

Mememes and Science: A Modern Investigation

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Abstract— This article aims to analyze and study memes from their multimodal perspectives, using concepts from biological conceptions; linguistic; technological and general themes. There is the intention to analyze memes from these perspectives, based mainly on the perspective of Charles Sanders Peirce and Richard Dawkins. It seeks to investigate and understand the phenomena originating from the internet and to observe, therefore, the uses of memes to help in other areas, resulting from the mentioned perspectives. The article demonstrates pertinent questions about memes and memetics, which is the science that understands memes with a scientific view, however, today based on multisemiotic and virtual media.

Keywords— Dawkins, internet, memes, memetics, Peirce.

1. INTRODUCTION

Mememes - from the Greek - mimesis, are phenomena present on the Internet. They can be texts, images, videos, slogans, and have the intention - on the Internet - to satirize or represent daily life in a humorous way. For this reason, the objective is to study and understand memes as an important form of propagation; to analyze them from the point of view of Richard Dawkins, Charles Sanders Peirce, and Algirdas Julien Greimas, and to understand the phenomena of the Internet. For this article to be possible, a bibliographic review of books and articles on the theme was used, as well as of related themes. Thus, as the first concept of memes in a generalized way, it begins at first, in 1921, with the publication of an image, representing as an object a pictorial representation of a man, which had as a principle the demonstration of reality and intentionality, in a humorous way, in Judge Magazine.

This imagetic relation was transposed to the concepts of memes on the Internet, because after this publication, the Internet memes followed the same layout and became virtual patrimonies. Thus, establishing an interpolation of concepts, Richard Dawkins, in the work *The selfish gene* (1972), used the term meme, as part of the genetic study, memes for Dawkins, are reproducers, make the process of cultural replication. Thus, establishing the relationship of the current memes are

considered cultural reproducers, as well as in genetic studies, because they follow an equivalent structure and have the same principle: to replicate. In social networks, memes undergo some processes in order to be replicated, one of the phenomena present is viralization, by which the object is replicated to select groups through the principles of its own posting origin. Mememes, from this point of view, can be objects of great value for the replication of content and information of great relevance, for conventional or journalistic uses. As such, memes from both perspectives are unique when it comes to analysis and synthesis of their structures and cultural relations. In order for this analysis to take place, it is necessary to have knowledge of the context, the essential relationships that make up memes, their subtitles, colors and shapes, and also their influence on society.

Following this principle, the use in this article of Charles Sanders Peirce's semiotics is essential for the structural and chromatic analysis, for this reason, it is conceptualized by triads, and concerns the sign under all its aspects. As further reading of the article, Algirdas Julien Greimas, performs analysis of the sign on semiotic squares, the author uses dualities to obtain the meaning of the sign, in addition to its context and corpus. Mememes, from this point of view, will take as relevant principles: the context and antithesis, due to the author's theoretical work. Mememes are transmitters and elements that make external transmissions, DAWKINS (1972, p. 114) says that, "[...]Every time a scientist hears an idea and transmits it to someone else he probably changes it quite a bit.", in this context, memes are also transmitted according to the enunciator to the enunciatee, because of this, it is observed that memes, both from genetics and the Internet, establish changes through transmissions, so there is a lack of originality.

Original memes, are replicated and the replications replicate themselves and the process does not end, in all replications, there is some change, being of the structure, the text, the image, but the stylistics of memes continues, although there is no originality. The author conceptualizes, that: "Mememes are being transmitted to you in altered form." (DAWKINS, 1972, p. 114), referring to the transmission of genes.

2. REPLICATION AND THE REPLICATOR

Replication for Richard Dawkins is a process that involves genes and their cultural transmission, given this perspective the author says that,

The replicator would then act as a template not for an identical copy, but for a type of "negative," which in turn would remake an exact copy of the original positive. For our purposes it does not matter whether the original replication process was positive-negative or positive-positive, although it is worth noting that the modern equivalents of the first replicator, DNA molecules.

(DAWKINS, 1972, p. 14)

Under this bias, the author conceptualizes the term replication as part of the study of DNA and biological concepts, thus, the term meme from the author's point of view, began by mimesis, was transformed into mimeme and, for reasons of expressiveness of the author, the phenomenon of apheresis occurred so that it became meme, and these transformations began the studies of DNA replication by the author, for reasons of the genes transmitters, however, the term was transformed conceptually, although it still has under its structure the biological issues. Because of the biological issue, DNA and the studies that involve this issue of genetic replication, is an important concept to understand how the replication of memes on the Internet is involved:

A DNA molecule is a long chain of building blocks, small molecules called nucleotides. Just as protein molecules are chains of amino acids, so DNA molecules are chains of nucleotides. The DNA molecule is too small to see, but its exact shape has been ingeniously deciphered by indirect means. It consists of a pair of nucleotide chains twisted together, forming an elegant spiral, the "double helix", the "immortal spiral".

(DAWKINS, 1972, p. 17)

Thus, Dawkins (1972, p. 23) alludes to memetics, through phenomena and actions involving nature, to involve mimicry, so he conceptualizes that, "[...]Other species of butterflies that don't taste bad then take advantage. They mimic those that taste bad." In this light, Dawkins (1972, p. 23) conceptualizes mimicry as something of biological value, and through this concept the relationship with Internet memes can be established. Dawkins (1972, p. 55) says that a selfish gene is not just a physical fragment of DNA, but the concrete representation of the replicating medium. Meme, for Dawkins (1972, p. 112) is: "a noun conveying the idea

of a unit of cultural transmission, or a unit of imitation." the author conceptualizes the word meme as something analogous to biology, but as a means of cultural transmission, so that one has the knowledge of what memes are in an original way, he goes on to conceptualize that: "Examples of memes are melodies, ideas, "slogans," clothing fashions, ways of making pots or building bows. [...]If a scientist hears or reads a good idea he passes it on to his colleagues and students." (DAWKINS, 1972, p. 112). Everyday examples of dawkinian memes, can be seen mainly through Marketing, banners and advertisements are memes, because they transmit ideas and culture, it is for this reason that in some moments people have an image in themselves and remember your song or your advertisement, because memes have replicated themselves and have become acoustic images, which are signifiers and signifieds that make up the sign and are part of the mentality of human beings and for this reason, we are able to hear thoughts and see mentalized images. Ferdinand de Saussure (1857-1913), the author who composes this relationship between acoustic images and the linguistic sign, defines the linguistic sign as a matter of formation that relates the concept and the acoustic or sound image. For Saussure (2006), hearing and phonation make a representative square in pairs, and within this square there is the concept and the acoustic image. Thus, the author conceptualizes that:

This analysis does not pretend to be complete; we could still distinguish: the pure acoustic sensation, the identification of this sensation with the latent acoustic image, the muscular image of phonation, etc. We take into account only those elements that we consider essential; but our figure allows us to distinguish without difficulty the physical parts (sound waves) from the physiological (phonation and hearing) and psychic (verbal images and concepts).

(SAUSSURE, p. 20, 2006)

Therefore, this relation of memetics, acoustic images, and linguistic signs are essential to the understanding of memes, which later become replicators not only biologically, but also virtually, because they follow the same dynamics that Dawkins explains in his work. The sense of replication, whether of biological or virtual conception, follows the same structure, but replicates itself by different means: one through DNA, the other through social networks.

3. THE FIRST PUBLISHED MEME

As mentioned in the previous sections, memes appear in a different perspective from what is known today, since

it was part of the study of genetics, and therefore mainly of DNA. The first meme, from the technological and social network perspective, appeared in a magazine and became, some time after its publication, a reference for the creation of Internet memes.

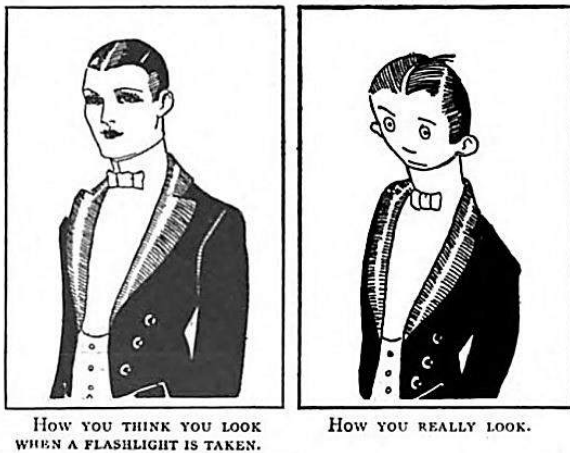


Image 1: considered the first published meme

Source: <https://emais.estadao.com.br/noticias/comportamento.tirinha-de-1921-pode-ter-sido-o-primeiro-meme-na-historia.70002271723>, accessed 22 Dec 2020

In relation to current memes posted on the Internet, there is the same structure, but not in the form of an illustration, but of an image. The memes, after this publication, were published en masse on the Internet, any and all forms of pragmatic images, with the use of captions were published, starting in 2000.

Following the same structure as the image above, Internet memes, called TrollFace's, were the first to go viral on the Internet, because besides being new to Internet users, it was an issue that showed relevance to social networks. In 2011, for this reason, the MemeDay was created, a day to celebrate memes and commemorate, unfortunately with the passage of time the day was forgotten, but even so, still some groups of people of this generation, remember and post images about it, in their social networks.

Nowadays, any image and any situation can be transformed into a meme, but because of Dawkins' theories, there is no way that original memes can exist, because they will always be replicated and published with the same content, but with minimal or stark changes. For this reason, memes become cultural and information vehicles, which can be useful for the propagation of information and educational and scientific dissemination content, as already exists in some groups on social networks and also educational media.

3.1 INTERNET PHENOMENA

The meme, whether from a genetic or media perspective, mutates. For a meme to be posted on the Internet, it must first be analyzed by social network algorithms. These algorithms are distinct and follow the principles of the social network they are included in, for example: if in a social network an object is posted with an educational theme and the social network only allows humorous themes, for sure the object will not be replicated and maybe even excluded from the platform because of its content. This is how memes are partially replicated, because when a meme is posted on a social network, in a general way, the algorithms do some analysis and take into account the originality of the post, the frequency of posting by the person who posted the content, the frequency of reactions of people present in the social network of the person who posted the content, the frequency of reactions and comments of the people who posted the content, whether or not they are related to the person who posted the content, the time of the post, and the type of post. Once these aspects are answered, the algorithms viralize the object, that is, replicate it to certain groups, taking into account the social network, the age group, the reactions and similar posts of the users. When users receive the content, they can continue the viralization process by writing keywords such as: UP and AC.

These terms are usually found in social network groups, whereby users repeatedly comment on these terms in order to have more users view the content. Moreover, when social network users make comments repeatedly, or posts repeatedly, the social network algorithms analyze such acts as spam, which can result in the exclusion of the account of the speaker and even banishment from the system. The same act happens when in the principles of that social network, certain words are not allowed, the algorithms analyze and exclude or ban the user in order to maintain the ethical codes principled in the network. Viralization then is a principle that occurs in all social networks, some happen explicitly, others implicitly. Sometimes, by system error or bad programming, the algorithms can act so that viralization occurs for objects that act against ethics and human rights, making, for example, that young people have access to these explicit contents, damaging them. Objects that involve crime, the explicit death of people and animals, are also viralized, but users also actively participate in this process, by making reactions and comments. Algorithm, a term and concept created by Ada Lovelace in her work Analytical Engine (1843), is predominantly relevant for understanding how memes work in social networks. As a matter of biological feedbacks, memes follow certain structures and with

them new memes are created, the term viral, which has become a public utility for the act of replicating itself, makes reality the feedbacks to Richard Dawkins' concepts, but through the computational medium. Dawkins, through this relationship between the biological and the computational, conceptualizes time and memory by means of the computer, because time is measured by controllable and changeable means, and memory is scarce and can be changed, both by programming the computer or changing its parts. Something that does not occur with genes, because these are constantly replicating themselves, regardless of the relationship of time and space. Thus, the author states that

Any user of a digital computer knows how precious a computer's time and memory storage space are. In many large computing centers they are literally valued in money; or each user may be given a ration of time, measured in seconds, and a ration of space, measured in "words". The computers in which memes live are human brains.
(DAWKINS, 1972, p. 115)

The relationship between the computational and the biological, are totally aggregable to each other, as one contributes to the other in a strategic way: one has its logical relations, algorithms, hardware and software that work concomitantly for media development and functioning, in view of the most variable contents being replicated every second; the other works exclusively on the relationship of matter, strands present in DNA, DNA content and, therefore, its function is to replicate itself, regardless of the phenotype or genotype aggregated, regardless of the information, but just as in the computer there are failures, in DNA, when replicating itself, it can trigger, equally, genetic failures, so both involvements are taken as triggers of replication, in different ways and with different purposes related to the content released, but with the same way of conceptualizing itself.

4. SEMIOTICS

Peircean semiotics begins with the reasoning based on Immanuel Kant's triad, which had as its principle the syllogism and its logic of search for truth under three variables. The author explains that, "it was Kant who first observed the existence, in analytic logic, of the trichotomic or tripartite distinctions." (PEIRCE, 2005, p. 18). For this reason, the author relates the triads as values that go beyond an exact logic, that it is necessary to have an analysis from the third proposition in completeness with the second and the first, so there may be more propositions from these concepts. In order to have this triadic relation in Charles Sanders Peirce's own

theory, the author, in his work, begins with the maxim that it is not possible to conceive the analyzed object as a unity, but with other terms: firstness, orientality or originality (p. 33), it is inferred that from the author's logic, one cannot conceive a sign in an exclusive and unique way, it is necessary to have a triadic relation with its subterms, he refers to these terms as ceno-pitagoric categories, and goes on to determine new terms that can be substituted for the terms of firstness, secondness and thirdness. He refers to secondness as transuasion, because for the author, "it is the modification of firstness and secondness by thirdness" (p. 36). In order to have meaning, it is necessary to analyze the object, that is, the signs in a concrete way, from the categories that the author concerns in his logic and work, so for the author

[...]a sign is everything that is related to a second thing. Its object, with respect to a quality, in such a way as to bring a third thing, its interpretant, into a relation to the same object, and in such a way to bring a fourth into a relation to that object in the same way, ad infinitum.
(PEIRCE, 2005, p. 37)

Besides the firstness, secondness and thirdness, the author names subgroups being: the index, the icon, the object, the argument, the symbol, and others. Each term has its relevance to establish the sign with the generalist view, because every sign has a relation of existence and this brings the exercise of what are concrete ideas, or acoustic images, this duality is present in the signs, because every sign has a contextualization, a relation of existence, a color, a principle, a relation of meaning. For the author, sign can also be represented by representamen, because it represents from it, concepts, ideas and concrete reasons. It is also conceptualized that the Peircean semiotics is denominated in three modes: the foundation, the object and the interpretant. Therefore, the author has for sign vision, something perceptible or imaginable. (p. 55). For the author, the division of the signs is based on triads: triadic relations of comparison; performance and thought, through which the sign is conceived under all its aspects, not reduced to the analysis of graphemes or phonemes only; or only by the image, object; but the whole: image (acoustic and concrete), text and enunciation, context and existence. The author then, when referring to such triads, aims from the point of view of logic the triadic relationship between possibility, existence and law, which change concepts among themselves and demonstrate from reason the sign under its own aspects through the phenomenological view. The Peircean laws infer that at least there must be, in the sign, existing dyadic relations

(laws) and the three main groups: firstness, secondness and thirdness, are represented as the subgroups mentioned and change among themselves: law, existence and possibility, which can intertwine or just exist in a single and unmixed way.

4.1 TRIADIC RELATION OF THE SIGN

For Charles Sanders Peirce, the triads can be determined as main groups, being named as: qualisigno, sinsigno and legissigno. The first as a quality of the sign, the second as the existence of the sign, and the third as a law (p. 60). The second trichotomy of signs are called icon, index, and symbol. The first is the object, the second is the phenomenon referring to the object, and the third is the meaning and law of this object (p. 61). The third trichotomy of signs are: rema, dicent, and argument. The first refers to a quality through its interpretant, the second refers to the sign that for its interpretant is of supreme existence, and the third is a sign that for its interpretant is a sign of law. (p. 62) Thus, the author has in his work the ten classes of signs, which are all those mentioned, but which make changes among themselves and may add more classes until there is the purpose of the interpretant. They are: a qualisign, an iconic sin-sign, a reticent indicative sin-sign, a dicent sin-sign, an iconic legissign (p. 64), a reticent indicative legissign, a dicent indicative legissign, a reticent symbolic (p. 65), a dicent symbolic and, finally, an argument. (p. 66). All these aspects, for Peirce, are segmented in the following sequence: IV, III, II, I, in a horizontal manner from top to bottom, therefore, it can be seen that from this view, there is a panoramic relationship of how to observe the sign under its changing aspects. There are, then, the degenerated signs that are replicas of the signs, which can be represented by objects and their auxiliaries; this logical sequence must be complemented with the ten triadic relations of the sign and observed under its concrete aspects; another relation that the author determines in his work are the trichotomies of the arguments, which have in their relations subdivisions of the ten triads mentioned, it is up to them whether there is truth in the deductions or falsities, or whether they are probable or improbable, from this there are inductions and experimental verifications of the sign, for this the sign suffers an argument from samples, and finally, after the issues determined by the argument, there is a general prediction, as determined by the author as abduction. (p. 68). An icon, according to the author, is the "[...]fact of making like quantities that have analogous relations to the problem" (p. 75). It is inferred that to be an icon, the sign goes through a triadic and logical relationship, in the following sequence: icon + index = symbol, or any other triadic relationship, the author proposes that this triadic relationship, relate to logical and

phenomenological relationships, to have the sign being observed under its fundamental and also constituent aspects.

4.1.1 SUBJECT AND PREDICATE

For Charles Sanders Peirce, subject and predicate relate concomitantly in order to have meaning. For this, the subject is related as universal and affirmative; besides relating possibilities in quartets, being of positive or negative value. Thus, in triads, there are relations to compose and superimpose the phenomena and the verbal sentences, in view of the fact that the verb is the principle of syntactic analyses, they are: conditional relations: can or cannot, if or else; disjunctive relations: can or may; excluding relations: can or cannot, if or else; independent relations: must or cannot; conjunctive relations: must and should; tertiary relations: cannot and cannot. The elements cited above, are part of the two groups: negative particular hypotheticals; affirmative universal hypotheticals. (p. 105). The terms are repetitive for the next two groups, but are further elaborated. Negative universal hypotheticals; affirmative particular hypotheticals; conditional relations: in every case [such a phenomenon would happen]; disjunctive relations: in every case [either] [or]; exclusionary relations: in no case [both] [and]; independent relations: can [something occur] without [something else occurring]; tertial relations: it may be that neither [something] nor [something else] happens. All the conditional reasons demonstrated, are reasons that go beyond the syntactic, it is established from logical propositions and ad argumentum. For the author, "nouns are originally used to denote "sense percepts," while hypothetical sentences are commonly used to denote situations that sometimes occur" (PEIRCE, 2005, p. 107). For Peirce, there are types of predicate, these being: analogical predication, by which the sense employed is the sense of reason; denominative predication: being is subject and is taken as subject; dialectical predication: it results in a probable argument, irreducible and nothing antecedent. (p. 113); direct predication: the extension of the subject belonging to the predicate is represented. (p. 114); essential predication: the predicate is totally contained in the essence of the subject; exercised predication: distinction between types of predicate, but exercised in an essential or accidental way; formal predication: predicate in the concept of subject; natural predication - direct, indirect and identical - indirect: subject related to the predicate. direct: subject and predicate related to a third element; identical: comparison between subjects. From this point of view, it is inferred that the types of subject and predicate, in Peirce's view, although related to the logical thought of medieval and modern philosophy,

continues in explicit ways in language and in the logical relations that exist in propositions, linked to discourse, speech and writing. (p. 115). Deduction and induction in this sense of the subject as a concrete being or not, infers by such logical relations, which may vary by context. The subject as a compound or simple being can be related by natural predication, while the disinitial subject can be considered an essential part of formal predication. The predications in this sense show variations so that one can have the genuine context and use of these types of predication, although the fact that there are several predications does not inflict the subject in a biased way.

4.2 ANALYSIS OF MEMES BASED ON TRIADS

For Charles Sanders Peirce, the sign must be analyzed from fundamental triads, containing, therefore, their contexts, their linguistic relations and their representations through visual and text, i.e., multisemiotic objects such as memes are facilitators and with more elements to have this analysis in a totalized way. In order to compare Peirce's and Greimas' systems, analyses were prepared based on the triads of two linguistic memes, in order to relate both theories and, in addition to comparing them, to observe the differences

between the two systems. In order to have this triadic analysis in a concrete way, it is necessary that there is explicitly the firstness, secondness and thirdness, the three elements will be deepened with triadic subgroups that will relate to each other to compose a single analysis, in addition, the triadic relationship of the sign highlights the most important issues of the analyzed object.

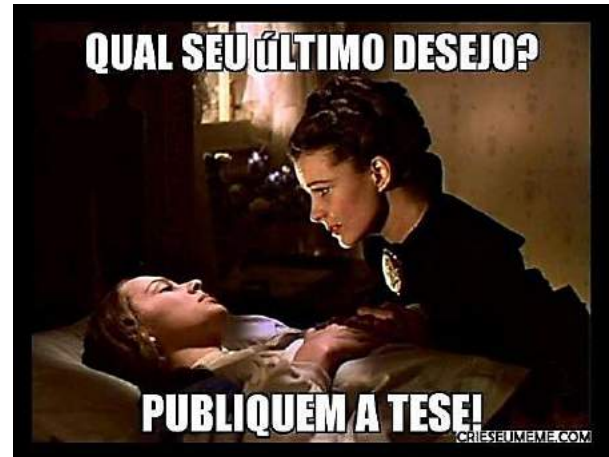


Image 2: meme about academic life

Source: <https://br.pinterest.com/pin/537828380476363568/>, accessed Dec. 22, 2020.

Table 1: meme analysis based on Peirce's triads

Firstness: light brown(tertiary); dark brown(tertiary); yellowish pink(tertiary); speckled yellow(tertiary); black(neutral); white(neutral); creamy yellow(tertiary);	Secondness: amenity; effect of despair; astonishment and irony; distrust.	Thirdness: fear; astonishment; irony; lack of calm.
<i>quali-sign</i>	<i>sin-sign</i>	<i>legi-sign</i>
icon: two women; dresser; bed; window.	index: Second woman's expression of despair; dark colors; woman in bed with her eyes closed.	symbol: women; bed; expression of both; colors.
rema: mix of warm and cool colors with the focus on dark colors with few points of light. Neutral colors (black and white) representing the antithesis of life and death.	dicente: lack of peace, despair, ironies, an uncomfortable situation of death.	argument: ironized fact (caption) by means of the academic life, for which one of the requirements is the publication of articles.

From these highlighted elements, it can be inferred that the context, despite having been changed for the substantiation of the meme, demonstrates issues beyond what is observed in the image, which can be taken with analytical value and literary concepts, the focus taken in the meme is then the relationship of the master's student with the publication of his thesis.

For entry to the doctorate, it is often a requirement. Furthermore, the desperation shown in the image infers that the fact that a thesis is a key element and that it is difficult to do, elaborated the near-death of the woman lying on the bed, who as a last wish, asked that it be published.



Image 3: meme about TCC examinations

Source: <https://economia.uol.com.br/blogs-e-colunas/coluna/reinaldo-polito/2015/08/25/ensaiar-defesa-de-tese-ajuda-a-vencer-bancas-de-pos-graduacao-veja-dicas.htm>, accessed 22 Dec. 2020.

Table 2: meme analysis based on Peirce's triads

Firstness: black, gray and white (neutral).	Secondness: anxiety; effect of despair; effect of serious fact; astonishment.	Thirdness: fear; astonishment; lack of calm.
<i>quali-sign</i>	<i>sin-sign</i>	<i>legi-sign</i>
icon: five men and one woman.	index: woman's expression of despair; dark colors; men with a brave expression; lack of amenity.	symbol: men and woman, table; ancient symbol in sculpture form, room, darkness.
rema: Only neutral colors, representing lack of joy and peace, with serious tone by context	dicente: lack of peace, despair, uncomfortable situation of death, astonishment.	argument: ironized fact (caption) by means of academic life, whereby one of the requirements is the participation of the board, and in this case, the board will give the answer of approval or not, thus the effect of amazement.

It is observed from these analyses that the concepts are concrete, unlike other systems of semiotic analysis; explicitly, the triads relate the object so that there are all the components that make sense in the sign. To analyze an object, it is necessary that there is agreement between the aforementioned elements, in addition to the apprehension of its real or modified context and its cultural relationship.

4.3 SEMIOTIC SQUARES

For Algirdas Julien Greimas, the visual representation fits to the semiotic squares, they contain the information that can be analyzed and ultimate representations of antithesis, it is a logical system that determines phenomena and possible feelings behind the object, but

it is not limited to these concepts. For there to be a square, there must be straight lines, at least four, in Greimas' scheme, every beginning of a line that makes up the square must have these nomenclatures (in the basic system): s1; s2; -s1; -s2; in a first scheme, s1 and s2 would be feminine and masculine, and the not-s1 and not-s2 would be the negation of these concepts. From these questions, there can be six types of lines: s1 - s2 = contrary axis; -s1 - -s2 = sub contrary axis; s1 - -s1 = positive axis; s2 - -s2 = negative axis; s1 - -s2 = positive deixis; s2 - -s1 = negative deixis. All these relations, can be taken into account when analyzing objects, having in mind what is opposed, there are examples of baroque paintings, in which there is the counterposition

of light and shadow; life and death and other concepts; these issues must be taken into consideration when performing the analyses based on Greimasian semiotics. These positive, negative and neutral terms (s and -s), are called by Greimas as semantic terms. According to the author, the interpretant notion referring to semiotic squares is taken from a:

[...]substance of the content - requires greater precision. We understand - as we have already insisted when talking about the semantic axis - that substance can only be proximalized and captured with the help of lexicalization.
(GREIMAS, 1972, p. 21)

With this, the notion of substance, according to the author, is found within the analysis of the content used, thus elaborating a relationship of opposition and complementation between signifier and signified, as it is witnessed beyond the plane of expression and content, in view of the fact that the analyses are elaborated according to the substance, that is, the way of analysis is changed, but not the structure. The author, like Peirce, concerns a triadic relation of the sign, by relating the semantic category to the lexemes of the French language (p. 22). Proceeding in a more concrete way, the semiotic squares relate not only in a relationship of antithesis, but of positive and non-positive, negative and non-negative categories, Greimas institutes in his work, relations of spatiality; dimensionality; verticality; horizontality; perspectivity and interality of the object, by which the semas and lexemes act in the manner stated above: from + and -; the positive and negative values of the object, are taken from the lexemic subcategories: *baut, bas, long, court, large, étroit, vaste and épais*. All the stated lexemes have a relation of existence; the meanings are related to qualities: tall; short; long; short; wide; narrow. In a systemic way, if an object were analyzed, whose main object would be the portrait of a human being, with facial expressions of fear, whose surrounding colors were black and dark red, Greimas' semiotic square and semantic analyses would look like this s1(fear) - s2 (non-fear); -s1(male - non-fear) - s2(male - fear); inside this square, it would be depicted in a manner inferential to the square, cutting from end - to - end, depicting this way: s - man; -s - life; s1 - s2 = living man; s2 - s1 = dead man. The essence of the content, would be the temerity of the man, through the context that would be discovered according to complementary information, such as the date of the work, the title, and the painter, from which the historical context, the literary and artistic period, would be inferred, Besides the artistic style, in the case of what was written, it would be the baroque, a

time of antithesis, then it is inferred that the context would be of someone who is lost through his belief in god and carnality, god would be the fear, while carnality would be the non-fear, thus the colors: black, dark red, would show first: black as the lostness, the lack of god or the no-god, and dark red, would be carnality, in antithesis with the idea of god. All these aspects, when analyzed by Greimas' vision, infer something beyond the relations of the squares, because the interpreter must be aware of historical, literary, artistic facts, etc.

4.3.1 ANALYSIS OF MEMES BASED ON SEMIOTIC SQUARES

For better visualization of the results of analysis of memes through linguistic systems, in addition to the composition of comparison between the two semiotic systems, from the author's point of view, specific memes are analyzed through the contexts and antitheses. The Greimasian system, allows, from semiotic squares, that there is the substance of objects through their contexts, their main antithesis, their colors and shades and especially the historical relationship and analysis of the subtitles with concrete determination in memes. Memes in this context will be used as an object of analysis based on the concepts of Greimas, which in this article is complementary reading and confrontation of results by means of the main author of this article: Charles Sanders Peirce, because one determines analyses by means of semiotic squares and the other: from triads, composing the essence of the object mainly in the imagetic relationship. In order to have in a total way this question of analysis of results, two memes were chosen in the area of linguistics, which by themselves infer concepts, images, objects, subtitles, contexts, etc., fundamental parts that concern the sign as a holder of concreteness.



Image 4: phonetic meme

Source: <http://anacrisprofessora.blogspot.com/2018/01/transformando-conceitos-em-memes.html>, accessed 22 Dec. 2020.

Figure 1: analysis from Greimas' semiotic squares

s1 = hunger(want-to-be);
s2 = hungerlessness (wanting-not-being)
s=lady(obj.)
not-s1 = not-hunger(not-wanting-not-being)
not-s2 = not-hungry (not-wanting-to-be)
-s = lady's expression/hands (context)

In this context, it demonstrates an africation of the phoneme /o/, represented as a phonetic phenomenon. The historical context, would be through the meme, the stylistics of the meme, the format, the quality of the image and the expression of hands, infer the year 2011 to 2014, when it was becoming popular the creation of memes in Brazil, possibly was used APP meme generator for mobile devices, which facilitates the creation of memes. The expression of the hands, infer a causality of pacifying element, the expression of the lady, demonstrates a near non-vision, which is had when people are not sure of what they speak. The antithesis between hunger and not-hunger, represented by the caption, ironizes the fact that phonetics is open to sociolinguistic analysis, for example, because it does not infer as absolute truth the grammar, but the pluralistic forms of speech and the insertion of understanding, that is why in phonetics there are differences between the phonemes: /'fi/ and /'ti/ for example, because it depends on the speaker's speech, so assuming that this is the relationship of the meme, the term: /'hunger/ is the phonetic inference of /ba'Xiga/. The predominant colors are: white; black; brown; yellowish-pink (soft); and dark brown. This advocates a relationship of peacefulness of the main object: the lady.

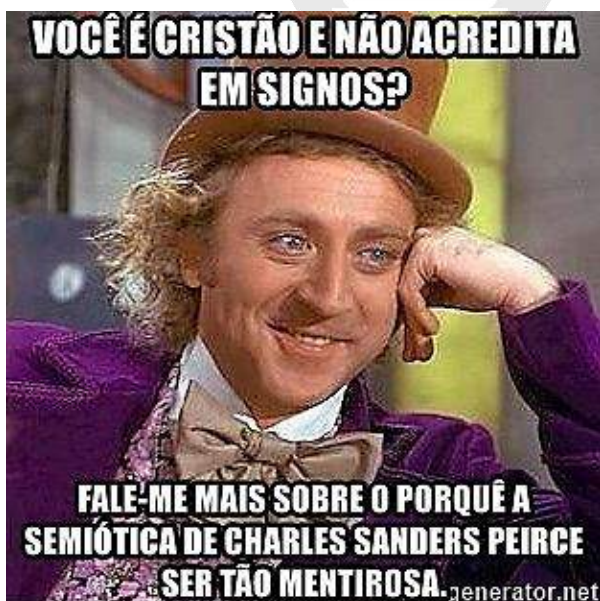


Image 5: meme about Peirce's semiotics

Source: <https://memegenerator.net/instance/17962597/willy-wonka-voc-cristo-e-no-acredita-em-signos-fale-me-mais-sobre-o-porqu-a-semiotica-de-charles-sand>, accessed 22 Dec. 2020.

s1 = sign (want-to-be);
s2 = non-sign (want-not-to-be)
s= actor with ironic expression(obj.)
non-s1 = linguistic non-sign (don't-want-not-to-be)
not-s2 = astrological non-sign (not-want-to-be)
-s = antithesis between the linguistic sign and the astrological sign(context)

In this context, it is observed an expression of irony by the actor (as the main object), the smile is genuine, the hand positions infer as mere distrust, or irony on his part; the meme caption, infers an irony and pragmatism by the concept of sign, this being the language system or the astrological system, by which Christians mostly do not feel comfortable to believe. Thus, the antithesis present in both signs is genuine and semantically analyzing, both have different meanings and equal signifiers, which demonstrates with greater emphasis this divergence of concepts.

5. FINAL CONSIDERATIONS

It is clear that memes, in addition to being means of replication, are mutable means and of extreme importance to society, especially in the digital environment. As they are replicators, there is always the replication of new memes on the internet, and thus, of the information propagated. In this article we have observed the great memetic search and how this scientific study occurs nowadays, although in an implicit way. The biological relations of memes, from their structure, to the content propagated, always have similarities with other types of memes, with other nomenclatures and ways of making the main object viable. With the collection of materials and complementary studies, we have a panoramic view of memes, and not just a single perspective, and so it is inferred that memes have cultural, linguistic and technological value and therefore are extremely important propagators of content, because of its structure and also the phenomenon of viralization. Memes are fundamental tools for understanding how the internet works, for answering questions about why, for example, chains are extremely propagated, and also for use as a tool for educational aid, linguistic and semiotic analysis as determined by the BNCC (2018) and also for

scientific dissemination, given the colloquial language and eye-catching images that can help external audiences to understand the information quickly. For this reason, educational resources such as games, involving scientific and biological memes, with interdisciplinary knowledge as the game called environmental questions, present in the article environmental science teaching: developing a pedagogical resource from the generating theme water, is of great importance for children and young people, so that they can develop criticality, scientific involvement and also greater affinity with the topics covered, that when it comes to the use of memes, infers greater mastery by the players, in addition to contributing to the further spread of scientific concepts.

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