual rhetorical exigences to be tackled are those related to beliefs and attitudes of teachers, tutors and students which impact on the acceptance (Selim, 2007; Kim, 2008) and the effectiveness of distance learning (Webster & Hackley, 1997; Kenski, 2003). According to what they said, the lack of interactions is a situation which entails at least: a) no interest in implementing and participate in chat and forums; confusion on roles of teachers and tutors; and misconception about distance learning.

In order to solve the lack of interest in creating chats and forums, an argumentative discourse should be addressed to teachers. They are the fitting audience of this situation since teachers are responsible for planning their courses/subjects according to ministerial documents defining E-TEC social roles and outlining their attributions, rights, duties. Bitzer (1968) do not talk about a fitting rhetor for a given rhetorical situation but we can say that Course Coordinators and the Program Coordinator are those capable of constraint teachers' actions towards the implementation of chats and forums in E-TEC IFPA courses. Besides the coordinators, the mentioned ministerial documents, and teachers' working contracts are constraints to be taken into consideration in order to modify the situation. In addition, successful experiences of a few E-TEC IFPA teachers in adopting these online interaction tools should be used as arguments to change reluctant teachers' beliefs and attitudes. Certainly, there are also lots of arguments from different points of view in the extensive research and literature showing the importance of such online interaction resources to distance learning.

The confusion on roles of teacher and tutor is undoubtedly an exigence which arises from the interpersonal dimension of E-TEC IFPA communication context. Broadly, in the context of the Program, tutors are meant to help teachers in the development of the courses. In practice, however, many tutors become the very teachers of the courses because actual teachers usually and conveniently delegate their work to tutors. In this case, shared experiences and relationships influences the institutionalized dimension in a way that

shared goals and mutual commitments of an interaction field could be at risk – it is a typical case of agency relationship. In order to solve this confusion, the Program Coordinator should address a discourse to both teachers and tutors based on what is established on those ministerial documents concerning rights, duties and attributions of social roles created to support the Program - legal established penalties could be also considered if necessary.

Finally, students' answers and attitudes show there is a shared misconceived idea of distance learning in the communal common ground (Clark, 1996) of E-TEC IFPA community. Actually, what we observe is that students are not really conscious of this way of teaching and learning. They are enrolled in E-TEC IFPA courses just because there is no other possibility to attend a “traditional” on-site course where they live. Thus, first and foremost it is necessary to construct a discourse capable of leading them to understand the nature and the characteristics of distance learning. Without a clear idea of distance learning will be difficult to students to really accept and engage in the courses (Dabaj & İşman, 2004; Riaz, Riaz & Hussain, 2011). Here, explanatory, motivational and argumentative discourses from multiple rhetors – coordinators, teachers and tutors – may be the better strategy to change students' beliefs and attitudes concerning distance learning. Moreover, one should not forget that E-TEC IFPA students' acceptance of distance learning also relies on the solution of the two other situations mentioned above.

6 Concluding remarks

What we have proposed in this paper is an approach aimed at better understanding and analyzing rhetorical situations with the help of a model of communication context.

This is a first attempt to combine Bitzer's conception of rhetorical situation and Rigotti and Rocci's model of social communication context. Putting them together seems to be insightful to better analyzing those kinds of situations involving communication problems which can be changed by means of rhetorical discourse. Undoubtedly, it will be necessary some more work in order to refine and enrich this approach in a more systematic way.

In this paper we proposed to deal with the lack of online/instructional interactions observed in E-TEC IFPA communication context. We found three main exigencies to be tackled in order to solve this communication problem: a) no interest of teachers in implementing and participate in chat and forums; confusion on roles of teachers and tutors; and a shared misconceived idea about distance learning. For selecting fitting audiences and relevant constraints, Rigotti and Rocci's model revealed to be a handy tool.

It remains to be proposed a method to construct argumentative discourses based on the presented approach, which reveals its usefulness in eliciting relevant institutionalized and interpersonal elements that a rhetor should be aware of in order to construct an adequate responsive discourse intended to change beliefs and attitudes.

(PAPER 4 - integration study) INTERACTIVITY IN THE BRAZILIAN EDUCATIONAL CONTEXT ACROSS THE COVID-19 PANDEMIC⁶³

1. Introduction

This paper is specifically aimed at filling the gap between the previous studies and findings of my PhD research carried out from 2008 to 2014 and the more recent period since the research was resumed in 2021. In this way, it is necessary to verify whether research questions, authors, theoretical perspectives, methods, collected data (corpus) and findings are still valid, and it can represent a current and relevant contribution to the knowledge area in which the research are inserted (COWTON, 2019), i.e, Communication Sciences, more specifically computer aided discourse analysis, argumentation, and cultural keywords.

The central research question of the PhD aims to answer whether the word *interactivity* is a cultural keyword of the so-called cyberculture, that is, the cultural and social arrangement markedly characterized by the presence and use of most varied computing devices⁶⁴. Once cultural keywords are words revealing the common ground of a certain community, the research also investigates which values and beliefs related to *interactivity* are evoked from ordinary discourse.

To answer those research questions, basically, the theoretical and methodological approaches applied was based: first, on a “test procedure” proposed by Rigotti and Rocci (2005) to verify whether a certain word can be considered a cultural keyword, looking at the role it plays in arguments; second, on the Argument Model of Topics (AMT), which is the result of a broad and extensive research on inference in argumentation

⁶³ This integration study is intended to be submitted to a journal for publication at the earliest opportunity.

⁶⁴ Here, cyberculture is not only understood in connection to digital/virtual environments but as a sort of *esprit du temps*, encompassing ideas, values, and behaviors that plays a significant role in shaping the dominating cultural and social trends of the last three or four decades.

(Rigotti & Greco, 2019)⁶⁵. The AMT has been particularly helpful to reveal the common ground (opinions, values, beliefs) of a community by reconstructing argumentative moves.

The research conducted thus far has relied on the ordinary use of the term *interactivity/interactive* found in argumentative texts. Thus, the work has been carried out based on a corpus constructed from texts in which *interactive* is used as an argument to support different standpoints. In the corpus construction process, texts were collected using the argumentative indicator *because* and the search terms *because it is interactive* and *because it is not interactive*.

The work that has been undertaken has resulted in the following main findings:

- *Interactivity* can be considered a cultural keyword in the context of cyberculture.
- *Interactivity* is polysemous and vague in terms of denotation, nonetheless it presents a persistent positive connotation across its use.
- People mostly think of *interactivity* in terms of efficient cause, emphasizing gains or benefits.

After presenting the work conducted in the previous period of the research, it is necessary to ascertain whether the word *interactivity* remains relevant and can still be considered a cultural keyword within cyberculture, given that the current social and cultural landscape is increasingly characterized by the widespread use of computing devices across various contexts of human experience.⁶⁶ For this new phase of the research, the educational challenges posed by the COVID-19 pandemic have emerged as a significant investigative opportunity. The global pandemic and the resulting social isolation have compelled people worldwide to engage in online activities for studying, working, talking to relatives and friends, having some entertainment, among other activities.

⁶⁵ Rigotti and Greco emphasize the effective collaboration of other colleagues from the Institute of Argumentation, Linguistics and Semiotics (IALS), at the Università della Svizzera Italiana (USI, in Lugano-Switzerland) in the development of AMT, especially Rocci and Palmieri.

⁶⁶ The concept of cyberculture remains relevant today, reflecting the ubiquitous role of digital technologies across nearly all spheres of contemporary life. It continues to provide a valuable framework for understanding how information technologies influence and shape social practices and interactions, underscoring that objects, procedures, and socially relevant processes depend, to some extent, on these digital technologies (Trivinho, 2001).

Exploiting the opportunities offered by my professional position⁶⁷, I chose to focus this new phase of research on investigating whether *interactivity* can be regarded as a cultural keyword related to education in the Brazilian pandemic context, as well as to uncover the common values and opinions it invokes in this specific scenario.

In this way, to achieve these goals, this new phase will be carried out based on a new corpus, which will be constructed by searching for *interactivity/interactive* in texts related to the Brazilian educational scenario across the COVID-19 pandemic.

2. Constructing the corpus

The construction of the corpus for this study can be compared to a snowball sampling, a non-probability method commonly employed in sociology and anthropology to collect data from subjects belonging to subsets of the population that are challenging for researchers to access, such as hidden communities or marginalized groups. Once one or few participants of a given research are known and accessible, they are asked to recommend other potential participants who fit the study criteria. This process continues iteratively, with each new participant recommending additional participants, resulting in the sample group growing like a snowball rolling downhill.

Here, the concept of a snowball sampling has been adapted to construct a corpus consisting of texts in which the words *interactivity* or *interactive* are associated with education in the Brazilian pandemic context, which is this paper's focus. Rather than conducting interviews with individuals, an initial set of texts was identified, which, in turn, led to the discovery of new texts and so forth.

Given that the previous research period utilized corpora comprised of English texts, I have chosen to initiate the construction of an updated corpus with the assistance of English-Corpora.org⁶⁸, one of the most widely used online corpora systems in the academic context. After identifying some relevant words and expressions linking *interactivity* and *interactive* to education, the second step involves using what has been

⁶⁷ I teach at the Federal Institute for Education, Science and Technology of Pará in Belém, Brazil, where I headed the Center for Distance Education Technologies, including the COVID-19 pandemic period.

⁶⁸ <https://www.english-corpora.org>.

found on English-Corpora.org to discover and collect from the Web some Portuguese texts in which the investigated words are related to education in the Brazilian pandemic scenario.

For the first step on English-Corpora.org, the research focuses on the two most extensive online corpora available, covering the period from 2014. These include the Corpus of Contemporary American English (COCA, 1990-2019) and the News on the Web (NOW, 2010-2022). Hence, by searching for occurrences of *interactivity* and *interactive* on both corpora and examining their word pages⁶⁹ it became possible to identify topics, collocates, and clusters related to education. As explained by English-Corpora.org: a) collocates display words occurring in proximity to a specific node-word, considering a span of 3 or 4 words to the left or to the right; b) clusters indicate the most common 2, 3 and 4 word strings; c) topics reveal words that co-occur anywhere in a given text, providing a better sense of the related words and concepts one is seeking.⁷⁰

Before presenting some data found on the word pages of *interactivity* and *interactive*, it is significant for this paper note that the text genre “academy” contains the highest number of tokens for both words in comparison to other genres such as news, magazines, media, etc. This suggests an ongoing interest in interactivity as a research subject within the academic domain.⁷¹

Therefore, the word pages of *interactivity* and *interactive* expose the following most relevant information related to educational context:⁷²

⁶⁹ Word pages are web pages resulting from searches on English-Corpora.org, providing an overview of specific words, including definitions, topics, collocates, clusters, and concordance lines, for example.

⁷⁰ English-Corpora.org claims to be the only corpora to provide topics and presents its method to find them: “For each of the texts in the corpus (22+ million web pages for iWeb, and ~500,000 texts for COCA), we found the words that occurred at least two times in the text/webpage, and which had a “normalized” frequency at least 20 times that of the entire corpus. This would typically eliminate most high frequency words or function words.”

⁷¹ Instigated by this information even if the focus of our research is not specifically academic texts nor a quantitative approach, a simple research without any refinement on Google Scholar searching for “interactivity + pandemic” resulted in approximately 17,300 occurrences, and in Portuguese “interatividade + pandemia” resulted in approximately 16,000 occurrences.

⁷² *Interactivity* COCA word page (<https://www.english-corpora.org/coca/?c=coca&q=94988401>); *interactivity* NOW word page (<https://www.english-corpora.org/coca/?c=coca&q=94988424>); *interactive* COCA word page (<https://www.english-corpora.org/coca/?c=coca&q=94988424>); *interactive* NOW word page (<https://www.english-corpora.org/iweb/?c=iweb&q=94988412>).

Words/Expressions	Types	Corpora
Learning	Topic, collocate	COCA, NOW
Classroom	Topic	COCA
Learner	Topic	COCA, NOW
Student	Topic	COCA
Teacher	Topic	NOW
Lesson	Topic	NOW
Course	Topic	NOW
Educational	Topic, collocate	COCA, NOW
Interactive learning	Cluster, collocate	COCA, NOW
Interactive learning environment	Cluster	NOW
Interactive learning experience	Cluster	NOW
Interactive and educational	Cluster	NOW
Interactive way to learn	Cluster	NOW

Table 3: Collocates, topics and clusters related to interactivity/interactive on the corpora COCA and NOW.

By using these specified words and expressions, a translation into Portuguese was undertaken to collect texts from the web. These translated terms were integrated into keywords such as *interativo/a* (*interactive*), *interatividade* (*interactivity*), *pandemia* (*pandemic*), and *COVID* forming queries that were strategically applied to gather pertinent texts for the research. The details of these keywords and their translations are presented in Table 4.

English	Portuguese	Examples of Portuguese queries used on search engines
Learning	Aprendizagem	Aprendizagem + interativa + pandemia/COVID
Classroom	Sala de aula	Sala de aula + interatividade + pandemia/COVID
Learner	Aprendente	Aprendente + interativo + pandemia /COVID
Student	Estudante/aluno(a)	Aluna + interatividade + pandemia /COVID
Teacher	Professor(a)	Professor + interativo + pandemia /COVID
Lesson	Aula	Aula + interativa + pandemia /COVID
Course	Curso	Curso + interatividade + pandemia /COVID
Educational	Educacional	Educacional + interativo + pandemia /COVID
Interactive learning	Aprendizagem interativa	“Aprendizagem interativa” + pandemia /COVID

Interactive learning environment	Ambiente de aprendizagem interativo	“Ambiente de aprendizagem interativo” + pandemia /COVID
Interactive learning experience	Experiência de aprendizagem interativa	“Experiência de aprendizagem interativa” + pandemia /COVID
Interactive and educational	Interativo(a) e educacional	“Interativo e educacional” + pandemia /COVID
Interactive way to learn	Jeito/forma/modo interativo(a) de aprender	“Jeito/forma/modo interativo/a de aprender” + pandemia /COVID

Table 4: Examples of queries used to collect texts from the web.

Utilizing these queries, dozens of texts were gathered from various sources on the web through search engines like Google and Duck Duck Go.⁷³ These texts were then consolidated into a single file, forming the working corpus. Following that, a cleaning process was performed on this file to remove elements such as advertisements, links, and other irrelevant information ensuring that the corpus retained pertinent content. Duplicate texts were also removed. As a result of this clean process, a total of 53 texts emerged as the final dataset, distributed across different categories: 18 from news websites, 17 from blogs, 14 from social media, and 4 from commercial webpages.

The subsequent sections present information and insights, comprising key findings, trends, and patterns, derived from this dataset, shedding light on the uses of *interactivity* within the Brazilian educational context during the COVID-19 pandemic.

3. Interactivity: conceptual and emotive meanings

In this section, we will explore the meanings of the keyword *interactive* across the corpus. Since this integration study marks a continuation and expansion of a previous research, we will reapply the same semantic analysis techniques rooted in Congruity Theory used before.⁷⁴ To provide a succinct summary:

- A content word, in our case "interactive," is analyzed in terms of predicates.

⁷³ While Google was chosen for being the leader in terms of coverage of indexed online sources, DuckDuckGo was complementarily used for its characteristics of privacy, providing a search experience free from tracking and personalized results, leading to potentially unbiased information retrieval.

⁷⁴ See Rocci and Monteiro (2009).

- A predicate is a lexical unit that expresses an action, state, or relation to be filled by *semantic actants* (arguments) (Mel'čuk 2004).
- The semantic actants are the elements involved in the action, state, or relation expressed by the predicates.
- Predicates also predefine the number and the semantic types of their possible actants.
- Predicates impose presuppositional conditions on their actant slots, meaning that certain semantic requirements or conditions must be satisfied for these slots to be appropriately filled.
- If these conditions are not satisfied by the filler of the slot an incongruity arises.

The preceding work, which relied on a corpus with 100 occurrences extracted from the British National Corpus, produced the following findings (Rocci & Monteiro, 2009, p. 86):

In all the occurrences reviewed, *interactive* selects only one actant, i.e. it is always a one place predicate – which we can write as INTERACTIVE (x_1). In the broader scene other participants (e.g. *subjects, objects, visitors, hair* etc.) can be named and are even obligatorily conceptually present, but the narrow actancial frame of the predicate either spotlights only one participant (*brain, computer terminal*) or takes the whole situation as its actant (*process, drama*). Thus we can distinguish two broad classes of actant frames:

(a) x_1 = individual

(b) x_1 = process / system

Considering the corpus occurrences, we observed distinct content filling both actants frames (a) and (b), including examples such as media, computer terminals, brain, drama, and communication systems, among others. This observation led us to categorize (a) and (b) into five distinct and complementary actant frames.

(a.1) x_1 = technological element, capable of exchanging information

(a.2) x_1 = non-technological element, capable of exchanging information

(a.3) x_1 = non-technological element, not capable of exchanging information

(b.1) x_1 = technological information exchange process/system

(b.2) x_1 = non-technological information exchange process/system.

These actant frames strongly suggest the word *interactive* is polysemous. Polysemy occurs when a single word has multiple senses or meanings, and in the case of *interactive*, the actants slots involve different and incompatible requirements to be filled, such as technological element, non-technological element, process or system, and capability of exchanging information or not.

Considering this, we will examine the usages and meanings of *interactive* within the specific corpus elaborated for this study, aiming to get eventual additional insights into the varied ways the term is employed in our text collection. This analysis will enhance the comprehension of its role in educational discourse within the context of the COVID-19 pandemic.

For this investigation, AntConc⁷⁵ will assist in revealing how often the word *interactive* appears in the corpus and in identifying the words that frequently co-occur with it. Following this, we will apply the Congruity Theory technique to determine whether a comparable polysemy arises, and if so, how it aligns with the earlier findings.

AntConc reveals 106 occurrences (hits) of *interactive*, making it the sixth most frequently word in the corpus,⁷⁶ along with the most frequent and relevant collocates presented in Table 5 and obtained through a search using a span of three words to the left (3L) and none to the right (0R). This span is explained by considering, first, the actant frames observed in the previous research and, second, the fact that in Portuguese, nouns precede adjectives. Consequently, the relevant content to fill the actant slots required by the adjective *interactive* is located on the left. Finally, it is noteworthy that some words like *classroom* are translated into Portuguese using three words (*sala de aula*).

⁷⁵ AntConc is a widely used software in text analysis and corpus linguistics research. It is helpful to gain insights into language usage, patterns, and trends within a given body of text. For more details, AntConc is available at <https://www.laurenceanthony.net/software/antconc>.

⁷⁶ After *student(s)* (283), *education* (209), *teacher(s)* (186), *class(es)* (177), and *learning* (138). Surprisingly, *pandemic* came in eighth place with 81 occurrences. An adaptation had to be made in the statistics since, for example, in English, variations in gender and number in Portuguese, especially for adjectives, are often translated into a single word. Therefore, *interactive* (adjective) corresponds to *interativo(a)(os)(as)*, and *teacher* (noun) corresponds to *professor(a)(es)(as)* and so forth.

Collocates (Portuguese)	Collocates (English)	Frequency
Aprendizagem	Learning	19
Tecnologia(s)	Technology(ies)	15
Tela(s)s	Screen(s)	11
Experiência	Experience	7
Plataforma ⁷⁷	Platform	5
Jogos	Games	4
Vídeos	Video	4
Aulas	Lessons	4
Atividades	Activities	3
Sala de aula	Classroom	2

Table 5: Collocates co-occurring with *interactive*.

Certainly, some of these collocates (e.g. learning, classes, experience, classroom) were expected, as they were part of the queries used to find texts for the working corpus (see Table 4). Beyond these anticipated findings, we now present ten representative occurrences of these words co-occurring with *interactive* for further exploration.

- (1) In such contexts (homeschooling), **interactive technology** is a valuable learning resource for children and their educators.
- (2) With **games and interactive screens**, technology contributes to a more complete teaching journey in distance education.
- (3) Augmented reality technology has become popular in schools because of the **interactive experience** it adds to education.
- (4) Within our interdisciplinary educational projects, the use of **interactive learning** provides greater engagement and communication, thereby promoting significant exchange.
- (5) Increasing online learning through **interactive activities** will result in a more enjoyable and diverse way to receive education.
- (6) My teacher created an **interactive classroom**, and I found it to be the cutest thing in the world.

⁷⁷ In the Brazilian context, *ambiente de aprendizagem*, which translates to *learning management system* (LMS) in English, is also referred to as *plataforma* (*platform*). LMS appears 3 times, and *platform* occurs 2 times. Therefore, we have preferred to use the single term *platform*, totaling 5 occurrences.

- (7) This provides an opportunity for technology companies to look beyond educational materials and offer **interactive platforms** that children can use to socialize with their peers during breaks between classes.
- (8) Human beings have always produced images as a means of expressing concepts, ideas, and other aspects of daily life. From cave art to **interactive videos**, images have been a significant help in transmitting ideas and knowledge.
- (9) The urgency is to prepare **interactive lessons**, create teaching methods that maintain concentration, and ensure learning.
- (10) To implement learning and engage students, I provide them diverse activities, such as music and **interactive games**, for example.

The new corpus reveals that *interactive* is a predicate, narrowly selecting only one actant slot – INTERACTIVE (X_1) – aligned with the earlier study. However, when examining the content filling the slots, there are not only similarities but also differences.

Similar to the previous findings, the actant slot X_1 should be distinguished, but the new corpus suggests specifications in the actant frames (a) and (b) as well as the addition of third actant frame (c):

- (a) x_1 = digital element.
- (b) x_1 = educational digital process/system.
- (c) x_1 = educational digital activity/experience.

Contrary to the split of these primary frames into complementary ones (a.1, a.2, a.3, b.1, b.2), considering the new corpus, there is no need for this additional separation. The *interactive* actant frames (a), (b) and (c) are sufficient to represent the semantic types for the possible actants it selects, possibly because the corpus refers to a specific context where digital technologies are prominent. Therefore, *interactive* is not readily associated with non-technological elements, processes, or experiences, differing from the previous study, in which occurrences like “interactive brain” or “interactive drama” were found in the corpus (Rocci & Monteiro, 2009, pp. 85-86).

Observing the presuppositional conditions imposed on the actant slots, in the frame (a), X_1 refers to some technology (hardware, software or media) designed to provide interaction and engagement with users (technology, screens, videos, games, platform); in (b), X_1 is a process in the field of education that incorporates digital technology to teach and/or learn, (learning, lessons); and in (c), X_1 corresponds to activities or experiences in which participants make use of educational digital technologies.

Interestingly, the outcome from the ordinary discourse aligns with the extensive literature review carried out by McMillan (2002), in which she identified three broad approaches conceiving interactivity as: a medium property, an exchange process, or the result of a perceptual experience.

In terms of polysemy, the new corpus suggests that it persists when compared to the earlier research. The conditions for fulfilling the actant slot X_1 are distinct and incompatible across the three frames. This is easily observed by applying the zeugma test (Cruse, 2000), which helps reveal instances where a single word is polysemous and manifests different predicates. The test consists of examining whether a word can be associated with more than one element in a sentence, even when those elements have differing semantic requirements, while still maintaining coherence. Consider, for example, *interactive learning* and *interactive screens*:

(11) *At our school, both the learning method and the screens are interactive.

In (11), an incongruity arises because the semantic requirements for being interactive in the context of “learning method” might differ from the requirements for being interactive in the context of “screens”. This suggests that *interactive* may have different meanings when applied to different elements, indicating its polysemy in the given context.

The earlier study revealed “that not only is the word interactive polysemous and that it selects fairly incompatible actant frames, but also that, within each frame the predicate expressed is scalar and vague” (Rocci & Monteiro, 2009, p.88). This is because “in each of the frames outlined above [a.1, a.2, a.3, b.1, b.2], it is very difficult to sort out

what are the necessary and sufficient conditions for interactive to be predicated truly” (Rocci & Monteiro, 2009, p.87).

Comparing to the challenge identified in the earlier corpus, analyzing the term *interactive* in the specific context of Brazilian education across the pandemic period appears to be less difficult. It seems that the necessary condition for the accurate use of *interactive* are somehow associated with an educational context where digital technologies are employed. In this sense, *interactive* could be considered less scalar in this specific context. Nevertheless, the referred association is quite readily and superficial and does not indicate the sufficient criteria for attributing interactivity to a digital element, process/system or activity/experience. The vagueness may stem from the diverse ways in which individuals interpret and understand interactivity in the investigated educational context.

If, on the one hand, Congruity Theory sheds light on the conceptual and representational meaning of the word *interactive*, specifically its denotation, on the other hand, there is a secondary, evaluative aspect – its connotation – that might be explored. This aspect aligns with what Stevenson (1937) refers to “emotive meaning”, indicating that certain words or expressions carry an inherent evaluative component, expressing the speaker's emotions, attitudes or approvals. These two perspectives allow for a more comprehensive understanding of the overall meaning of *interactive/interactivity*.

Examining occurrences (1) to (10), it becomes evident that, for example, adjectives (valuable, popular, significant, cute) and verbs (to contribute, to add, to promote, to engage) convey a positive value surrounding the term *interactive*. Indeed, Stubbs (1996) proposes that “cultural connotations” of keywords could be grasped observing their collocates. By studying recurring collocation patterns, it is possible to uncover positive or negative “semantic prosodies” related to a word, offering insights of its evaluative meanings.

Expanding the investigation to the entire corpus and searching for collocates within a larger span of ten words to the left (10L) and ten to the right (10R), the positive semantic prosody related to *interactive* becomes even more evident as confirmed by the adjectives and verbs found in the corpus:

- Adjectives: important, fun, fundamental, innovative, collaborative, dynamic, efficient, high, intelligent, interesting.
- Verbs: to facilitate, to benefit, to enhance, to provide, to help, to optimize, to stimulate, to aggregate, to involve, to allow, to create, to develop.

Therefore, the current working corpus basically highlights the same outcome as the previous research. While *interactive* is polysemous and vague in terms of denotation (conceptual meaning), in terms of connotation (emotive meaning), it consistently presents a positive evaluation across its usage. Due to the context of the current investigation, there appears to be a specification regarding the necessary conditions to label something as interactive. An element, a process/system, or an experience/activity must be connected to the use of digital technologies in education. However, this condition is still not sufficient to clearly define what interactivity means as a quality attributed to something.

Building on the previous research and expecting to open new perspectives and discover new results, the investigation of how *interactive* is used argumentatively can give a better comprehension on the intended meaning when individuals think of interactivity.

4. Interactivity: a cultural keyword in education

The concept of a keyword can be understood through the metaphor of a key. Words act as keys, providing access to a body of knowledge associated with a specific community or even an entire culture. In this sense, keywords serve as gateways to understand the shared values and beliefs of a given cultural context.

The previous study indicated that *interactivity* could be considered a cultural keyword. Now, it will be examined whether this remains true, but with a specific focus on the context of Brazilian education across the COVID-19 pandemic.

There is a long tradition of studies on cultural keywords, with notable contributions from scholars such as Raymond Williams in the field of historical semantics, Anna Wierzbicka in lexical semantics, and Michael Stubbs in corpus linguistics. Despite the importance of their works, these authors do not provide a specific and objective method

to determine whether a word can assume the status of a cultural keyword within a community.⁷⁸

Thus, for this specific verification, we will follow a theoretical and methodological perspective already adopted in the previous work, which is proposed by Rigotti and Rocci (2005). They suggest a testing procedure to help in identifying whether a particular word can be considered a cultural keyword. Their approach involves looking at the role played by a candidate word in arguments, and the reconstruction of natural language arguments in accordance with the Aristotelian tradition concerning enthymematic syllogisms. In this type of syllogism premises can remain implicit, given their familiarity and the ease with which they can be promptly inferred. Moreover, these unstated premises are what Aristotle refers to as *endoxa*, representing culturally shared values and beliefs commonly accepted within a specific community.

We propose to consider as serious candidates to the status of cultural keywords the words that play the role of *terminus medius* in an enthymematic argument, functioning at the same time as pointers to an *endoxon* or constellation of *endoxa* that are used directly or indirectly to supply an unstated major premise. (Rigotti & Rocci, 2005, p.131)

Even before applying the referred testing procedure, it is worth to say that the vagueness in the use of *interactive*, to some extent, may suggest its status as a cultural keyword. Terms with unclear or multiple meanings can be rooted in a culture in a way that they are employed as a shared value, as if their significance is universally understood, eliminating the need for further clarifications. Additionally, cultural keywords typically carry an emotive meaning, endowing them with a persuasive power when utilized. This is the case for *interactivity*.

Let's apply Rigotti and Rocci's testing procedure to analyze the following occurrence from the working corpus:

- (12) Augmented reality technology has become popular in schools because of the interactive experience it adds to education.

⁷⁸ Williams (1976), for instance, says that the words he investigated as cultural keywords has “virtually forced” themselves on his attention while investigating some arguments. Wierzbicka (1997), in turn, claims that “there is no objective discovery procedure for identifying keywords in a culture.

In this example, *because* serves as an argumentative indicator, point out an ongoing argumentation, while the term *interactive* is employed as the very argument. Reconstructing the enthymematic syllogism, we have:

Major premise: Technologies that provide **interactivity** are likely to become popular (unstated).

Minor premise: Augmented reality technology adds **interactive experience** to education.

Conclusion: Augmented reality technology has become popular in schools.

Observing the role played by *interactive/interactivity*, it functions as the *terminus medius* of the syllogistic structure, linking the minor and the major premises, and giving the logical consistence to the conclusion. At the same time, *interactive* is the trigger that makes possible to recover the major premise, which is indeed an *endoxon* (shared acceptable value), otherwise, reaching the conclusion would not be possible.

Thus, since all the elements are present and all conditions have been met for *interactivity* according to Rigotti's proposal, it might be the case to consider it a cultural keyword. This hypothesis becomes more reasonable insofar as other occurrences in the corpus can be reconstructed through a similar inferential structure. In fact, the same inferential structure is observed across the corpus, including the interesting example (13), where something is argued against for not being interactive, confirming the positive connotation of *interactivity*.

(13) The lesson should not be a reproduction of an old paradigm. It cannot be a transposition from the whiteboard to video conferencing. Especially because no one has patience to participate in long-lasting non-interactive activities anymore.

Major premise: Long-lasting **non-interactive** activities are not desirable (unstated).

Minor premise: No one has patience to participate in long-lasting **non-interactive** activities anymore.

Conclusion: The lesson should not be a reproduction of an old paradigm.

4. Examining arguments to gain insight into culture

Bearing in mind that *endoxa* are common opinion “which commend themselves to all, or to the majority, or to the wise” (Aristotle, 1960), or in other words, they are widely accepted values and beliefs belonging to the extensive knowledge of a given community, in the previous phase of the research, I suggested that:

[...] the retrieval of *endoxa*, by means of cultural keywords, from a relevant corpus is a feasible methodological strategy to gain insights into a given cultural community. Collecting *endoxa* activated by a certain keyword leads to discover – or at least to make explicit – what people think about the keyword itself and provide some clues to better understand the community it represents. (Monteiro, 2014a, p. 368).

Given that, some *endoxa* regarding interactivity were uncovered from the texts of the earlier corpus, and they were also analyzed. The analysis was assisted by the Argumentum Model of Topics – AMT, “a theoretical and methodological tool to analyze the inferential configuration of arguments” (Rigotti & Greco, 2019, vii), providing elements to hypothesize a meta-discourse on interactivity based on the values and beliefs extracted from the investigated texts.

Interactivity is a property or a quality attributed to a vast assortment of new technologies (including hardware, software, Internet etc) that in one way or another is said: 1) to provide advantages in view of more effective results as regard to working, domestic or entertaining activities; 2) and to elicit feelings of interest, excitement and satisfaction from these activities, which most times are compared with the use of or experiences with, so to say, “traditional” media (like paper books, radio, TV etc). (Monteiro, 2014a, p. 372).

This comprehension stems from identifying values and beliefs (*endoxa*) that were not explicit in the analyzed texts but were inferred from the cultural and discursive context in which occurrences of *interactivity* were identified. The understanding is also attributed to the bases on which people ground their argumentative reasoning involving a certain *endoxon*, namely arguments from efficient cause. Additionally, it is important to note that the corpus was constructed with texts in which *interactivity* acts as an argument to support varied standpoints.

Examining more closely the Brazilian educational context during the COVID-19 pandemic, we note that *interactivity* emerges not only as an argument, as seen in occurrences (12) and (13), but also as a standpoint or part of a standpoint.

First, it is worth noting that in several occurrences, such as (14) and (15), the standpoint containing *interactive* are not followed by any argument to defend it.

(14) In the context of homeschooling, interactive technology is a valuable learning resource for children and their educators.

(15) Blog is an educational and interactive resource that enables students to study English in a more interesting way.

The sufficiency in the use of the term *interactive* in (14) and (15) also suggests the existence of that shared set of knowledge, beliefs, and assumptions, described by the Aristotelian conception of *endoxa*. The speaker assumes that the audience will share an understanding of what constitutes “interactive technology” (14) or why “interactivity enables a more interesting way of studying” (15), allowing them to fill in the details by their own. This is also aligned with Clark’s (1996) notion of “communal common ground”, who highlights the importance of this shared knowledge for successful communication. In this sense, *interactive* becomes a key to open a body of associated ideas, beliefs, and values within the educational context on focus. Not by chance, the observed sufficiency corroborates its presumed status of cultural keyword.

Beyond these instances, there are other occurrences where arguments supporting a standpoint that includes *interactivity* may offer additional insights into the reasons for its use. Let's consider the following example, extracted from a blog article where, at a certain point, the author discusses the benefits of interactive learning technology.

(16) With the help of interactive online learning children can have exciting educational opportunities at home.

Considering the argumentation at work, the AMT will be of help to investigate the inferential relations between the standpoint and the argument, as graphically shown in Figure 5.

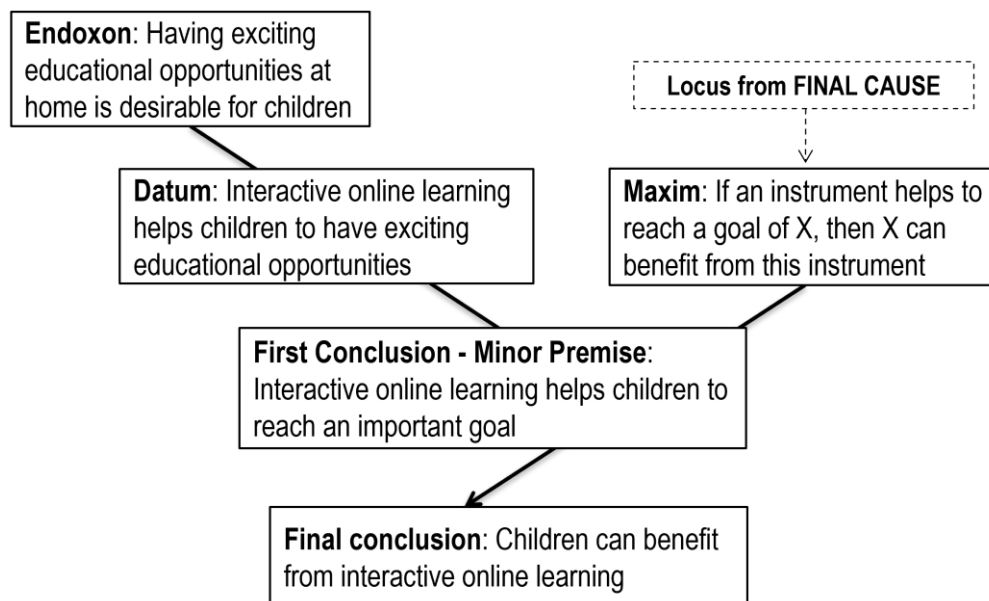


Figure 5: Example (16) reconstructed by AMT.

Figure 5 presents an intertwined syllogism, where the right side corresponds to the procedural-inferential (topical) component, based on a *Maxim*, and the left side, based on an *endoxon*, refers to the material-contextual (cultural) component. Rigotti and Greco (2019) warn that in argumentative moves, logical coherence is necessary but not necessarily sufficient for constructing sound and successful arguments. Thus, while the topical component ensures inferential consistency, the endoxical dimension contributes to the persuasive effectiveness of the argumentative reasoning (Rigotti & Greco, 2019).

When reconstructing arguments using AMT, the authors recommend starting by identifying the *Locus* from which the *Maxim* is selected. Anchored in the studying tradition of Topics, Rigotti and Greco (2019) explain that *Locus* is an ontological relation such as cause-effect, whole-parts, etc., that generates general laws forming the foundation for arguments. In (16), as the argumentation aims to emphasize the beneficial finality of the interactive online learning, the *Locus from final cause* is the suitable source, and it gives rise to the *Maxim* “*If an instrument helps to reach a goal of X, then X can benefit from this instrument*”, corresponding to a modus ponens ($p \rightarrow q$) inferential principle.

Now, the standpoint “*Children can benefit from interactive online learning*” must be placed in the *Final Conclusion* box, as the whole inference endpoint. After that, the

Minor Premise of the right-side syllogism must be filled providing the logical consistency of the topical component. In the investigated case, this *Minor Premise* is “*Interactive online learning helps children to reach an important goal*”, and it is exactly the intersection point between the inferential-procedural and the material-contextual components, ensuring that the general *Maxim* is associated with the cultural context, giving to the argument both logical consistency and cultural persuasion.

Finally, *Endoxon* and *Datum* must be filled shaping the cultural component of the entire inferential structure. While the *Endoxon* (*Having exciting educational opportunities at home is desirable for children*) is a general premise belonging to the common ground of the interlocutors – in this case the author and its potential audience –, the *Datum* (*Interactive online learning helps children to have exciting educational opportunities*) refers to the factual element, a “piece of specific evidence” (Rigotti & Greco, 2019, p. 217).

The in-depth analysis provided by AMT gives a comprehensive understanding of how the argument in sentence (16) is related to the broader discussion on the benefits of interactive learning technology. It details the author’s reasoning while claiming that interactivity can offer exciting educational opportunities, specifically for children. In essence, the argument suggests that children gain advantages or positive outcomes from participating in interactive online learning, emphasizing the finality of interactivity in this case.

The reconstruction of the whole inferential structure illustrates the interplay between the inferential-procedural and material-contextual components, ensuring both logical consistency and cultural persuasion in constructing the argument. The topical dimension is grounded on a *Maxim* derived from the *Locus from final cause*, emphasizing the instrumental value of interactive online learning. At the same time, the cultural component highlights the author’s probable intention to convince the audience by appealing to their common values and beliefs about the desirability of exciting educational opportunities for children at home.

Examining the corpus related to the Brazilian educational context during the COVID-19 pandemic, other occurrences, such as (16), could be analyzed, resulting in a

similar line of reasoning based on arguments from final cause that reveal various finalities attributed to interactivity, like the following:

- To immerse students in the familiar classroom atmosphere without leaving home.
- To allow students to receive personalized feedback, guidance, and instructions.
- To help children delve into the concepts they are trying to learn.
- To teach babies new vocabulary.
- To make education more enjoyable and diverse.
- To provide greater engagement and communication, thus promoting significant exchange.
- To study in a more interesting way.
- To visualize abstract concepts and enhance understanding.

This analysis conforms to the findings from the prior investigation of argumentative moves where interactivity acts as an argument to support a particular standpoint. In such cases, interactivity is asserted to be the effective cause behind a sequence of beneficial outcomes (Monteiro, 2014), underscoring its positive cultural connotation.

What remains without further explanation is why people attribute interactivity to some digital element, system, or experience. The corpus presents a few occurrences in which we can interpret as an attempt to describe what it means to be interactive, as the following:

- (17) [The app] Teuida is an interactive way of learning, presenting a video scenario where you need to respond using the microphone, enhancing pronunciation, and listening skills at the same time.⁷⁹

⁷⁹ Teuida is an app intended to learn Korean and Japanese by speaking. By the way, on the website (<https://www.teuida.net/>) there are two main sections: “Boost your confidence with Real-life Conversations”, and “Check your pronunciation with Interactive Lesson”.

In (17), I acknowledge that interactivity arises in a relation of cause-to-effect, argued to be the efficient cause for enhancing pronunciation and listening skills while learning a language. However, we will specifically focus on the intriguing connection between “interactive way of learning” and the specific method mentioned, i.e., “presenting a video scenario where you need to respond using the microphone”). There seems to be an attempt to describe or explain why the author considers Teuida as an interactive way of learning.

Therefore, when reconstructing the supposed argumentation in the terms of AMT (Figure 6), the inferential structure stems from the *Locus from definition*, as the arguer appears to describe what is meant by *interactive*. This description is the *Datum* (a video scenario where you need to respond using the microphone), but the entire inferential reasoning only makes sense, both logically and culturally, whether it is commonly accepted that “using a microphone is a required condition of being interactive” (*Endoxon*).

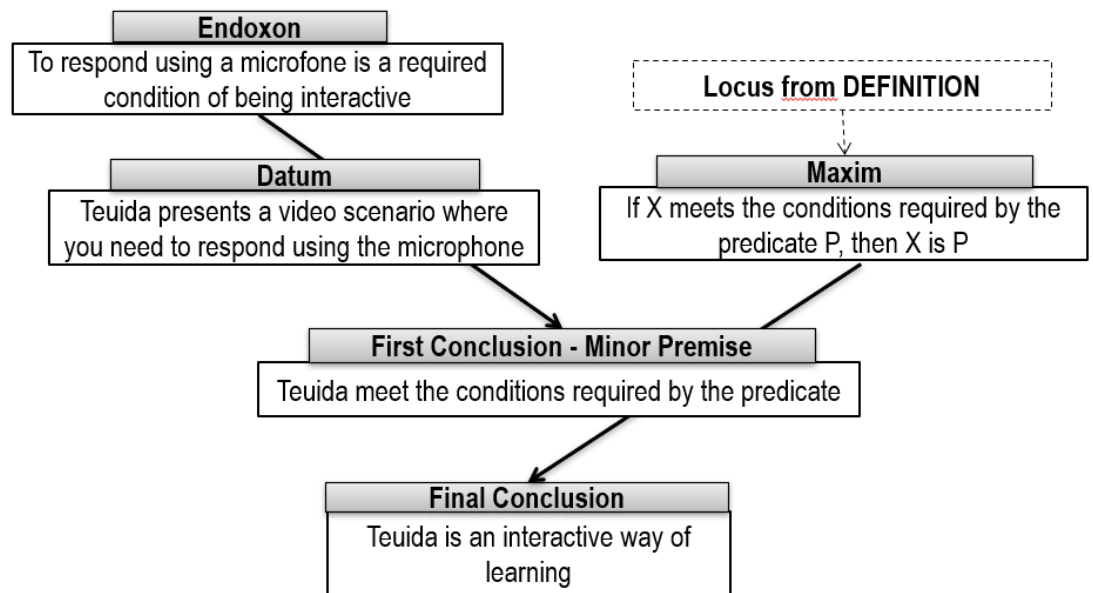


Figure 6: Reconstruction of example (17) by AMT.

A relevant issue with this argument is that the *Locus from definition* requires both necessary and sufficient conditions to adequately support the conclusion. While using a

microphone may be considered a necessary condition for interactivity in this context, it is not a sufficient condition, by itself, to fully characterize the concept of *interactivity*. In the analyzed example, the use of the microphone is taken as the basis for claiming that the Teuida app is interactive, but this premise would only be adequately convincing if other aspects of interactivity were also considered.

Although the AMT analysis suggests that the argument, as structured, is weak, the previously noted vagueness of *interactivity* makes it challenging to determine what would be sufficient to qualify something as interactive. To strengthen the reasoning, the arguer would provide additional evidence that, combined with the use of the microphone, justify the conclusion that the app is truly an interactive way of learning.

Even if using a microphone were considered interactive in the context of a language learning app, it may represent a very basic level compared to a technology designed to recognize children's facial expressions during remote lessons, as described in this other occurrence:

- (18) Interactive technology presents a solution that employs 3D cameras, which recognize facial expressions and the direction of the eyes. After detecting signs of confusion or disinterest, the educational program can slow down the lesson, repeat the explanation, switch to another topic, or alert the teacher.

In the same way it was mentioned in the previous phase of this PhD research (Rocci & Monteiro, 2009), it is also relevant here to highlight the potential for using rhetorical strategies such as “dissociation” (Perelman & Olbrechts-Tyteca, 1958; van Rees, 2009) and “persuasive definition” (Stevenson, 1938).

“Dissociation” involves creating a new definition for what is considered the “real” notion of something, establishing an evaluative hierarchy between the concepts (van Rees, 2009). Thus, considering examples (17) and (18), this rhetorical technique could be applied by distinguishing between “basic interactivity,” such as the use of a microphone, and “advanced interactivity,” represented by technology that recognizes facial expressions. In this case, the latter would be said to represent the truly interactive experience.

Regarding “persuasive definition”, Stevenson (1938) points out that it involves attributing a new conceptual meaning to a familiar term while preserving its emotive meaning. This technique is employed, whether consciously or unconsciously, to influence the direction of people's interests. In the case of examples (17) and (18), by attributing a new meaning to the term “interactivity”, which goes beyond the mere use of a microphone, the discourse can redirect the audience's attention to the importance of more sophisticated technologies that genuinely enhance the learning experience. Hence, “interactivity” could be redefined in a way that expands its conceptual meaning to include technologies that allow for a more effective response to students' needs, while preserving its positive emotive meaning.

4. Concluding remarks

This integration study aims to connect two distinct periods of my doctoral research, verifying the current validity of research questions, theoretical perspectives, methods, data, and findings, as well as presenting some innovations where appropriate.

As a primary goal, upon which subsequent objectives depended, it was necessary to ascertain the current relevance of the word *interactivity* as a cultural keyword, considering that after several years such relevance could have diminished or even disappeared. To this investigation, the need to migrate to online activities imposed by the COVID-19 pandemic emerged as a research opportunity, particularly in the field of education, which had already been addressed in the previous period of this doctoral research.

While the earlier phase of the research involved the analysis of general texts in which *interactivity* is used argumentatively, for this study it was constructed a corpus based on the Brazilian educational context across the Covid-19 pandemic. Additionally, we introduced a methodological procedure for text retrieval inspired by the snowball sampling technique, typically used in sociology and anthropology.

During the corpus construction process and within the texts themselves, we observed an ongoing interest in interactivity. Furthermore, in the new corpus we found argumentative uses that served to confirm that it can still be considered a cultural keyword

nowadays. For this, the “testing procedure” proposed by Rigotti and Rocci (2005), previously employed, proved to be still useful.

Replicating the methodological path of the first period of the research, we also validated the applicability of Congruity Theory to identify meanings attributed to interactivity. We have introduced the use of the AntConc software, which provided new insights from quantitative data. The results were practically the same as in the first phase: in conceptual terms, interactivity is a polysemic and vague word, while presenting a highly positive “emotive meaning” (Stevenson, 1937). With the support of AntConc it was possible, for example, to confirm this positive “semantic prosody” (Stubbs, 1996) by listing frequent adjectives and verbs that surround interactivity in the texts as collocates. Given that the corpus specifically focuses on the field of education, it is noteworthy that the scalability in terms of the necessary conditions to designate something as interactive appears more restricted, requiring only that an element, process/system, or experience/activity is related to digital technologies.

Another aspect examined was the argumentative uses of interactivity/interactive. With the support of AMT, the research shows how arguments involving interactivity are structured inferentially, uncovering shared values (*endoxa*) that sustain their persuasive effectiveness. We have discovered uses of interactive similar to those found previously, as an argument supporting a standpoint. However, the new corpus revealed new uses as a standpoint or part of a standpoint. While in the former case, the argumentation is generally based on arguments of “efficient cause”, in the latter case, we have arguments of “final cause”, revealing various finalities attributed to interactivity. In both cases, the positive cultural connotation of interactivity is highlighted.

The exploration of interactivity as a cultural keyword in Brazilian education reveals its dynamic role in shaping arguments, standpoints, and educational practices. This comparative analysis between two distinct periods of research not only underscores coinciding results but also some contextual nuances that influence the perception and utilization of the word *interactivity*, providing new insights to better understand this cultural keyword and underlining adaptations in its uses within different cultural contexts.

It is important to consider that in the current investigation, the corpus represents a restricted context both in terms of theme (education) and cultural scope (Brazil). Therefore, despite the broader nature of the texts examined in the first phase of the research, which pointed to essentially the same results as this new more focused investigation, it would be opportune to conduct future research based on other contexts, both in terms of thematic field and the culture of other countries.

Regarding theoretical approaches and methodological procedures, we acknowledge that other alternatives could have been explored and applied, but our intention here was indeed to validate the work conducted in the first period of our doctoral research by building a bridge to integrate them. Nonetheless, a few methodological innovations were introduced, and new results were found.

3. CONCLUDING SYNTHESIS

This doctoral thesis represents a contribution to research on digital culture, language, argumentation, and education by comprehensively exploring *interactivity* as a cultural keyword within contemporary cyberculture. It delves into the multifaceted meanings and cultural implications of interactivity, extending beyond its technological and functional role to encompass a rich array of socio-cultural values and expectations. Spanning two distinct research periods and comprising three published papers alongside an integration study, this thesis aims to uncover the diverse uses and meanings of interactivity in our contemporary world, shedding light into its pivotal role in shaping discourses, social communications, and educational paradigms.

After considering formal definitions and conceptualizations from academic studies, the research adopts an interdisciplinary approach to explore the semantic nuances and argumentative usages of *interactivity*, investigating how ordinary people employ it in everyday life. By focusing on ordinary discourse, the research contributes to the existing body of knowledge on *interactivity* by revealing shared values and beliefs that constitute the cultural common ground of specific communities.

This thesis begins with a central research question: Is interactivity a cultural keyword of cyberculture?

In this context, a cultural keyword is considered a linguistic tool that gives access to the knowledge belonging to a particular discourse community or culture. The “discovery procedure” proposed by Rigotti and Rocci (2005) plays a decisive role in addressing this question, suggesting looking at how a given word is used argumentatively. According to them, a word is a serious candidate to the status of cultural keyword when it plays the role of *terminus medius* in an enthymematic syllogism. In this role, the word not only ensures the logical coherence of the syllogism but also points to implicit premises that are *endoxa* in the cultural common ground.

Build upon Rigotti and Rocci’s proposal and to provide a convincing case based on a large-scale investigation, a corpus was constructed consisting of online texts in which *interactivity* is used argumentatively. While we do not disregard the importance of

quantitative data, the intention here was to find a certain consistency both in evoking a constellation of related *endoxa* and in the standpoints argued for.

After applying this methodological procedure, we conclude that *interactivity* can be considered a cultural keyword in contemporary cyberculture. It is worth emphasizing that this procedure was applied in the two distinct phases of this doctoral research – both in *corpora* composed of texts from various contexts and within the specific context of education – resulting in the same conclusion.

A second research question deriving from the first is: What meanings, values, and beliefs are associated with interactivity?

The use of *corpora* also served to identify several meanings related to *interactivity*, highlighting its polysemy. In the initial period of the research, texts revealed that *interactivity* is a quality noun used to attribute value to objects, processes, and systems, whether technological or non-technological, capable or incapable of exchanging information. This examination applied the Congruity Theory, which revealed not only the polysemy of the term but also its vagueness. Although it is sometimes puzzling to understand why people attribute the quality of “being interactive” to an object, process, or system, one unequivocal aspect of its usage is the persistent positive connotation, an “emotive meaning” (Stevenson, 1937) that gives it a persuasive force. The positive aura surrounding interactivity was observed throughout the research in both periods, whether in broader uses or specifically within educational context.

The exploration of interactivity's polysemy and persistent positive connotations across different contexts underscores its significance as a cultural phenomenon deserving of scholarly attention. Understanding why people use the adjective *interactive* in contexts where it might be unnecessary or unexpected raises intriguing questions. The fact that its employment could be dispensable does not mean it lacks importance. Rather, associating interactivity with various elements like media, hardware, software, and processes seems to provide certain advantages. Often, the precise definition or meaning of interactivity may be less significant than the perceived value it adds to whatever it is associated with.

Going beyond the search for the meaning of *interactivity* in its everyday use by ordinary people, the research sought to uncover the values and beliefs that make

interactivity a strongly persuasive cultural keyword. By examining online texts where *interactivity* is used argumentatively to defend a standpoint, with the support of the Argumentum Model of Topics (AMT), it was possible not only to retrieve various *endoxa* – always positive – related to interactivity and interconnected, but also to discover a pattern of argumentative reasoning that predominantly conceives interactivity as an efficient cause that produces effects of interest, excitement, enjoyment, power, and so forth. On this regard, the most recent period of this doctoral research, based on specific texts from the Brazilian educational context, also revealed a series of finalities (final cause) attributed to *interactivity*, which corroborate the positive evaluative connotation with which the investigated cultural keyword is endowed.

Moreover, the thesis extends its relevance beyond theoretical insights to practical applications in educational contexts, particularly in distance education. By tackling the lack of interactive communication among stakeholders in a specific educational setting, the thesis offers an interesting methodological framework for analyzing and addressing communicative challenges involving interactivity. The combination of Bitzer's concept of rhetorical situation with Rigotti and Rocci's model of social communication context provides valuable insights for analyzing situations where communication issues can be effectively tackled through argumentative discourse. Furthermore, this methodological framework is not limited to educational contexts. It can also be applied to analyze different communicative situations. The research's focus on interactivity within distance education serves as a case study illustrating the broader applicability of this approach.

In general, this thesis can be considered a comprehensive case study of a prominent lexical item in contemporary culture: *interactivity*. The path taken from verifying its presumed status as a cultural keyword to uncovering meanings, values, and beliefs associated with it may be applicable to other lexical items. The adopted approach emphasizes the significance of cultural keywords as tools for uncovering implicit values and understanding cultural beliefs within argumentative contexts. It underlines the importance of integrating methods from lexical semantics, corpus linguistics, and argumentation theory into discourse analysis, thereby enriching the understanding of language, culture, and persuasion in contemporary contexts.

The extended duration of this doctorate, spanning from 2008-2014 and then resuming from 2021-2024, adds complexity to the continuity of the research. Over this period, societal transformations, cultural shifts, technological advancements, and changes in educational practices have occurred, possibly influencing the interpretation and relevance of research findings. Furthermore, research questions, theoretical approaches, methodologies, and data over time may impact the results (Cowton, 2019).

To tackle these potential issues, an integration study was proposed to contextualize and ascertain the research previous outcomes within a specific historical and cultural context, providing new insights into the evolving nature of *interactivity* as a cultural keyword within contemporary cyberculture.

Observing that the theoretical and methodological frameworks employed in the first phase of the research remained valid, they were reapplied to analyze an updated corpus, albeit constructed using a new methodological technique (snowball sampling). It is important to note that this new technique was employed not because the previous one (using argumentative indicators) became outdated or invalid, but because the primary goal of the corpus was not to find argumentative uses of *interactivity*, but rather to ascertain its presence in recent texts with a certain frequency and cultural relevance. As demonstrated, the results derived from the updated data confirmed the conclusions of the earlier period of the research, with minor variations due to the specific educational context recently investigated.

While efforts were made to collect and analyze relevant data, the scope and representativeness of the corpora could be further expanded. For instance, the decision to exclusively use the argumentative indicator *because* when retrieving texts containing the string “because it is (not) interactive” may have limited the exploration of nuanced argumentative uses of *interactivity*. It is true that in the corpus focused on the Brazilian educational context, even though the snowball sampling technique was not specifically aimed at uncovering argumentative uses of the investigated keyword, such uses were found, and they are not directly evidenced by argumentative indicators. Nonetheless, collecting additional corpus data using a wider range of indicators (*therefore, since, thus,*

hence, consequently, etc.), could have led to additional discoveries and insights on interactivity as a cultural keyword.

Indeed, this thesis provides comprehensive insights into the cultural significance of *interactivity* in contemporary cyberculture, but it is important to recognize that a more in-depth analysis and some applicability were conducted in specific Brazilian educational settings. The findings and conclusions derived from these contexts may not directly correspond to the uses of *interactivity* in other cultures. Expanding the scope of study to encompass cross-cultural investigation could extend the understanding of how interactivity is perceived and employed across different societies, providing new elements to validate and generalize the research conclusions more accurately.

Another point of attention is the dynamic nature of cyberculture. The continuous emergence and development of digital technologies may suggest changes over time. Based on observations and analyses made throughout this research covering a significant period, it is highly probable that the positive emotive meaning associated with *interactivity* will persist regardless of technological advancements. However, definitions, concepts, meanings, and reasons why people attribute the quality of “being interactive” to something may change, given that it is a cultural keyword. For instance, what does interactivity mean considering the recent artificial intelligence (AI) boom? Perhaps someone might argue that AI truly provides interactivity, applying “persuasive definition” to give a fresh conceptual meaning to *interactivity* while maintaining its positive connotation, or employing “dissociation” (Perelman & Olbrecht-Tyteca, 1958; van Rees, 2009) to establish a new hierarchy that presents AI interactions as more “genuinely” interactive. Both rhetorical techniques, discussed in the papers within this thesis illustrate how conceptions of *interactivity* can adapt to evolving digital contexts.

The same observation applies to educational contexts where emerging digital technologies are utilized, implying new dynamics and perceptions of interactive communication. Exploring the intersection of digital culture and education offers promising directions for investigating how *interactivity* shapes pedagogical practices and student engagement in virtual learning environments.

Looking ahead, all these points represent interesting opportunities for future work aiming to capture the evolving significance of *interactivity* and the intricate relationship between society and technology. The collaboration among Linguistics, Discourse Analysis, and Argumentation Theory has proved its productivity. This interdisciplinarity will be useful to refine methodologies and theoretical frameworks, providing new possibilities for deepening comprehension of cultural keywords and their valuable insights into studies of culture and argumentation.

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