The Oral Argumentation in Scientific Dissemination Genre – Intersemiotic Analysis of Multimodal Materials

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Abstract:

This article is linked to research carried out within the scope of the Professional Master's degree in Languages and aims to discuss how aspects linked to orality, identified in two scientific dissemination videos circulating on Youtube[BR], produced about the fake news theme, are articulated to other semiosis in the composition of opinions that aim at the adhesion of adolescents and youngsters to the ideas conveyed in two different channels. Based on concepts from the field of conversation and textual linguistics, it is proposed a methodological procedure that guides the analyzes of orality combined with the intersemiotic complementarity of multimodal materiality. The results indicate that following the discursive flow and discourse topics collaborates with the understanding of filtering operations and salience, both associated with the characteristics of audiovisual productions, in addition to registering the type of privileged reasoning in each one. It is understood that the identification of these linguistic-discursive resources can provide a reference for the composition of pedagogical practices aimed at understanding oral argumentation.

Keywords:

Orality. Multimodal argumentation. Opinion.

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INTRODUCTION

Since the beginning of the 21st century, the scientific dissemination has been more and more present as a discursive practice in the globalized society, mostly with the easiness of its circulation on the internet. Despite the difficulty to characterize this discourse genre, since it is a "second discourse – derived from the scientific –" (GRILLO, 2008, p. 1), the increasing production of this genre has provoked distinct reflections among professors and professionals of the different areas.

In Brazil, for about forty years, the scientific journalism defines that scientific dissemination "encompasses the use of resources, techniques, and processes for the dissemination of scientific and technological information to the general public" (BUENO, 1985, p. 1421). Thus, this kind of journalism is associated with both the media filed – as a source of information to the general public – and the educational field – as it is seen by its use in didactic books (NASCIMENTO, 2005), in science classes (FERREIRA; QUEIROZ, 2012), and in extension courses for non-specialists, mostly with a large frequency this kind of course on YouTube social network (REYES; VAZQUEZ, 2020).

Although scientific dissemination texts have been receiving particular attention due to the mediation that the journalism offers to academic and scientific subjects, there is still the need for analyses that enables the discussion about the role of orality and of other semiotic resources in the composition of this discourse genre. Therefore, in this paper, an initial attempt to describe and analyze the materials produced with the purpose of advising teenagers and youngsters is proposed. This attempt is justified by the need to found teachers to enable students to understand the information transmitted in social media.

Additionally, the description and interpretation of scientific dissemination papers that freely circulate on the internet is also justified through at least three reasons that are going to be interrelated throughout the text:

a. as a discourse genre, the scientific dissemination paper is "relatively stable" (BAKHTIN, 2016); manifests tensions between the stabilization forces of ideologies and the transformation forces of life, which are always historically marked and unique (FARACO, 2009); has had its compositional construction and style profoundly modified due to the various semiotic resources available at digital means of communication;

b. for recognizing that the teaching of the oral modality of a language must be widened at schools (DOLZ; SCHNEUWLY; HALLER, 2004) and that there is a lack of clarity of some primary and secondary school teachers in relation to the possible meanings of linguistic, extralinguistic, paralinguistic, and kinetic aspects that constitute the spoken language, (GALVÃO; AZEVEDO, 2015), the studies related to the work with orality in the teaching of mother tongue (FÁVERO; ANDRADE; AQUINO, 1999; FORTE-FERREIRA; SANTOS; NORONHA, 2022; MAGALHÃES, 2006;) and the descriptions and analysis of the existent and emerging oral genres are needed so as to contribute to the teaching and learning practices;

c. the discussion about polemic themes in scientific dissemination papers motivates the producers to adopt a more opinion-based profile, making this genre closer to an opinion article; therefore,

besides describing the theme under discussion, the material has an axiological and thus discursive and ideological position in relation to them (COSTA, 2014). Not only do a description and an explanation of concepts occur, but also the interpretation of the social impacts by the owner of the channel on YouTube or by the discussion presented to the audience.

In order to discuss these broad matters in a paper of a short extent, this text was divided into three parts before the final remarks: 1. briefly describing the scientific dissemination paper genre, produced to teenagers and youngsters, having as basis examples available on YouTube[BR]; 2. defining the different aspects that are articulated through an intersemiotic complementarity (ROYCE, 2007) to build an explicative-argumentative discourse as well as illustrating an analytical procedural model; 3. selecting points that may contribute to the work of primary and secondary school teachers that dedicate themselves to teach oral language at schools.

1. Peculiarities of the Scientific Dissemination Paper on YouTube

Overall, the characterization of the scientific dissemination paper (henceforth SD) stems from a written version, as different studies confirm: Bueno (1985); Jacobi (1986); Berruecos (1995); Grillo (2006), among others. However, since the second half of the 1980s, Jacobi has been already sensible of the figurative representations used in scientific popularization. This is why he drew his attention to the efforts employed by museums and by non-formal education. Even though, there are scholars that worry about the relation between writing and image, studies that explore the specificities of SD that happens in the oral modality are scarce. In Brazil, works that explore the teaching of oral exposition, seminars or debates, are found, but what has been found concerning videos on social media is substantially different from these school genres.

In the description of the SD paper in written modality, it is stated that it is a genre that integrates three fields: the scientific – which affords technical discussions related to different themes of social interest –; the media or journalism – which are associated with socioeconomic and cultural discussions from a certain time and place –; and the educational that disseminates the knowledge to primary and secondary school students through varied resources (didactic or paradidactic books and manuals, specialized newspapers or magazines etc.) – as Grillo (2006) described. Besides, the dissemination text follows an order that is inversed to the canonic scientific text (objective, methodology, conclusion, applications) since it aims at capturing the readers' attention and interest in relation to the scientific knowledge through the construction of texts organized in a wide compositional variety, "adequate to the necessary dialogue that the reportage of scientific dissemination genre must perform with utterances from the scientific sphere" (GRILLO; OLÍMPIO, 2006, p. 386), among other reasons.

Because of that, the explanations are accompanied by an interpretation related to the theme and/ or the facts treated in the article as well as the implications related to it, that is why the identification of the inductive and persuasive purposes is possible. When the subject at hand is polemic, the points of view in opposition and the used resources to obtain the adherence to the reader (COSTA, 2014) are identified. Such characteristics are present in SD materials built through multiple modalities. The variety related to the themes at hand, to the way the ideas are discussed, and to the style is frequent in the examples available on YouTube[BR], since the new discursive productions are marked by hybridism both in the constructional composition and in the patterns of thought, which enable the overcoming of the binarity and of the dichotomy of media old logics. Different types of crossing that interrelate values, information, and discursive positions, that begin to coexist and interact on the internet (MAST; COESEMANS; TEMMERMAN, 2016).

For over a decade, studies about the educational role of the videos found on YouTube have been produced (BERK, 2009; BURGESS; GREEN, 2009; JONES; CUTHRELL, 2011; MION; LOPES, 2021; RESENDE, 2015; REYES; VAZQUEZ, 2020; VIZCAÍNO-VERDÚ; CONTRERAS-PULIDO, 2019, etc.). This fact is explained because, since the constitution of this social media in 2005, children and youngsters began to have direct access to social and cultural themes, to varied forms of entertainment, and to formative platforms, besides establishing new forms of relationship and integration through the sharing and uploading of individual or collective productions.

Among different educational uses that are observed from the videos found on YouTube and the benefits highlighted by the studies above, only five are going to be focused here. YouTube is an efficient educational tool due to: (i) the focused attention generated in children and youngsters and consequently the memorization of information motivated through the visualization of different materials; (ii) the promotion of the use of both cerebral hemispheres (the left that processes language and the right that processes non-verbal information), which promotes the increase of intelligence; (iii) students' emotional responses to videos (both positive and negative); (iv) the motivation to produce their own videos about different themes (BERK, 2009); (v) the democratization of scientific knowledge.

In order to make this set of results effective, in the process of creation and use of the SD videos, oral language deserves special attention since according to Royce (2007), the verbal and visual modalities complement each other in the production of meaning. However, this author investigated only print materials in the study of intersemiotic complementarity[1], therefore, based on Isola-Lanzoni (2020), a reflection on the role of oral modality in the composition of SD videos addressed to teenagers and youngsters on YouTube[BR] is going to be proposed.

Nevertheless, if "a teaching and learning object clearly delimited and defined, which grants the legitimacy and pertinence of oral language in relation to reference knowledge, to social expectations", and to students' needs and potentialities, is to be created" (DOLZ; SCHNEUWLY; HALLER, 2004, p. 151), collaborating on the teaching work through the description, analysis, and interpretation of the videos, considered as language social practices around Brazilian society, is a task that requires researchers from different fields of knowledge. Even though it has been recognized, due to the limits of this paper, it is going to be provided just a few studies produced in Linguistics and Languages.

Because of the wide access to the majority of the videos found on YouTube[BR], it is crucial to critically select the available material to ensure the reliability, the precision, and reasonableness of the pedagogic work (JONES; CUTHRELL, 2011), mostly when SD is aimed, that is why the reference criteria conformed for the reflection proposed in this article are going to be presented in the next section.

2. The Complexity of Orality that is Present in Scientific Dissemination Videos that Circulates on YouTube[BR]

Brazil is one of the main consumers of videos found on YouTube[BR2], besides being the country with the third country with the greatest average of daily time spent on social media (for users aged 16 to 64)[3]. In relation to the production of SD to that platform, in 2019, Science Vlogs[4] badge was created as a resource to certify the quality of the scientific content on the internet. Since the place of orality in the constitution of the intersemiotic complementarity in videos available to teenagers and youngsters is going to be discussed, two videos were selected as examples under the following criteria: (i) handling the same topic – *fake news* was chosen due to its relevance in contemporary society because the Sars-CoV-2 pandemic; (ii) declaring the intention to make SD on YouTube[BR] (one of the chosen videos has the badge Science Vlogs); (iii) using accessible language to teenagers and youngsters.

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[1] The concept of "intersemiotic complementarity" is proposed by Royce (2007) based on the principles of Systemic Functional Linguistics, which is organized into three kinds of metafunctions (ideational, interpersonal, and textual), but, in this study, there is not going to be a separation of the elements into each of the three kinds of metafunctions because a global analysis of the selected materials is being proposed for discussion. Besides, aspects that were not taken into account when considering print materials, as used by Royce (2007), are going to be included.

[2] In April 2022, Brazil was ranked 4th among the countries with the highest number of YouTube users, according to Ask Statista. Available at: https://bit.ly/3GEYC1g. Access: Jan 5th, 2023.

[3] According to Hootsuit 2022 reaserch. Available at: https://kepios.com/reports. Access: Jan 5th, 2023.

[4] The Science Vlogs Brasil (SVBR) is a scientific dissemination community that curates channels on YouTube to award them a badge of reliability and quality. It also seeks to expand the scientific dissemination content on social media, through youtuber partners regarded as "patrons" of the initiative, as Pirula, Sergio Sacani, André Azevedo da Fonseca, and Dr. Drauzio Varela. Check at: https://bit.ly/3ZcDMh2 (*Jornal da USP*).

The choice for a polemic topic is grounded on the recognition that language is ambivalent and that the main matrices operations of discourse are two: "filtering" and "salience" based on Grize (1996). The filtering is associated with the points that are chosen to discuss the matters, among many others, while salience is about the verbal and non-verbal means that favor the fixation of attention and consequently of the memory of what is being dealt with. Such criteria serve both the content analysis and the composition of the multimodal text. In relation to those operations, Grácio (2014) highlights that in that kind of construction a perspectivation of the content always occur according to the interests at stake in each communicative situation, even when it happens through the use of technological artifacts.

In this sense, in discourses marked by the divergence of points of view, observing such operations is relevant even though they may also be identified in discursive productions oriented to the construction of the objectivity of scientific discourse, since those operations may be also be taken as relevance criteria that are always associated with social relations of power. Therefore, those two operations are going to work as reference both to the analysis of the explanations about the theme at hand and to the analysis of the oral language in the SD discourses found on YouTube[BR].

Specifically, in the observation of orality, it is considered that the text, as a socio-communicative unity, is always integrated with an interactional process, but in videos produced for YouTube, the spoken text is not built in face-to-face situations and not even happens in an incomplete or fragmented way because youtubers' planning, which is aimed to youngsters, follows a careful composition. Despite that, many characteristics of speech are present and meaningful in the interpretation of meaning produced by each one, as the discursive flow and prosodic phenomena (pauses, vowel lengthening, functional items, paraphrases, repetition of lexical items, highlighted due to the observed recurrence), that is why they are going to be integrated in the analysis.

In relation to the interaction, under the perspective of intersemiotic complementarity, "the represented participants, the interactive participants and the visual's coherent structural elements" (ROYCE, 2007, p. 66) that encompasses all textual compositional features are going to be considered. The *represented participants* are the elements or the entities that are present in the materiality of the video; the *interactive participants* are the subjects that integrate the video, for example, the youtuber, the graphic designer as well as the intended audience[5]; the structural elements, the combined resources in the composition of the audiovisual material that integrates the represented and interactive participants with particular attention to those previously highlighted in relation to orality, for being culturally, historically, and ideologically marked.

The analysis of the videos was then organized into two subsections. In the first, a *global* analysis (FÁVERO; ANDRADE; AQUINO, 1999) will be employed in relation to the structure of the SD videos so as to describe the discursive flow is performed when one wants to produce an oral explicative-argumentative text around a topic at hand. For that, it was chosen to delimit the composition of the discourse topic, for being the resource that guarantees the guiding thread of the textual organization as well as the organization of the reasoning privileged in each material. In the second, the resources that enable the understanding of how they were articulated in order to promote the intersemiotic complementarity are going to be highlighted. In this section then, extralinguistic, paralinguistic, and kinetic aspects are going to be integrated to the prosodic and pictorial, to enable a *local* and situated analysis (FÁVERO; ANDRADE; AQUINO, 1999), i. e., in relation to the context of production, to the enunciator's characteristics, and to the represented and interactive participants.

Before composing each subsection, some information related to each video selected was gathered. *Video 1* belongs to Nostalgia channel, created by Felipe Castanhari, a youtuber that was elected as one of the thirty most promising youngsters by Forbes Brazil and that was ranked by QualiBest Institute as one of the

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[5] According to the New Rhetoric, the audience is "[...] the ensemble of those whom the speaker wishes to influence by his argumentation. Each orator thinks, in a more or less conscious way, about those he seeks to persuade and that constitute the audience to which he directs his speech." In this sense, the intended audience is a construction, more or less systematized, based on the psychological or sociological features that aims to persuade "effectively concrete individuals" (PERELMAN; OLBRECHT-TYTECA, 1996, p. 22).

greatest Brazilian digital influencers in 2019. His channel is not exclusively dedicated to, but the videos that worked with it had great repercussion. The video is "WhasApp and Facebook DESINFORMATION" and aims at contending against the culture of rapid share of fake news that jeopardizes the differentiation between facts or news and fake. It was produced in March 2017 and registered 1,843,049 visualizations until January 5th 2023[6]. *Video 2* is on Slow's channel and integrates the Science Vlogs Brazil's campaign (#PandemiaSemFake, PandemicsWithoutFake) that aims to make people aware of the importance of verifying information, valuing the journalism, the fact checkers, and researchers that daily work to promote the public debate with precise and reliable information. Its name is "BRAZIL IS ISOLATED FROM THE WORLD!!!", and it discusses the country's isolation due to the production of false narratives to stimulate the use of chloroquine, azithromycin, and ivermectin as early treatment for the Sars-CoV-2 pandemic. It was produced in December 2020 and registered 32,816 visualizations until the same date[7].

2.1. The composition of the discursive flow of two scientific dissemination videos

The SD video, as a speech text, is overall developed through an interactive activity but is organized in a monological[8] way, with planning preceding the production of the material and interaction established in distant spaces and times, which differs from the face-to-face orality. Therefore, the production may be collective, not only individual, there is the possibility for reviewing both the script and the verbal expression (through video editing resources, i. e., the process of creation is hidden from the platform user, who has access only to the final version), and the producer may anticipate the "possible reactions" from those that may be interested in the theme. It is then observed that the production of this kind of video is closer to the characterization of the written production than to the speech production (FÁVERO; ANDRADE; AQUINO, 1999, p. 74).

In relation to the discursive flow, given the polemic character of the theme, the articulation of the different points of view in the composition of a dispute of discourse positions is visible, from which a combat between the perspectives that circulate Brazilian society is comprehended. It is also comprehended, from what is said and from other resources – such as intonation, pauses, gestures, facial expressions –, a game of subjectivity, in other words, a representation game, through a negotiation process that happens from the producer's anticipations in relation to what is shared with the interlocutor in the projection built by the discourse (BRAIT, 2003).

In **video 1**, since the beginning of the video, Felipe Castanhari inserts himself in an enunciation established between the "I" (who has already shared news without checking it) and the "you" (a teenager or a youngster that is treated as "you"). The "I", inscribed in discourse, anticipates difficulties that might be experienced by the interlocutors and offers examples of situations that might have happened before explaining why that is a social problem. The camera captures the youtuber's image in close up, which enables a direct look to whom watches the video, and the background scene, prepared with toys for different ages, collaborates with the familiarities between the youtuber and the audience, and, at times, the big close-up helps to add more dramatization to what is being said (0'35"-0'36").

Along the interactional process, "I" and "you" are included in "everybody" (from 1'04" to 11:15": I Read the nEWS before sharing with my friENDS I also check if that whatsapp chain message is TRUE, I CHECK it is all right guys I am not here to judge **ev:ery bo:dy** has already shared some news just because of the Title") and "we" (: yes I know it's hard, RIGHT we see the news on the timeli:ne **we** read the title and there comes that insane wish to click the sharing button but listen carefully buddy IT IS VERY IMPORTANT

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[6] Available at: https://www.youtube.com/watch?v=HNCYAVcT_Is. Access: Jan 2nd 2023.

[7] Available at: https://bit.ly/3Qqmnh5. Access: Jan 2nd 2023.

[8] According to Charaudeau and Maingueneau (2004, p. 164), the "[..] monological discourse (or 'monogenerated', i. e., built by one single **locutor**, with no intervention from others) [is generally] the monologic discourse (which puts one single **enunciator** on the scene) […]", but also monological-dialogical discourses may exist.

THAT YOU RE:SIST"). This game of subjectivity is sustained until the beginning of the "tips" listing starts (2'34"-6'55"), proposals to avoid disinformation in social media when the discourse becomes explicative even though the informality is kept. At the end, a solution for the problem (7'30"-7'35") is presented in a directive speech act: "Stop disseminating this shit on the internet", manifesting the recurrent style of famous youtubers, which includes "[…] the use of slangs, swear words, and short and fragmented phrases […]" (MENDONÇA; SALGADO, 2012, p. 33).

In **video 2**, the youtuber composes an objective discourse, in other words, the objectivity effect is obtained from the use of an inclusive "we", which comprises the specialists that gather scientific information that discuss the disinformation over the Sars-CoV-2 pandemic period, as well as those that visualize the video. In addition to that, definitions are used to situate the matter at hand ("infodemic", at 0'29") in the very beginning, daily examples serve to illustrate situations linked to the problem (for example, at 0'54"-1'05": "he:y grandma what are you typing in there? uh I'm sending to everybody that if you take cinnamon tea and hold your breath for 10 seconds the covid goes away because I saw Mr. Zé doing it yesterday and it worked"), and research data are joined along the video (as the creation of a fact check agency, at 1'37"), but the expression of all that is performed through a more informal language, with the use of slangs and close up camera, which generates an approximation between the enunciator and possible interlocutors. Half of the whole video (13'06") discusses disinformation, and the other half includes a personal evaluation that associates the great number of fake news with Brazil's isolation in relation to other countries, that is, the second part may be considered as more of an opinion article than a SD.

In both videos, kinetic aspects, such as varied facial mimics (some a bit amusing), looks that alter to follow the content, and hand movements are articulated to build the dynamicity of the oral text. In relation to the paralinguistic aspects, clear voice but modulated according to the emphasis each youtuber wants to convey to certain parts of the oral text, the use of strategic pauses (6'54" in video 1 and 5'59" in video 2), and an accelerated prosody that determines the liveliness and enables the handling of many points in short time, associated with the vowel lengthening in words that are highlighted[9] as in: "the title of the news not al::ways rerpesen::ts what is written inside" in video 1 (1'35"-1'40") or "about the global information crisis during the pande:mic " in video 2 (3'40"-3'43") and a syllable-timed speech, as in "the article had nothing to do with the title of the news" in video 1 (0'49"-0'52") or as in "the lying apocalypse" in video 2 (1'30"-1'32"), serve to increase the intensity of speech.

The mobilization of those resources also collaborates with the development of the discourse topic, considered as a decisive element in the constitution of an oral text since it enables the recognition of the "thread of the interactive textual organization" (JUBRAN, 2006, p. 90). There are two necessary conditions for a discourse topic to be structured: the centration and the organicity. In **centration**, "the use of explicit and inferred referents, which converge to the textual development" (FÁVERO; ANDRADE; AQUINO, 1999, p. 39) is observed. In video 1, through the filtering operation, it is confirmed that the citation of daily behaviors of sharing fake news serve as basis to explain what disinformation is and propose a solution for this problem through the exposition of tips to prevent that from happening. Video 2, in turn, starts with a thesis (disinformation that spreads around the internet isolated Brazil from the rest of the world due to the high production of fake news), numerous examples taken from different fact check agencies are inserted in order to defend a strong combat position against the isolation of the country for that later.

In video 1, a simpler composition is chosen, with expressions made up by the youtuber (as "Ronaldinho title", for mentioning, and titles that aim to attract netizens), and the use of tips (from 2'22") delimits the actions that may be taken by teenagers and youngsters. Video 2, in turn, demands from who watches the post in the channel the understanding of the central discussion (the infodemic is another kind of pandemic that has grown a lot since 2020) and of the secondary information that helps to understand the nature of the problem as well

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[9] The vowel lengthening mark is the one proposed by the Cultured Linguistic Urban Norm Project (Projeto da Norma Linguística Urbana Culta), known as NURC Project, carried out in five Brazilian state capitals in the 1970s.

as the available means to solve it. Each kind of guidance orients the distinct construction of textual segments with "topic state". In centração, three features are analyzed: "concernence", "relevance, and "pinpointing" (JUBRAN, 2006, p. 91-92), which may guide the understanding of oral texts, as in Figure 1.

Figure 1 - Development of the discourse topic.

Video 1 - Nostalgia channel	Video 2 - Slow channel
Imagine that going around all the time with news from politics or economy, or news from your team, that is really dangerous, guys, because the rumors and the exaggeration suddenly start to be more valued than facts...	Justifying a lot Brazil's isolation in that topic in relation to the rest of the world, in my opinion, imagine if people understood how their health was solely trampled by political interest...
Explanation: at the end of the video (6'57"-7'10"), in an effort to synthesis, Castanhari uses the "that" to summarize many terms related to the same conceptual field (nothing to do with, lie, no truth, disinformation, fake news), which collaborates with the concernence and relevance, through an anaphoric process of idea recovery, and pinpointing, since it prepares the netizen to the explication of the youtuber's point of view.	**Explanation**: at the end of the video (10'15"-10'29"), to mark the defended position, when using the expression "in that topic", Estêvão Slow anaphorically recovers everything that was discussed, assuring concernence; when putting Brazil facing the "rest of the world", marks the relevance of the discussion in an international context of the Sars-CoV-2 pandemic, and explicitly pinpoints that it is a personal point of view ("in my opinion").

Source: own elaboration.

In both excerpts in Figure 1, there is the prevalence of the abduction reasoning, which is fundamental for scientific research since, due to its conjectural character, it allows the proposition of alternatives resulting from a set of different, spread, concomitant phenomena. The thesis explicitly defended in each channel is presented as a verisimilar and reasonable reason for all the phenomena that are considered. Therefore, it is understood that the abduction is built on the basis of inferences that are presented as the best possible explanations for a set of selected social situations (ANGENOT, 2015) and is mostly built from a combination of linguistic-discursive resources. "Because of that, it is stated that an argumentation does not persuade by itself, but it conducts the addressee to persuade himself" (GRIZE, 2020, p. 260).

The analysis of each excerpt indicated that concernence and relevance are indispensable features for precising the topic centration, which directly collaborates with the argumentation about the topic at hand and with the pinpointing in relation to the handling of the theme. Establishing a focal point is a process that is reinforced by the salience operation, which is going to be analyzed in association with the semiotic complementarity.

2.2. The role of intersemiotic complementarity in the understanding of the oral text

In the *local* scope, in function of the limits of this study, the verbo-pictorial interaction will be assessed in order to delimit the organicity of the oral text, characterize the participants and the articulation of the compositional elements. The represented participants are distinct in the videos, for expressing himself in the first person singular, Felipe Castanhari assumes an individual voice, but that includes other youngsters that practice the sharing of information without previous fact checking. Putting himself as someone who has already done it may stimulate the identification of the netizen that interacts with the selected material for video 1. On the other hand, Estêvão Slow begins the video with a graph found in a report produced by four scientists and, in the sequence, announces the campaign with which the video is associated (#PandemiaSemFake – a

campaign by Science Vlogs Brazil with the support of Vero Institute and the International Fact-checking Network (IFCN) via Shuttleworth Foundation. In other words, the institutional voices are in the foreground and the youtuber is just one of their representatives. Both of them support the speech by images that reinforces what is being said and provide the multimodal materiality with organicity, but in the case of video 1, made up or lived daily situations are recovered, while in video 2, examples taken from different academic sites and from institutions or research work are taken.

The **interactive participants** are differently named, in the case of video 1, the names of the people who participated in the production along with Castanhari[10], besides the netizen named as "you". In the case of video 2, the use of first-person plural includes a great quantity of people that integrate channels associated with the Science Vlogs Brazil badge[11] and all of those that integrate Brazilian/international society and that are interested in scientific information about the dissemination of fake news. The specialists' ideas are included in many parts of the video, and there is even a detailed explanation of a dispersion graph (at: 4'26"-5'10"). In addition, there is an inclusion of social voices that could be said by different people or created to illustrate the defended position. In the excerpts marked by that different voice around society or invented, there is the use of gray color to differentiate it from the youtuber's main voice (as at: 3'00"-3'06"). Despite those differences, the use of the same angle (foreground) indicates that there is an effort to be produced a direct contact with those that are interested in the videos and to establish a horizontal relationship of power with the teenagers and youngsters.

In relation to the elements that collaborate with the structural coherence of the topic and intersemiotic organization, it is observed that the resources are similar in the visual plan: clippings of posts are inserted beside the youtubers' images while they are developing the oral text (as at: 0'52"-0'57" and 9'23"-9'36" in video 2); the locutor is removed to include an image and let the narration in off (as at: 0':23-0':28" in video1 and 0'27"-0'35" in video 2). Those differences are limited to writing ideas that were orally expressed, with or without a supporting background, in big, colorful letters, a recurrent resource only in video 1 (as at: 0'42"-0'45", 0'49"-0'5'", 1'03"-1'06" etc.) and to manipulating a kitten in front of the camera when wishing to mark a particular important point in video 2 (6'07"-6'20").

Such resources strengthen the salience operation because it marks the most relevant points of the discussion well and contribute to the holding of ideas in the memory since they work as a kind of rational and emotional highlighting proposed by the enunciator for the matter at hand, by the produced focal narrowing (GRIZE, 1996). According to this author, four movements are generally used in this process: (i) in the starting point, there is the description of what is being discussed; (ii) next, successive unbalancing to delimit the field that is being circumscribed occurs; (iii) answers to the presented questions are organized; (iv) there is a punctual discussion in function of the gathered elements in the material. The two videos follow, with variations in the examples and semiotic resources, a script that exactly accompanies this sequence.

Besides, those resources serve the topic organicity. The movement of the topic may be characterized by the following way: in video 1, examples that serve to confirm how the sharing (without fact checking) continually occurs both on Facebook and on WhatsApp to persuade the netizen to stop disseminating fake news (named as "shit") on the internet; in video 2, the movement follows another process: entities are directly cited as the authority voice to prove how much fake news circulates around the world and the distinctive place of Brazil in this context, which is going to reinforce the country's isolation, mostly motivated by the actions of the President of the country, who openly defended the use of a set of medicine without scientific confirmation during the combat against the pandemic. In both videos, some resources are present: the comparison between

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[10] Credits: Screenplay – Rob Gordon and Felipe Castanhari Editting – Nando Almeida Arts – Rick Ordonez Research – Leonardo Producer – http://tucanomotion.com.br

[11] We are together in the fight for the quality of information on the internet, mainly at moments when we can save lives. For that reason, we want to make you all aware of the importance of verifying the source of information, valuing the scientific dissemination, the journalism, the fact checkers, and researchers that daily work to feed the public debate with precise and reliable information.

data and facts, the repetitions of the defended thesis and the paraphrases of the ideas presented since the beginning of the videos, and in this process, the prosody through intonation is an efficient mechanism in the explanation, emphasis, and strengthening of ideas. The typical intonational modulation[12] is often used (as at: 1'27"-1'32" in video 1 and 7'18"-7'28 in video 2, among others), for the ideas to be reassured.

3. IMPLICATIONS OF THE ANALYTICAL PROCEDURES IN THE TEACHING OF ORAL LANGUAGE COMPREHENSION IN PRIMARY AND SECONDARY EDUCATION

If the understanding of the face-to-face verbal interaction is a demanding activity, as the NURC project delimited in Brazilian academic research over the years, the articulation between orality and varied semiotic resources makes this task even more complex for both teachers and students of primary and secondary levels, mostly when dealing with materials that aim to defend a thesis towards an intended audience. When taking what has been studied for more than 20 years, paying attention: to the context of each material, which includes both the recognition of production and circulation conditions of the videos from YouTube[BR] and the identification of the participants; to the recognition of beliefs and knowledge under dispute in/for the discourse; to the constitutive aspects of orality; to the multimodal composition of an audiovisual production, is essential when organizing activities of oral comprehension.

According to Marcuschi (1998, p. 23), as "[...] the comprehension is a multiple signalization process" since it requires the existence of common referents, the interest built in function of the objectives previously defined and of the focused attention, among other skills, it is the duty of the teaching and learning activities to identify means to exist "sufficiently engagement to the development of cognitively combined and interactively coordinated activities". Particularly, in the case of the work with multimodal texts of SD, which have in the verbal language the main support, the demands are widened since it is also needed the understanding of how a game between perspectives is articulated in the construction of explanations and argumentations.

For also accepting that the construction of knowledge in classroom is interactively made in a "network of relationships with [socially], overlapping, interconnected cognitive spaces" (MARCUSCHI, 1998, p. 27), it is assumed that students' and teachers' actions taken inside school need to consider the reading/comprehension practices situated in the social reality. In relation to what has been previously discussed, it is known that students are daily exposed to videos circulating on YouTube[BR], but there is still a lack of studies that may support the teachers' work in relation oral comprehension, as Galvão and Azevedo's study found in 2015. Thus, besides proposing an exploratory procedure applied to the analysis of two SD videos, to finalize this paper, five points that may guide the creation of oral and multimodal text activities are indicated.

1. Circumscribe the contextual aspects that refer to the production and circulation of SD discourse.

As students are frequent users of this social media, the survey of the contextual aspects need to rely on the information that the group can directly identify in the description of the videos and in other means of information. Joining search strategies for information to the description of each video is also a productive way to expand the informational and digital literacy (AZEVEDO; GASQUE, 2017).

2. Elaborating a global view of the discourse flow, considering the represented/interactive participants and the construction of reasoning in SD.

The observation of the discourse flow requires the understanding of how the filtering and salience operations guide the linguistic, pictorial, sonant, etc. choices. Organizing work groups may broaden the perceptions from what is identified in the discursive materiality and of students' previous knowledge since each

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[12] "[...] typical intonational modulation: rising intonation, suggesting the beginning of a sentence, in the opening of a topic and falling intonation, most of the time with concluding inflexion in the end" (JUBRAN, 2006, p. 110).

one of them may recover distinct aspects. In relation to the represented participants, the teacher's collaboration may be needed because the enunciative marks may not be easily perceived by students.

3. Observing how the centration of the discourse topic collaborates with the comprehension of the positions towards a subject at hand in SD.

The development of an active listening, i. e., of a listening that considers what is being said, the implicit, and the articulation among the parts that compose the oral text is favored by the exchange of ideas among students in relation to the discursive positions identified in different segments of the audiovisual material.

4. Mapping the linguistic and semiotic resources that collaborate with the organicity of the discourse topic in order to comprehend the argumentative orientation.

This kind of identification is often performed in the academic scope, then, in order to make activities that favor this point, it tends to be needed a coordinated planning with specific activities that promote the construction of inferences, mostly the sociocultural, as well as the organization of schemes that facilitate the perception of the relations among the different multimodal resources.

5. Analyzing how the intersemiotic complementarity guides the production of meaning effects in/through the SD discourse and the oral argumentation.

Besides motivating the comparison among different oral and multimodal materials produced in society to observe the coherence between the composition of discourse and the use of varied semiotic resources, with particular attention to the impact of prosody in the exposition of ideas, mostly around polemic themes, dialogues may be organized concerning specific points that directs the attention to certain uses of language.

Even though it is a short list, these points permeate the set of aspects analyzed and delimit those that directly collaborate with the teaching and learning of the description and interpretation of scientific dissemination papers that freely circulate on the internet. Due to the limits of this texts, the concepts pointed out deserve to be widened as well as the inclusion of the details that are available in the cited texts.

In addition to that, it was aimed to explain that the SD papers build an objectivity that is associated with opinions (axiological opinions) justified both in situations lived in society and in studies and research that deepen the discussions presented, which expands the understanding of the composition of a discourse genre in circulation and the continuous alteration it goes through in contemporary society.

Finally, it is important to highlight that the study relative to the kinds of reasoning, briefly mentioned in this study, is a field that may be widened so as to afford many activities of comprehension.

FINAL REMARKS

In this paper, the scientific dissemination paper genre in video format circulating YouTube[BR] was chosen, so that it would be possible to compose a methodological and analytical procedure that would favor the analysis of orality combined with the intersemiotic complementarity. Throughout the analysis of two scientific dissemination videos, two operations that conduct the construction of this kind of discourse were delimited: the filtering and the salience, which help to understand how linguistic and non-verbal elements that constitute orality are associated with semiotic resources in audiovisual productions that are used to discuss a polemic theme.

The set of concepts gathered in this study is non-exhaustive, it may and should be incremented, but it is already a guide of pedagogical practices that may be employed since the elementary school by teachers that have the orality and oral argumentation as fields of interest.

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