LOOK READING COURSE OF PHOTOGRAPHY BY EYE TRACKING

PERCURSO DE LEITURA DO OLHAR DE FOTOGRAFIA POR RASTREAMENTO OCULAR

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ABSTRACT

Through an unprecedented experiment on "Image reading by eye tracking", we studied the reading of syncretic multimodality as an object of study. Specifically, we investigated polysemy and polychromy as semantic phenomena of visual perception. In a situation of reading digital photography from a Brazilian advertising magazine (*G Magazine*), Brazilian university readers performed eye movements, building course for reading the gaze, with effects of (in) order of the image and meanings of the gaze (*reading gestures*). The justification for choosing such data from a specific group (heterosexual men) is based on the average answer "yes", in relation to the question "Is there nudity in the image?" (found on the last slide of the experiment), if it presents itself differently from the "no" answers of the other five participating groups (homosexual and bisexual men, homosexual, bisexual and heterosexual women). Also by the heat map and 'p' value of this group, heterosexual men indicate pairwise comparisons, in relation to the areas of interest: underwear of the right model, face-wig-bust of the drag queen, face of Dicesar, sandal of the drag queen, face of right model. The analysis proposal shares theoretical knowledge of the various facets of the 'construal' (building of meaning, Ferrari, 2016; Ferrari *et. al.*, 2017) and of the semantic-discursive relationship (Pêcheux, 1982, 1983, 1984; Souza, 2000, 2001, 2011 , 2013, 2018; Nascimento, 2015, 2017, 2018, 2019a, 2019b) in visual perception of reading digital photography of advertising cover, from an erotic magazine. The authors invest in the interpretation that ensures the elaboration of the answer "Yes" or "No" in the face of the question proposed in the image reading experiment.

KEYWORDS: Look reading course. Image. Sense of the look.

RESUMO

Por meio de um experimento inédito sobre "Leitura de imagem por rastreamento ocular (*eye tracking*)", estudamos a leitura de multimodalidade sincrética como objeto de estudo. Especificamente, investigamos a polissemia e a policromia como fenômenos semânticos de percepção visual. Em situação de leitura de fotografia digital de revista publicitária brasileira (*G Magazine*), leitores universitários brasileiros realizaram movimentos oculares, construindo percursos de leitura do olhar, com efeitos de (des)ordem da imagem e sentidos do olhar (*gestos de leitura*). A justificativa de escolha de tais dados de grupo específico (homens heterossexuais) se baseia pela média de resposta "sim", em relação à pergunta "Há nudez na imagem?" (que se encontrava no último slide do experimento), se apresentar diferente das respostas "não" dos demais cinco grupos participantes (homens homossexuais e bissexuais, mulheres homossexuais, bissexuais e heterossexuais). Também pelo *heat map* e valor de '*p*' desse grupo homens heterossexuais indicar *pairwise comparisons*, em

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relação às áreas de interesse: cueca do modelo direito, rosto-peruca-busto da *drag queen*, rosto do Dicesar, sandália da *drag queen*, rosto do modelo direito. A proposta de análise compartilha conhecimentos teóricos das várias facetas do *construal* (construção do significado, Ferrari, 2016; Ferrari *et. al*, 2017) e da relação semântico-discursiva (Pêcheux, 1982, 1983, 1984; Souza, 2000, 2001, 2011, 2013, 2018; Nascimento, 2015, 2017, 2018, 2019a, 2019b) em percepção visual de leitura de fotografia digital de capa publicitária, de uma revista de erotismo. Os autores investem na interpretação que assegura a elaboração da resposta "Sim" ou "Não" diante da questão proposta no experimento de leitura imagética.

PALAVRAS-CHAVE: Percurso de leitura do olhar. Imagem. Sentidos do olhar.

1. Introduction

Next, we deal with the **theoretical relationship** of Cognitive Linguistics and French Line Discourse Analysis with Experimental Linguistics through an unpublished experiment on *Image scanning by eye tracking*[3]). With this, we highlight the reading of syncretic multimodality as **object of study**, specifically the polysemy as a semantic phenomenon of visual perception in a situation of digital photography reading of Brazilian advertising *G Magazine*, whose eye movements have built reading paths, order of the image and directions of the look. These senses of the gaze will be analyzed as *reading gestures*.

What we will see are **research data** (NASCIMENTO, 2019a) of the average of an experiment resulting from the participation of 24 university students, from a public institution of higher education, and individual results (*gaze plot, heat map and pairwise comparisons*) of participant, 20 years old, student of the 3rd period of Letters, in the academic year of 2017. The participants' collaboration was to the task of visualizing an image and answering a question on the screen of a computer while the ocular tracker recorded its times and patterns of fixation.

With the **general objective** of contributing to the understanding of the semantic polysemy process involved in the visualization of images, the **specific objectives** are: (*a*) distinguish the reading of the areas of interest in terms of their specific conceptual properties, (*b*) investigate the distinction of reading between common areas (*underwear*, *face*, *legs* etc.) and particular areas (*right model underwear*, *left model underwear* etc.), (*c*) to analyze the reading of a participant's ocular movements, through the results of *gaze plot* and *heat map* (TFD: **total fixation duration** in the area of interest) of the ocular tracing experiment, and

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[3] For more information, see França, Ferrari, Maia (2016), especially the chapter on *Methods of linguistic investigation*, the part of eye tracking (eye tracking), on page 76. See also Maia (2008).

finally, (*d*) to identify reliable 'p' values of the heterosexual men group by means of *pairwise comparisons*.

The **rationale for choosing** such specific group data is based on the mean *yes* response to the question *Is there nudity in the image*? (Which was on the last slide of the experiment), if different from *no* of the other five participating groups (homosexual men, bisexual men, homosexual women, bisexual women, heterosexual women). Also by the heat map and 'p' value of this group heterosexual men indicate pairwise comparisons, in relation to the areas of interest: right model underwear, drag queen's face-wig-bust, Dicesar's face, drag queen sandal, right model.

The **analysis proposal** shares knowledge of Cognitive Linguistics and French Line Discourse Analysis by adopting the dimensions of the various facets of the construct (meaning construction) for analysis and the semantic-discursive relationship in visual perception of digital cover photo reading in a May 2010 issue, of an erotic magazine. We will adopt the **theoretical support** of Langacker (1987, 1991), Sweetser (2013), Ferrari (2011, 2016); Ferrari *et. al*. (2017), Dancygier (2017), Dancygier e Vandelanotte (2017), Souza (2000, 2001, 2011, 2013, 2018), Pêcheux (1982, 1983, 1984) e Nascimento (2015, 2017, 2018, 2019a, 2019b).

With some *scientific traditions*, we will share theoretical discussions likely today in the discursive field. We chose scientifically as the interfaces mentioned by Michel Pêcheux (in his 1984 text, posthumous publication), still lacking in theoretical-methodological developments. The challenge is to work investigatively with two theories (or more) in interface mode, through dialogues, revisions, duels, even with points of refusal, in order to obtain results for reading and interpreting the syncretic materiality of modal texts.

We clarify that these *shares* mentioned by the author are thought in relation to syntactic functions in the "real language" (PÊCHEUX, 1983), which are not strictly limited in the sentence, but are related to interfaith phenomena (and linguistic marks of enunciation and of the said pragmatic record), understood as pertaining to the intradiscourse (concept that comprises a linguistic of the discursive sequences) and the interdiscourse (concept that comprises a semantics of the discursive sequences, or an intersection of crossings of these discursive sequences).

In the same text about the choice of the term *sharing*, Pêcheux ([1984]2011, p. 227) points out the **commitment** and the **contradiction** about the shares[4]:

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[4] See Nascimento (2015).

(1) *the contradiction in the approach under the historian's practices (for example, the social history of mentalities or Foucauldian archeology), Sociology (for example, the symbolic in social relations), Philosophy (for example: the philosophy of language)*;

(2) *the contradiction in approach under the status of the subject in discourse, in the case of Cognitive Psychology and Intellective Psychology, against Psychoanalysis (Lacanian, for example)*.

With the investigative procedure of interface (1) and (2), here, in this text, the sharing with Cognitive Linguistics and French Speech Discourse is developed in an unpublished experimental research on *Image Reading* by eye tracking.

We further clarify that the present research could potentially be affiliated with the more contemporary views on scientific interdisciplinarity and on the question of language and symbolism in psychology (PÊCHEUX; HENRY; HAROCHE; GADET, 1982), thus avoiding the irreducibility of approaches to an innate logical or neurological cognitive substrate, or acquired, either to a logical and cognitive substrate. The approach that considers the function of the symbolic (NASCIMENTO, 2015, 2017) – without ever being a reductive of the facts of language – is what interests us, because we corroborate with the Freudian position concerning *free association* as analytical technique and with the Lacanian position to the effect of the writing, to the sinthome/sympthom[5], to the drive, to the desire and its interpretation, even when methods of experimentation on sensation and perception are chosen for research (NASCIMENTO, 2019a; 2019b).

In the case of ocular tracking, recorded ocular movements are nothing less than the identification of visual perceptions, whose extension of the course of the eye registers the polysemy of the senses, the drive and desire, the singular (and syntactic) readings – Lacan (1975) – It can be said, therefore, that ocular tracking identifies "reading trituration" (PÊCHEUX, 1981), once ocular movements are considered as discursive sequences of visual grinding: selection, displacement, rupture, slippage, derision.

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[5] Sinthoma (sympt*h*om) – by Jacques Lacan (1975-76): that opposite to the symptom, the pathology; the singular; the creation. Sinthoma/Sympthom is distinguished from symptom, just as there is a different path from disease to cure, from repetition to authorship, from anguish to the singular trait of jouissance, or identity, or happiness, or pleasure (this positively). See Jacques Lacan – *Seminar 23: The Sinthoma*, for example.

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2. Theoretical assumptions

For Cognitive Grammar (developed by Ronald Langacker, 1987, 1991), what is meant by grammar is that there are schematic patterns of conceptual structure and symbolization. In this GC, the term predication is used conceptually to name the meaning of an expression, regardless of the limitation of its semantic field, for example. This theoretical field of GC addresses the meaning not only of the conceptual content but also of the particular and singular way in which it is constructed, constructed. Specifically, this theory has as its tool the notion of construct. In his understanding, construal understands the phenomenon of meaning, in what refers to the competence of the speaker with regard to the treatment of the same situation, or similar situation, in other ways, alternatively or substitutes semantically – to cite as an example.

In the wake of the meaning being the interaction between conceptual and constructive content, and the domain is the content, we chose to consider that the ocular movement (given as a result of gauze plot and heat map in the ocular tracing experiment) in the activation of a set of cognitive domains, responsible for visual perception, for the course of the look and correspondingly for the senses of that look, resulting in a given semantic path, which corresponds to the base construction for the meaning.

For example, the specific angle, color, and shape of the digital photographic image of *photographic model underwear* may evoke the following domains of experience: space, the underwear concept, the more schematic concept of male underwear (portability for penis and scrotal sac), the design of a designer underwear, notions of content, volume etc. On the one hand, the list of domains evoked by an image is neither extensive nor exhaustive, and always depends on the reader's perceptual purpose, for example; on the other hand, a distinction can be drawn between the basic domain and the non-basic domain. We know that non-basic domains "tend to organize in hierarchies, so that a conception relative to a certain level presupposes and incorporates one or more conceptions of a more basic level" (FERRARI *et. al.*, 2017, p. 1468).

By basic domain it is understood that it is analysable based on other conceptions (example of the underwear: space, product, fabric, chromatic spectrum, designer, sewing spectrum, or seamless etc.) and non-basic domain, what can be reduced to other notions (example: immediate experience of using the product *underwear*, emotion of intimate use, eventually to the scene of sexual act, such as the sensation of sexual pleasure, portability

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product that, in a way, guarantees safety and protection for movements and visualization, respectively etc.).

About the meaning, we choose to adopt for analysis the dimensions of the various facets of the construct. "While recognizing that not all meanings are based on visual perception, CG uses visual metaphor to classify the various facets of the construct. These facets include the dimensions of specificity, focus, and prominence" (...) (FERRARI *et. al.*, 2017, p. 1468).

The specificity is for the level of precision of a situation. For example, a particular garment may be described as *underwear*, but also as swimwear, which implies a greater degree of specificity. In this case, the term *underwear* is more schematic than *swimwear*. The characterization received from *underwear* can be instantiated by more specific characterizations, each of them serving to elaborate more detailed specifications (underwear [cueca] → trunks → purple trunks → small purple trunks).

Focusing is considered as an aspect of the construct to include

> the selection of conceptual content for linguistic presentation, as is the case of the organization in terms of figure and background (foreground *vs.* background). In more general terms, all expressions evoke background knowledge as the basis for interpretation (FERRARI *et. al.*, 2017, p. 1469).

We will set an example. In order to interpret one of the ten (10) areas of interest selected to monitor and control the results of reading digital photography, in the case of the *underwear area of the photographic model*, one must access the cultural knowledge related to this type of model, without which the reader would think the underwear could be either. That is why, in addition to the organization figure *vs.* background, focus "includes the extent that an expression covers the accessed domain. For each domain of an array, an expression has a scope consisting of its coverage of that domain, which will always be bounded in its extension" (FERRARI *et. al.*, 2017, p. 1669). Thus, the term underwear (cueca) evokes a certain spatial extension for the specification of its characteristic form, the verb modeling requires the mental access to specific characteristics (of time and space, for example) for the identification of a modeled body, and so on.

In terms of figure/background organization one can have the scope. Scope is "a matter of selection" (FERRARI *et. al.*, 2017, p. 1469). Based on maximum scope, *clothing* selects a certain conceptual content to put in prominence (ie, immediate scope). This selected content *purple underwear* and *lilac underwear* – in examples in case of image reading of the experiment presented here – constitutes a particular structure that will be called profile.

In view of the above, the concept of polysemy becomes necessary. Ferrari (2011) part of *Metaphors we live by*, which marked the birth of Conceptual Metaphor Theory (LAKOFF; JOHNSON, 1980), to explain how the metaphoric phenomenon is related to notions of perspective, time, space and movement. In addition to the concepts of the conduit metaphor (REDDY, 1979) and metaphorical systems (LAKOFF, 1993), the author still presents the concept of personification, which Lakoff and Turner (1989) studied from literary texts, as well as the relation schemas imagery and polysemy remain with the metaphor. On metonymy, Ferrari (2011) shows that cognitivists see the phenomenon as a projection between two domains, unlike metaphor, which involves only one. The author explores the relation between metaphor and metonymy through the process of metaftonímia, resulting from the interaction between both concepts.

With regard to the theory of mental spaces, Fauconnier's proposal (1994, 1997) is explored by showing how "mental spaces are created as speech develops" (FERRARI, 2011, p. 109). The concept of projection between domains is explained using concrete examples to illustrate how two distinct mental spaces – Reality and Representation – can relate to a given sentence. In addition, the notions of anaphoric references and referential ambiguities, besides the factors time and mode are organizers of the mental spaces. Finally, the concept of conceptual merge is presented as "the origin of our aptitude to invent new meanings" (FERRARI, 2011, p. 120). The author also discusses how merges are applied to syntactic constructions through XYZ constructs (Turner, 1991) and how they relate to the concept of metaphor.

In the present research, the object of study the image of advertising digital photography as non-verbal language establishes the polysemy in the order of the image at the moment of ocular movement, in order to indicate construction of movement caused by the result of gaze plot and confirmation by the heat map , in its total fixation duration (TFD) – total fixation duration in each area of interest. This indication of motion construction caused by gaze plot results demonstrates the path taken by looking at the image, so that the ocular movement following the previous one indicates the new stimulus resulting in visual perception. Thus one obtains the senses of the gaze, whose polysemic network is woven, for example. This is a hypothesis of this research.

Ferrari (2015) presents a study that contrasts analyzes of conditional constructions proposed by Functionalism and Cognitive Linguistics, arguing that the adopted semantic models – Objectivist Semantics or Cognitive Semantics – ground the difference of analytical

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approach between the two strands. In this research, the author states that "the polysemy of verbal tenses is a recurring phenomenon" (FERRARI, 2015, p. 147).

Ferrari (2016) has studied polysemy in constructions of verbal communication in Portuguese, retaking proposals that communication tends to be codified linguistically in terms of the Conduct Metaphor (REDDY, 1979). The importance of this study is for the extensions associated to the Conduct Metaphor, from Polysemy Ties: the Metaphorical Extension of Motion Caused and the Metaphoric Dative Extension. With the combination of Conceptual Metaphor Theory (LAKOFF; JOHNSON, 1980) and the Construction Grammar paradigm (GOLDBERG, 1995, 2006), the author argued that the CMC and Dative Construction (CD) can motivate said extensions.

In this study, the researcher states that "the polysemy loop captures the nature of the semantic relations between a particular sense of a construction and extensions of that sense" (FERRARI, 2016, p. 106). According to the author, the type of inheritance ties "is not the only possibility of metaphorical relationship observed in grammar. Ties of polysemy can also be established by metaphorical extension" (FERRARI, 2016, p. 107). The notion of metaphorical extension lies in the constructs involved that are not qualified as distinct syntactic constructs (FERRARI, 2016). Recalling the molds proposed by Lakoff (1987), Ferrari (2016, p. 107) triggers the author's teaching that "metaphoric extension corresponds to bonds that are established by polysemy". In the wake of this distinction, the present research may focus on metaphorical extensions related to non-verbal language, in the case of the object of study the image of digital advertising photography. These metaphorical extensions establish polysemy bonds in different ways of the Ties of Motion Construction and the Dative Construction, which the author of the study mentioned. In the case of non-verbal, the hypothesis is the construction of movement caused to be identified in ocular movements, for example.

In this context of syncretic multimodality, in the case of digital photography, we resort to what Sweetser (2013) approaches as a representation of the point of view in its relation with the creativity involved in different multimodal resources. In her text *Creativity across modalities in viewpoint construction*, the author affirms:

> Given the complexity that representation from the "single" point of view can have, it is fascinating to take a step further and see the creativity involved in representing multiple viewpoints in language and gestures, and even in visual art. As artists and art critics have always known, creativity consists in finding new and elegant ways to

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use the resources of your chosen medium. And each of the media mentioned above has different features (SWEETSER, 2013, p. 250)[6].

The functioning of language, face to face, "has all the resources of a body inherently envisioned in space, to represent phenomena from the point of view" (SWEETSER, 2013, p. 250). Taking the standpoint of language resources can combine linguistic forms to mark the incorporation or combination of viewpoints, says Sweetser (2013). The author exemplifies with an ironic Yes, I am so annoying, in Standards situation, so the speaker assigns the opinion so irritating to the spoken imagined speaker, whose gestures and verbal speech are integrated into verbal and gestural language, therefore non-verbal.

"How could we initially think that the single body is a limitation in representing multiple bodies – or at least we might think that it would be confusing for recipients to unpack the blends and realize that a fist represents part of an attacker while the rest of the body represents person being attacked" (SWEETSER, 2013, p. 250). The author still addresses this aspect with the following question: But clearly this is no problem for humans interpreting interaction – and why should it be, for people who can understand Free Indirect Style? Faced with this, readers and listeners *unwrap* these blends in a smooth and comfortable way, building multiple viewpoints in relation to one another (SWEETSER, 2013).

When this question is presented to show the variety and nature of the issues raised by the phenomena of point of view in the multimodal language, since the multiple modalities involved are involved in research and in the work of language scholars, the questions are generally of an emergency of meaning, whose own use of language can be better understood by properly investigating other modalities alongside language, such as the innovation of contexts and forms of language.

According to the field of Discourse Analysis, unlike an epistemological emptying of the language, we work on that notion of language in its relation to discourse and image. This approximation is with the levels of discourse (formulation, constitution and circulation). Hence the image as a condition of the production and interpretation of the reading of the reader. Hence the study of image with "the study of discursive phenomena (...) are confronted with a wider space, that of reading and interpretation." (PÊCHEUX, [1984]2011, p. 227).

When studying image, we are in the defense of the order of the image confronting confrontation with the disorder of the look – that is, with the multiple and asymmetrical traces

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[6] Given how complex the representation of 'single' viewpoint can get, it is fascinating to go one step further and see the creativity involved in representation of multiple viewpoints in language and gesture, and even visual art. As artists and art critics have always known, creativity consists in finding new and elegant ways to use the resources of your chosen medium. And each of the media mentioned above has different resources (SWEETSER, 2013, p. 250).

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of the gaze. Symmetry stands for the image, offering the order, as the asymmetry is for the look, offering clues, signs, emblems. To put it another way: the movements in the path of senses result from order and disorder. These eye movements are confronted with the space of reading and interpretation. Movements – often – produce discontinuities through dispersal and regularity of discourse. These discontinuities present a gap in study and signal the need for research.

For further investments in relation to this gap, the study on the imaginary syntax (NASCIMENTO, 2018, 2019a, 2019b) seen by the *heat map* can be productive, while allowing the identification of a dissimetric and uneven sequence of the eyes, which, by the same token, it also allows the identification of the production of the senses of the gaze. The senses of the eye may not necessarily and necessarily correspond to the senses of the image, imposed by the order of the image itself, because we do not see only the visible. There are discursiveness in what you see, just as there is in what is and is visible. However, visibility is not only visible, it is also in the irreversible, in the whimsy, in the remains that may be in the alleys and in the curves of the ways of the look, by sequences taken by the eyes. "When it is affirmed that an image is not visible, but becomes visible through the gestures of interpretation, it assumes the political-ideological reach inscribed in the use that is made of the images" (SOUZA, 2018, p. 23).

Of course, there is the ordinary functioning of the discursiveness of the gaze, by the recording of the dashed sequences through the eyes. However, it is also true that there are other functions that are not univocally ordinary. There is the inverse order of the canonical order of syntax! That is quite true. There are truths of pallor (*La véritès de la palice*, as Pêcheux called his 1975 work)! These conditions of eye production and interpretation can *contribute to the study of the effects of change affecting the unequal and uneven circulation* of the meanings of the order of the image. There is work of discursive heterogeneity in the socio-historical contradictory game of the image and the look. The look is not always symmetrical and equal to the image. Here is the disorder of the look.

This disorder may point to susceptible historical events, ie: other and new historical events. Hence the discursive event of the image as the foundation of another and new historical event, as the foundation of another and new discursive formulation/constitution. The image is for the structure and the event as the discourse is for the structure and the event (PÊCHEUX, 1983). What is true about the pallor of a face? or a countenance? ...the speech if it were not semblante [to remember Lacan]? There is tongue in the face, in the countenance... and in the image!

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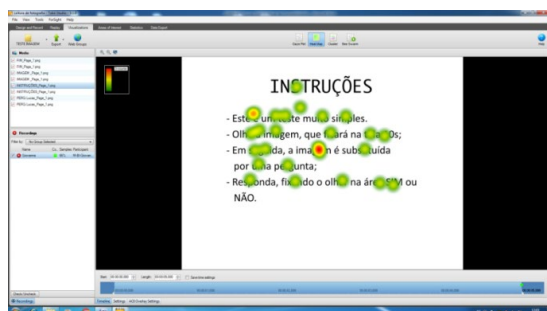Revista Linguíſtica **736**

3. Methodology

Based on the Langacker (1991) theoretical instrument, developed to deal with the meaning of linguistic expressions, whose focus was on nominal structures, we corroborate for the reading of image with its defense *that the semantic function (and not the structural character) is the critical factor in understanding your internal organization*. In the wake of the fact that an area of interest of the image profiles a thing, defined as an imaginary region (set of interconnected entities) in a given domain, we make analytical efforts to distinguish the areas of interest in terms of their specific conceptual properties.

Specifically, we investigated the distinction between common areas (*underwear*, *face*, *legs*) and particular areas (*right model underwear*, *left model underwear*, *drag queen face*), proposing that the former function the type function, while the latter characterize instances of a type. The face, for example, is a type that functions as a universal human cognitive element, regardless of sexual orientation. On the other hand, the particular areas are dependent on the sexual orientation, according to the point of view and polysemy of the gaze of the selected group, in the case the group of heterosexual men. Hence, particular areas characterize instances of one type – the variability point of view and polysemy of the gaze. The *underwear of the right model* or the *underwear of the left model* are instances of a type (*underwear*, *clothing*), as a particular and non-universal cognitive element. This leads us to predict research that sexual orientation influences the area of interest.

In order to contribute to the understanding of the processes involved in the visualization of images, participants were asked to collaborate with the task of visualizing an image and answering a question on the screen of a computer while the eye tracker recorded their times and patterns of fastening.

Let's look at an experiment resulting from the participation of a participant, 20 years, student of the 3rd period of Letters, academic year of 2017. In the caption of the figures, are the indications of instructions, the steps of the experiment and the number of the slide, sequence that was displayed on the screen by the participant.

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Figure 1: *Heat Map of the instructions (slide 1 of the experiment)*

Source: *TOBII equipment TX300*

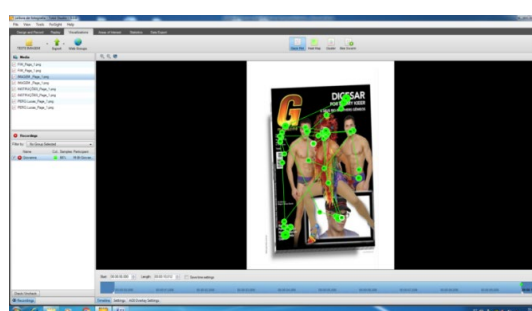**Figure 2:** *Gaze Plot of instructions (slide 1 of the experiment)*
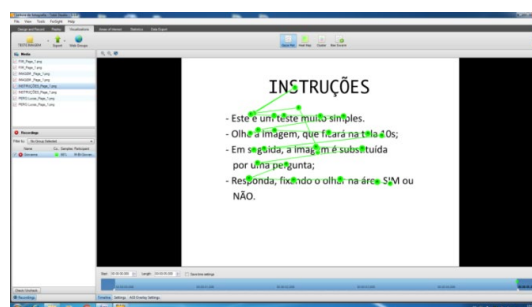
Source: *TOBII equipment TX300*

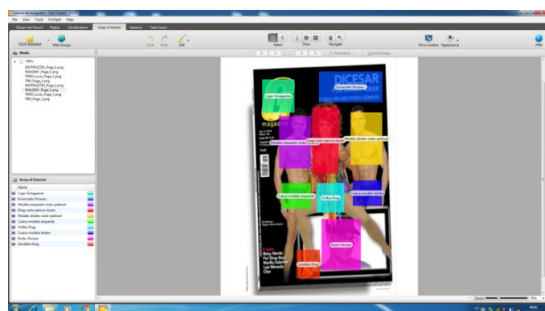**Figure 3:** *Heat Map of the image (slide 2 of the experiment)*

Source: *TOBII equipment TX300*

Figure 4: *Gaze Plot of the image (slide 2 of the experiment)*
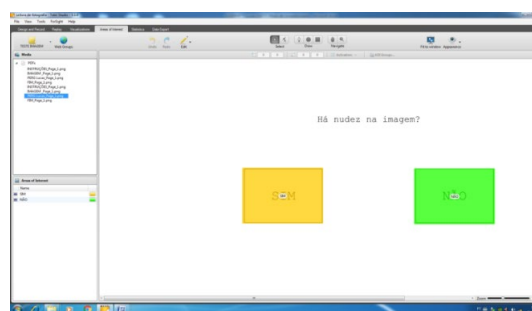

Source: *TOBII equipment TX300*

Figure 5: *Areas of interest of the image (procedure for analysis of the experiment)*

Source: *TOBII equipment TX300*

Figure 6: *Response Areas of Interest (procedure for analysis of the experiment)*
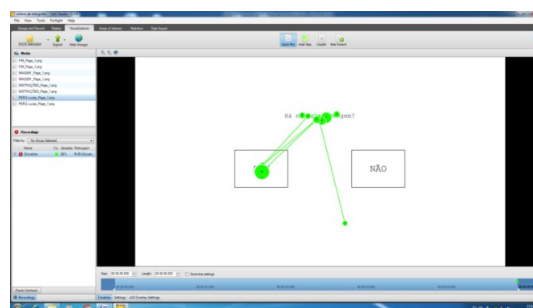

Source: *TOBII equipment TX300*

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Figure 7: *Heat Map of the question*
(slide 3 of the experiment)

Source: *TOBII equipment TX300*

Figure 8: *Question Plot Gaze*
(slide 3 of the experiment)

Source: *TOBII equipment TX300*

Figure 1 is Heat Map of the instructions (slide 1 of the experiment); Figure 3, Heat Map of the image (slide 2 of the experiment) and figure 7, Heat Map of the question (slide 3 of the experiment). Figure 2 deals with Gaze Plot of the instructions (slide 1 of the experiment) and figure 4, Gaze Plot of the image (slide 2 of the experiment). Figure 5 shows areas of interest of the image (procedure for the analysis of the experiment) and figure 6 of Areas of interest of the response (procedure for analysis of the experiment).

The image offered by the software coupled to the eye tracker used can be visualized in heat maps that portray, in a color scale, the greenish tones, passing through the yellow and the orange tones, until reaching the red, the duration of the fixation (first fixation and total fixation) and the number of saccadic movements on the Areas of Interest indicated in the stimuli, from the lowest to the highest values assigned to this image by the quantification operations generated by the system. With this feature, one can see in the heat map 1, 3 and 7, above, the convergence between the indexes of *heat* in the first pass of the look (first-pass).

In the same heat map 1, 3 and 7, we notice the reddish spot on the region, which reflects the average of the First Fixation Duration (FFD), in sharp contrast to the greenish spot, which received average FFD significantly lower.

The subject's ocular fixations were tracked and the task consisted of the self-monitored reading of the image that appeared on a single slide in the second screen, and on the subsequent screen an interpretive question was presented with two response options, The look on one of them. The dependent variables were established as: (i.) total fixation times in the regions of interest, (ii.) ocular fixation in a region, and (iii.) total fixation times in response alternatives to the final interpretative question.

The experiment was applied using TOBII equipment TX300, binocular, integrated the monitor of 23, in an experimental laboratory room. Initially, the task was explained to the

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participant, asking them to read an image quickly, self-monitoring their passage through the space bar, on the computer keyboard. When pressing the space bar, an interpretive question, with two options of answer, was called to the screen, and the participant must answer it, fixing the look for a few seconds in the option that it considered correct. As the TOBII TX300 system performs minor head movement corrections, no head fixation device (nasal clip and/or chin rest) was used, which allows for more natural reading.

The calibration of each subject, which was seated at a distance of 60 to 65 cm from the screen, was then followed and the appearance and movement of 12 points represented by green circles. Calibration was repeated if acceptable parameters were not obtained as indicated by the program. After the calibration phase, the subject was exposed to three slides (instructions, image and question), with only one slide being the presence of the image, which was a digital photograph, cover of advertising *G Magazine*, being observed by the experimenter, who he could not tell him any adjustments to the task. Then, the experimenter retired from the room, leaving each subject to complete the experiment, which had an average duration of 5 minutes.

4. Analysis

For Ronald Langacker (1987, 1991), grammar is one in which there are schematic patterns of conceptual structure and symbolization. In this conception, we can see multimodality as a linguistic object that has its own grammar – perhaps a visual grammar – whose predication is composed of elements that anchor the meaning of these elements, depending on their morphological, syntactic and visual semantic fields, for example. Corroborating with CG, the meaning depends on the particular and singular way of constructing this content.

When treating the notion of construal as a tool, we understand, here, the phenomenon of meaning in what refers to the competence of the reader with regard to the treatment of the content and organization of material loaded with meaning. In the wake of which meaning is the result of conceptual and constructive content, the domain is the content of multimodality, whose ocular movement given as a result of gauze plot and heat map in the ocular tracking experiment, performed by the research presented here, focuses on the activation of a set of cognitive domains for concentration in a particular area of interest that longer duration of fixation reveals the attention of visual perception, through the course of the look.

Let us look at the following table to understand what we have just affirmed.

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Table A: Average of heat map results of male and female participants

RESULTS	PARTICIPANTS		
MEN	**Gay Men**	**Heterosexual Men**	**Men's Bisexuals**
Heat Map			
WOMEN	**Women Homosexuals**	**Heterosexual Women**	**Women Bisexuals**
Heat Map			

Source: TOBII equipment TX300

Given this syntactic concentration of the look, singular and particular, the correspondence in the senses of the gaze demonstrates results in a given semantic path visibly marked by the gauze plot – to be seen more ahead. We can say that the relation gaze plot and heat map corresponds to the construction of base for the meaning, seen as matrix. This matrix refers to the ocular choice given by movement in relation to the specific angle, color and shape of the image. For example, the *face of the photographic model on the right*, the *face of the photographic model on the left* or the *face of the drag queen*, which may evoke the following domains of experience: space, the concept of face, of face of photographic model or face of drag queen, the conception of a face, notions of content, phenotype etc. The list of domains evoked by a face image always depends on the reader's perceptual purpose.

Next, we see the bar chart showing the total fixation duration (horizontal scale from 0 to 10) in each of the 10 areas of interest (vertical scale from 1 to 10).

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Graphic 1: TFD (total fixation duration) – total fixation duration in each area of interest
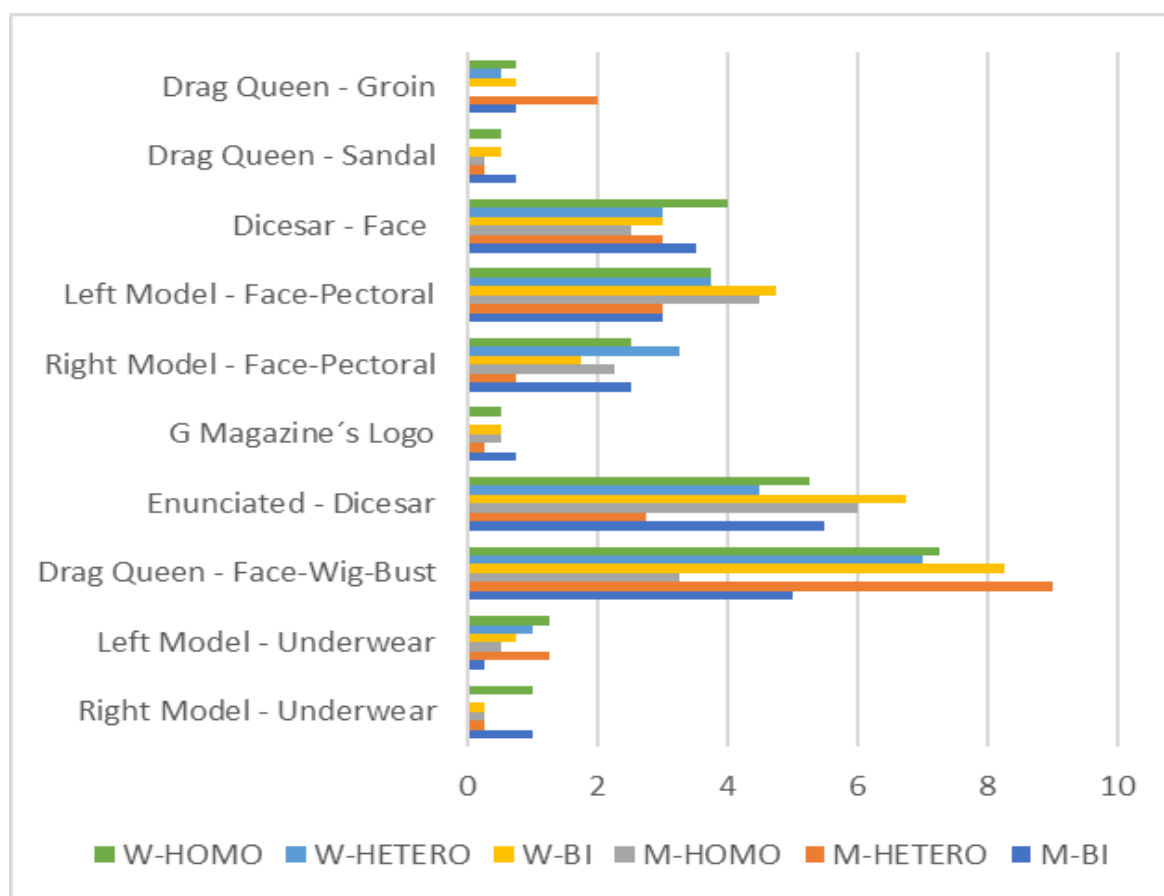
Source: self elaboration

On the meaning, we deal with the dimensions of the various facets of the specificity, focusing, and prominence (FERRARI *et. al*., 2017, p. 1468): The specificity lies in the level of precision of a situation, a certain part of the human body can be described as *face*, but also as *eyes*, *mouth*, or *nose*, implying a greater degree of specificity. In this case, the term *face* is more schematic than *nose*. The characterization received from *face* can be instantiated by more specific characterizations, each of them serving to elaborate more detailed specifications (face → mouth → mouth of the photographic model → mouth of the photographic model of the right).

However, focusing is considered as an aspect of the construct because it includes the selection of conceptual content for linguistic presentation, such as figure and background (FERRARI *et. al*., 2017, p. 1469), as are the case of the figure and background of the four faces present in digital photography. Four faces with different shapes and shapes. We will set an example. In order to interpret one of the ten (10) areas of interest selected to monitor and control the results of reading digital photography, in the case of the *area of interest of the*

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photographic model, we access the cultural knowledge related to this type of magazine model erotic advertising for the LGBT audience, without which the reader might think that the face of the model is.

Beyond organization figure *vs.* the domain of a matrix whose scope consists of its coverage of that domain: the term face evokes a certain spatial extension to the specification of its characteristic form, the phenotype that requires the mental access to specific characteristics (of phenotypic traits that profile of degrees of beauty and that may accent expressions of sympathy and happiness, for example) for the identification of a modeled, or artistic, body in the case of drag queen.

In this case, the figure/fund organization may indicate the scope, which is "a matter of selection" (FERRARI *et. al.*, 2017, p. 1469). Based on maximum scope, *human body part* selects a certain conceptual content to put in prominence (ie, immediate scope). This selected content *face of the photographic model of the right*, *face of the photographic model of the left* or *face of the drag queen* constitutes a particular structure called profile.

Therefore, the concept of polysemy is necessary to understand the profile, the area of interest (indicated by the heat map) and the gaze plot. The profile chosen and indicated by the heat map in a specific area of interest carried out by the eye tracking of each participant-reader of our research explains how the metaphorical phenomenon is related to notions of perspective, time, space and movement. This phenomenon involves a projection between only one domain, unlike metonymy, which involves two (FERRARI, 2011).

Let us see the confirmation of our hypothesis – the polysemy is in the order of the image at the moment of ocular movement, in order to indicate construction of movement caused by the result of gaze plot and confirmation by the heat map –, when analyzing the following table, with individual results. As previously mentioned, we recall that the indication of motion construction caused by the result of gauze plot demonstrates the path taken by looking at the image, so that the next ocular movement indicates the new stimulus resulting in visual perception.

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Table B: Individual plot gauge and heat map results of heterosexual male participants

Results	Participants: Heterosexual Men			
	E. S.	M. A.	M.	R. N.
Gaze Plot				
Heat Map				

Source: TOBII equipment TX300

In a Ferrari study (2016), the author states that "the polysemy loop captures the nature of the semantic relations between a particular sense of a construction and extensions of that sense" (p. 106). Recalling the molds proposed by Lakoff (1987), Ferrari (2016, p. 107) triggers the author's teaching that "metaphoric extension corresponds to bonds that are established by polysemy". In the wake of this distinction, moving from linguistic constructions of Brazilian Portuguese to the multimodality nature of digital photography, we proceeded to the treatment of metaphorical extensions related to non-verbal language in order to identify the reading differences of the experiment participants. Let us see that the metaphorical extensions carried out by the reader's path are differentiated from the extensions of the readers M. A, M. and R. N. All these four heterosexual male subjects performed the metaphoric extension in a particular way, thus individually constructed the polysemy of the gaze.

The polysemy of the gaze is nothing more than the senses that the gaze was tracing in order to construct reading gestures. Each reading was finalized at the time the heat map of the ocular tracking experiment demonstrates the total fixation duration (TFD) – total fixation

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duration in the largest area of interest. We individually identified the heat map of each reader-participant of the heterosexual men group: the reader E. S. had total duration of fixation in the following areas of interest: Dicesar statement, drag queen wig, left model face and Dicesar face on television. The M. A. player had total fixation duration in the bust areas of the drag queen and underwear of the left model. M. had total duration of fixation in the areas of interest bust of the drag queen, whereas the reader R. N. had in the statement Dicesar, soon of *G Magazine*, face of the drag queen and face of the left model.

When we analyze Table B, we see that there are different extensions, in a greater or lesser scale, or vice versa, of each reader-participant in relation to each area of interest. These distinct metaphoric extensions establish polysemy bonds also distinct from those of Caused Construction and Dative Construction, which the author of the mentioned study (FERRARI, 2016) studied. However, in cases of materiality of the non-verbal, the hypothesis that the movement construct caused can be identified in ocular movements is true, for the justification that we can (according to the specific objective d, of this research) identify values of p' reliable heterosexual men group by means of pairwise comparisons, outcome of the ocular tracking experiment (eye tracking).

For this, we will see Table C.

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Table C: Individual results of gaze plot, heat map and pairwise comparisons of heterosexual man participant, identified as reader M. A.

	MAN-HETEROSEXUAL	
Results	*Gaze plot*	*Heat map*
M. A.		
	Pairwise comparisons	
	[UnderwearRightModel_Man-Hetero] *vs.* [DragFaceWigBust_Man-Hetero] t(6)=2,47 p< 0,0482	
	[UnderwearRightModel_Man-Hetero] *vs.* [FaceDicesar_Man-Hetero] t(6)=2,82 p< 0,0305	
	[DragFaceWigBust_Man-Hetero] *vs.* [DragSandal_Man-Hetero] t(6)=2,79 p< 0,0318	
	[RightModelFace_Man-Hetero] *vs.* [FaceDicesar_Man-Hetero] t(6)=2,57 p< 0,0426	
	[FaceDicesar_Man-Hetero] *vs.* [DragSandal_Man-Hetero] t(6)=3,23 p< 0,0178	

Source: TOBII equipment TX300

The context of this picture is the visual radiography – obtained by the procedures gaze plot and heat map of the methodology eye tracking – of syncretic multimodality of the digital photography, object of research, here. The construction of movement caused is in relation to what Sweetser (2013) approaches as representing the point of view, in its relation to the creativity involved in the different multimodal resources.

This construction of movement caused is the functioning of language in digital photography, for example. "(...) has all the resources of a body inherently envisaged in space, to represent phenomena from the point of view" (SWEETSER, 2013, p. 250). It is exactly the point of view represented in the language resources, combining the areas of interest of linguistic forms (for example, the *G Magazine* logo and the statement: Telling by Dimmy Kieer alongside his twin big brothers), with the areas of interest in visual and gestural linguistic forms (for example, the drag queen wig, the left model face, the right model face,

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Dicesar's face on television, the face of the drag queen, as well as areas bust of drag queen, underwear model left, underwear model right, pectorals models etc.

These areas represent non-verbal angles, colors and forms are polychromy – a concept elaborated by Souza (1996, 1997) – that mark the incorporation or combination of points of view (SWEETSER, 2013). Polychromy allows the reading to interpret, from more common sense directions to those of interpretation investment:

> When analyzing an image through the bias of polychromy, one directs and constructs one's own look through the gestures of interpretation. Gestures that, at one and the same time, would cut out the visual paraphrases that constitute the body of the image and give place to the slides of senses, to the metaphorical effects, ordered by the injunction of saying (SOUZA, 2013, p. 298, griffins our).

"The work with the concept of polychromy brings us to how the textualization of the politician occurs in the realm of the non-verbal" (SOUZA, 2018, p. 23). Thus, gestures, corporeities and expressions of smiles, sympathy and happiness, for example, marked on the face of the left model, as well as his underwear as an interested area, may justify being the model to receive more textualization of the politician (asserted by the heat map) – and verbal forms (logo *G Magazine* and Dicesar by Dimmy Kieer...), which integrate in verbal, corporal and gestural language, whose construction of movement caused allows the transit of an area of non-verbal interest with an area verbal.

The motion construct caused is that which is indicated as a movement in numerical sequence by the gauze plot – that is, the ocular movement 2 is the result of the displacement from 1 to 2, and so on, weaving a numerical frame representing the path of construction of the senses, in order to enable consequently the existence of polysemy and polychromy, on the basis of this, to record the path of metaphorical extensions. These metaphorical extensions result and depend on the construction of motion caused. The construction of motion caused depends on the existence of polychromy in digital photography, which allows the drive to correspond in the consequent ocular movement, driven by the desire of the change of visual direction. This plot has its correspondence in the interpretation that ensures the elaboration of the answer *Yes* or *No* in front of the question *Is there nudity in the image?*

From the individual gaze plot results of the subject reader M.A., the metaphorical extensions of eye tracking from (1) to (31) ocular movements resulted and depended on the motion construction caused by the initial drag (1) elbow and (2) shoulder of the drag queen and pectoral of the left model, then (3) left model's belly, (4) underwear, specifically the genital region of the left model, (5) returning to the drag queen, area of the collant, height of the belly, (5-9) lying in the area of the collant, from the belly toward the breastplate of the

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drag queen, (11) going to the neck of the Dicesar in the television area, (13) advancing to the legs of the drag queen, (14) for the model of the left model, the height of the boundary between the underwear and his legs, moving from (14) to (15-17) the chest of the left model, returning again to (18) the underwear of the left model, direction between the underwear of the underwear and its legs to the elastic of the underwear (cueca), where it is located to the Mash brand. From (22) between the area of the collant, (26) the wig and (27) the bust of the drag queen, moving to (28-29) neck and mandible of the Dicesar in the television area, finishing the ocular movements in the area of the drag queen, specifically in the region between the genitalia and its legs, finally arriving (31) in the right model, in the underwear, whose hand of the drag is overlapping the genital region.

We also considered the data above Table C, referring to the gaze plot of reading of this reader-participant identified as heterosexual male M. A. We selected five reliable comparisons, according to the last specific objective of this experimental research: (d) to identify reliable 'p' values of the heterosexual men group by means of pairwise comparisons.

The data is:

1. [Underwear_Right-Model_Man-Hetero] *vs.* [Drag_Face-Wig-Bust_Man-Hetero] $t(6)=2,47$ $p<0,0482$;

2. [Underwear_Right-Model_Man-Hetero] *vs.* [Face_Dicesar_Man-Hetero] $t(6)=2,82$ $p< 0,0305$;

3. [Drag_Face-Wig-Bust_Man-Hetero] *vs.* [Drag_Sandal_Man-Hetero] $t(6)=2,79$ $p<0,0318$;

4. [Right-Model_Face_Man-Hetero] *vs.* [Face_Dicesar_Man-Hetero] $t(6)=2,57$ $p<0,0426$;

5. [Face_Dicesar_Man-Hetero] *vs.* [Drag_Sandal_Man-Hetero] $t(6)=3,23$ $p<0,0178$.

Let us see that the comparisons of this group of men with values of 'p' reliable at <0.05 are: in (1) underwear of the model right *vs.* face, wig and bust of the drag queen ($p <0.0482$); in (2) underwear of the model right *vs.* face of the Dicesar ($p <0.0305$); in (3) face, wig and bust of the drag queen *vs.* sandal of the drag queen ($p <0.0318$); in (4) face of the right model *vs.* face of the Dicesar ($p <0.0426$); and in (5) face of the Dicesar *vs.* sandal of the drag queen ($p <0.0178$).

As "we could initially think that the single body is a limitation in representing multiple bodies – or at least we might think it would be confusing for recipients to unpack the mixtures..." (SWEETSER, 2013, p. 250), readers *unpack* these blends smoothly and

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comfortably, constructing multiple viewpoints in relation to each other (SWEETSER, 2013), in relation to one area of interest to another, as we see in the data from (1) to (5).

As we look at Table B: Individual results of gauze plot and heat map of heterosexual male participants, as we observed in Table C: Individual results of gaze plot, heat map and pairwise comparisons of heterosexual male participant, identified as M. A., data (1) model right *vs.* drag queen; (2) model right *vs.* Dicesar; (3) drag queen *vs.* drag queen; (4) model right *vs.* Dicesar; and (5) Dicesar *vs.* drag queen represent the cognitive domains, respectively, in (1) underwear *vs.* face, wig and bust; in (2) underwear *vs.* face; in (3) face, wig and bust *vs.* sandal; in (4) face *vs.* face; and in (5) face *vs.* sandal.

This list of specific domains evoked from (1) to (5) by underwear, face-wig-bust, face, sandal depended on the perceptual purpose of the readers of this group to the polychromy that guaranteed the injunction to interpret and affirm the *Yes*, with regard to the question *Is there nudity in the image*? In the case of M. A., the underwear domains of the right model, drag queen bust and face of the Dicesar on television were the content of the multimodality, whose ocular movement given as a result of heat map in the ocular tracking experiment focused on the activation of these three sets of cognitive domains. The concentration in the three areas of interest, which presented a longer duration of fixation, reveals the visual perception attention of this reader-participant M. A., through his eye tracking. This concentration corroborates in the elaboration to the answer of the question *There is nudity in the image*?

5. Final considerations

According to the defense that an approach deals with productive concepts for analyzes of a variety of verbal and non-verbal linguistic forms, gaze plot, heat map, and pairwise comparisons allow to identify phenomena from the point of view diffused in non-verbal language, in the imaginary case – digital advertising photography.

As phenomena connected to multiple points of view form a network, the gauze plot allows nothing less than a thorough examination of this frame of sight. It is precisely in this experimental procedure that multiplicity creates the need for semantic-discursive analysis of the cohesion of the look, for example, and thus of the gestures of reading. The reading of each reader-participant focuses on discourse, at a level of additional point of view, in space from the point of view of discourse. This space recognized in areas of greater or lesser interest, as evidenced by the heat map, presents readings of multiplicities of the domains – *logo G*, *statement*, *face-wig-bust*, *underwear*, *face e sandal*.

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Therefore, the discursive is the social process whose specificity lies in the type of materiality of its base, linguistic materiality, since language constitutes the *material place* in which the effects of meaning are realized, that is, effects that give body for the discursive materialities (PÊCHEUX, 1981). Therefore, the subject is subject to the interpretation and subject of the interpretation of the symbolic (LACAN, 1958-59, 1964; PÊCHEUX, 1982; NASCIMENTO, 2015, 2017). There is no meaning without interpretation, and interpretation is an excellent observatory of the symbolic to work the historically determined relationship of the subject with the senses, in a process involving the imaginary, the symbolic and the *of* effect, so that develops in certain social reading situations.

Some theoretical-methodological challenges regarding image reading (NASCIMENTO, 2018, 2019a, 2019b):

– the statute of the image has, on the one hand, in some support, its visible materiality by means of formulation, constitution and circulation in symmetrical sequences, on the other hand, it has its materiality of sense by disorder of the gaze, supporting the seen not only in the visible, as well as by alleys and curves effectively asymmetric to sequences. The movements of the eyes properly are responsible for the foundation of the look to the image. The senses of the gaze trace in ways not exclusive to the symmetrical direction of the image. The eyes also see in random directions. The eyes look and see. They not only look.

– by these means, the relation of the image and the gaze is a matter of reading, insofar as it is for the disciplines of interpretation, always calling into question the existence of approximations and distances between the order of the image and the disorder of the gaze, or between the disorder of the image and the order of the gaze. Whatever the path of analysis, research can never be satisfied with the conception that the look is controlled and dominated by the subject who owns his eyes. It is polysemous. It is semantic. It is a drive. It is desire. It is an interpretation – of the symbolic, of the image, of the imaginary, of the discourse under analysis.

The image reading is submitted by subjective, symbolic, sexist and biopsychological and multiple assertive, uncontrolled and asymmetric coercions – as we saw in the gaze plot. The interpretation does not have as unity only the reading of the visible, because you do not see only the visible. The interpretation is of the order of desire. From the work of the imaginary. Of the movements caused by the drive and by the discursive. Of the ideological. From the imaginary. From subjective sexist positions. Normative. Fixed. Standardized. Stereotyped. Frozen. The dispersion of lanes, signs, and emblems also produces semantic-

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discursive regularities that allow reading and interpretation of syncretic multimodalities. The curves and the alleys (with and without exits, by the polychromy) produce their effects in the look – there the place of the disorder of the look.

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REFERENCES

DANCYGIER, B. (2017). Viewpoint phenomena in constructions and discourse. *Glossa*: a journal of general linguistics 2(1):37, pp. 1–22, DOI: https://doi.org/10.5334/gjgl.253

DANCYGIER, B.; VANDELANOTTE, L. (2017). Viewpoint phenomena in multimodal communication, *Cognitive Linguistics*, 28(3), pp. 371-380. DOI: https://doi.org/10.1515/cog-2017-0075

FAUCONNIER, G. (1994). *Mental spaces*. Cambridge: Cambridge University Press.

FAUCONNIER, G. (1997). *Mappings in thought and language.* Cambridge: Cambridge University Press.

FERRARI, L. (2011). *Introdução à Linguística Cognitiva.* São Paulo: Contexto.

FERRARI, L. (2015). Semântica objetivista ou semântica cognitiva? Implicações do modelo semântico na análise de condicionais. *Gragoatá*, Niterói, n. 38, pp. 142-162, 1. sem. DOI: https://doi.org/10.22409/gragoata.v20i38.33304

FERRARI, L. (2016). Construções gramaticais e laços de polissemia: as extensões metafóricas de comunicação verbal. *LinguíStica* / Revista do Programa de Pós-Graduação em Linguística da Universidade Federal do Rio de Janeiro. Volume Especial, dezembro, pp. 102-113. DOI: https://doi.org/10.31513/linguistica.2016.v1n1a5441

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FERRARI, L. (2016). *Introdução à Linguística Cognitiva.* 1. ed. 2ª reimpressão. São Paulo: Contexto.

FERRARI, L. *et. al.* (2017). Referência genérica em SNs singulares: uma abordagem cognitivista experimental. *Revista de Estudos da Linguagem*, Belo Horizonte, v.25, n.3, pp. 1463-1500. DOI: http://dx.doi.org/10.17851/2237-2083.25.3.1463-1500

FRANÇA, A. I.; FERRARI, L.; MAIA, M. (2016). *A Linguística no Século XXI*: Convergências e divergências no estudo da linguagem. São Paulo: Contexto.

GOLDBERG, A. (1995). *Constructions*. Chicago: University of Chicago Press.

LACAN, J. [1958-59]. (2016). *Seminário, livro 6*: o desejo e sua interpretação. Rio de Janeiro: Zahar.

LACAN, J. [1964]. (2008). *Seminário, livro 11*: os quatro conceitos fundamentais da psicanálise. Rio de Janeiro: Zahar.

LACAN, J. [1975-76]. (2007). *O Seminário, livro 23:* o Sinthoma. Rio de Janeiro: Zahar.

LAKOFF, G. (1987). *Women, fire, and dangerous things*: what categories reveal about the mind. Chicago: The University of Chicago.

LAKOFF, G.; JOHNSON, M. (1980). *Metaphors we live by*. Chicago: The University of Chicago Press.

LAKOFF, G.; TURNER, M. (1989). *More than Cool Reason*: a field guide to Poetic Metaphor. Chicago: University of Chicago Press.

LANGACKER, R. (1987). *Foundations of cognitive grammar*: Theoretical prerequisites. Standford: Standford University Press.

LANGACKER, R. (1991). *Foundations of cognitive grammar*: Descriptive aplications. Standford: Standford University Press.

MAIA, M. (2008). Processos bottom-up e top-down no rastreamento ocular de imagens. Revista *Veredas* (UFJF), v. 2, pp. 8-23. Disponível em: https://www.ufjf.br/revistaveredas/files/2009/12/artigo01.pdf

NASCIMENTO, L. (2015). Especificidade de uma disciplina de interpretação (a Análise do Discurso no Brasil): alguns apontamentos. Revista *Filologia e Linguística Portuguesa*, USP, v. 17, pp. 569-596. DOI: https://doi.org/10.11606/issn.2176-9419.v17i2p569-596

NASCIMENTO, L. (2017). Quando a letra falta, o digital fal[h]a: a função do escrito. *Policromias* – Revista de Estudos do Discurso, Imagem e Som, dezembro, pp. 51-71. Disponível em: https://revistas.ufrj.br/index.php/policromias/article/view/12738/9935

NASCIMENTO, L. (2018). Imagem cosmética, sintaxe imagética e posições identitárias: leitura de visualidades da *G Magazine*. In: BEZERRA, B. B.; CARVALHO, D. de M. (Org.). *Laços entre Comunicação e Educação*: reflexões sobre novas plataformas midiáticas e interferências estéticas. São Paulo: Pimenta Cultural. pp. 118-153. DOI: https://doi.org/10.31560/pimentacultural/2018.815.118-153

NASCIMENTO, L. (2019a). *Insinuações da Carne: Ordem da Imagem e Sentidos do Olhar – por questões de leitura de fotografia digital da G Magazine.* 216 p. Tese (Doutorado em Linguística) – Programa de Pós-Graduação em Linguística, Universidade Federal do Rio de Janeiro, *Campus* Ilha do Fundão, Rio de Janeiro, RJ. Disponível em:

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Celebrando mais de 50 anos do Programa de Pós-Graduação em Linguística da UFRJ e do percurso da Professora Emérita Miriam Lemle
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http://www.ppglinguistica.letras.ufrj.br/images/Linguistica/3-Doutorado/teses/2019/TESE-Final-BIBLIOTECA-UFRJ-L.NASCIMENTO.pdf

NASCIMENTO, L. (2019b). Análise do Discurso e Linguística Experimental. In: NASCIMENTO, L.; SOUZA, T. C. C. (Org.). *Gramática(s) e Discurso(s)* – ensaios críticos. Campinas: Mercado de Letras, 2019. pp. 365-398.

PÊCHEUX, M. (1981). L'énoncé: enchâssement, articulation et dé-liaison. Actes du Colloque Matérialités discursives. Université Paris X – Nanterre, 24-26 avril 1980. In: CONEIN, Bernard. *et. al*. (Orgs). *Matérialités discursives*. Lille: Presses Universitaires de Lille. pp. 143-148.

PÊCHEUX, M. [1983]. Discourse: structure or event? – Actes du Colloque Marxism and Interpretation of Culture: Limits, Frontiers, Boundaries. L'Université Urbana-Champaign, 8-12 juillet 1983. In: PÊCHEUX, Michel. *L'inquietude du Discours.* Textes choisis et présentés par Denise Maldidier. Paris: Éditions des Cendres, 1990, pp. 303-323. [PÊCHEUX, Michel. *O Discurso*: estrutura ou acontecimento. Tradução de Eni Puccinelli Orlandi. 3. ed. Campinas: Pontes, 2002.]

PÊCHEUX, M. [1984]. Especificidade de uma disciplina de interpretação (A Análise do Discurso na França). In: PÊCHEUX, Michel. *Análise de Discurso – Michel Pêcheux.* Textos selecionados por Eni Puccinelli Orlandi. 2. ed. Campinas, SP: Pontes Editores, 2011. pp. 227-230.

REDDY, M. (1979). The conduit metaphor: a case of frame conflict in our language about language. In: ORTONY, A. *Metaphor and thought.* Cambridge: Cambridge University Press, pp. 164-201.

SOUZA, T. C. C. (1996). *Imagem e Sentido.* Texto-apostila utilizado no curso Análise do discurso, do Instituto de Artes de Comunicação Social, UFF: Niterói, primeiro semestre.

SOUZA, T. C. C. (1997). *Discurso e imagem: perspectivas de análise do não-verbal*. Conferência no 2º Colóquio de Analistas del Discurso. Universidad del Plata, Instituto de Linguística da Universidad de Buenos Aires: La Plata e Buenos Aires.

SOUZA, T. C. C. (2013). Gestos de Interpretação e Olhar(es) nas Fotos de Curt Nimuendajú: Índios no Brasil. Revista *FSA* (Faculdade Santo Agostinho), v. 10, pp. 287-301. DOI: http://dx.doi.org/10.12819/2013.10.2.16 Disponível em: http://www4.unifsa.com.br/revista/index.php/fsa/article/view/144/93

SOUZA, T. C. C. (2018). Perspectivas da análise do (in)visível: a arquitetura discursiva do não verbal. In: *RUA* [online]. nº. 24. Volume 1. pp. 17-35 – e-ISSN 2179-9911 - junho. DOI: http://dx.doi.org/10.20396/rua.v24i1.8652400

SWEETSER, E. (2013). Creativity across modalities in viewpoint construction. In: BORKENT, DANCYGIER, HINNELL. (Eds.). *Language and the creative mind.* CSL1 Publications. pp. 239-256.

TURNER, M. (1991). *Reading minds*: the study of English in the age of cognitive science. Princeton: Princeton University Press.

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