TATUAGEM: TATTOO:
UMA ARTE DE AN ART FORM OF
INFORMAÇÃO CONECTADA CONNECTED INFORMATION
PATRÍCIA SALES
ZENY DUARTE

Patrícia Sales holds a Bachelor's degree in Social Communication and is a Master and researcher in Information Science at the Graduate Program in Information Science at the Federal University of Bahia. She is an archivist at the same university.

Zeny Duarte holds a degree in Library Science and Documentation and a Ph.D. in Letters, and performed postdoctoral studies on Information Science on Digital Platforms. She is a Full Professor at the Federal University of Bahia, Brazil, where she coordinates the G-Acervos group. She develops critical, theoretical and epistemological studies on Information Science covering digital platforms, and effects pedagogical and curricular projects in Brazilian universities.

Abstract

This article is a reflection upon and a result of a research work developed at the Postgraduate Program in Information Science of the Federal University of Bahia (UFBA), Brazil, which aimed to show the use and understanding of information through tattooing, and its behavior from an information point of view. From such perspective, the article converges with the theme of V!RUS Journal, "The construction of information", offering concepts on the "information" object from scholars such as Shannon and Weaver (1975), Wersig and Nevelling (1975), Abraham Moles (1969), among others. The article presents a tattoo as a body of information, which is synthesized through the subject's external and internal relationships in society, and also the criteria suggested by Coelho Netto (1973) and Moles (1969) to distinguish semantic information from aesthetic information. Finally, the journal's theme allowed us to present the "information" object based on the tattoo as a social product and a generator of meaning. We conclude that practices and better use of information build new products and, consequently, new information since the use of tattoos is unrestricted and covers multiple scopes.

Keywords: Information, Tattoo, Semantic information, Aesthetic information

1 Conjecturing and choosing the concept of information

In a society shaped by dynamism, it is imperative to be aware of the activities promoted by the use of information. In addition, the subject resorts to information resources to achieve its desires or needs. Thus, information is used to construct new information that will promote social well-being in the cultural, political, technological, or economic sphere.

As a study object, it is known that information passes through several areas of knowledge for the purpose of observing its behavior, processing, sharing, storage, among other actions stimulated and promoted by information.

A landmark for information studies is *The Mathematical Theory of Communication*, by the Americans Shannon and Weaver (1975); however, for the authors, "the word information, in this theory, is used in a special sense that must not be confused with its ordinary usage. In particular, information must not be confused with meaning" (Shannon and Weaver, 1949, p. 8, emphasis in original). Obviously, this theory does not apply to all studies that need a wider or specific concept. Wersig and Nevelling (1975) understood that the use and meaning of the term were justified, but there should be a rule for assessing which meaning would be appropriate for each purpose.

> In scientific discourse, theoretical concepts are not true or false elements or glimpses of some element of reality; rather, they are constructions designed to play a role in the best possible way. Different conceptions of fundamental terms like information are thus more or less useful, depending on the theories (and in the end, the practical actions) they are expected to support (Capurro and Hjorland, 2003, p. 149)

Therefore, the discussion and serious study regarding the concept of information promote a conceptual profusion from theorists such as Moles (1969), Wersig (1975), Barreto (1994), Le Coadic (1996), Silva (2006), Ribeiro (2012) and others. Faced with theorists with consolidated concepts, the one that most closely approximates and relates to contemporary and dynamic society is used: "Information as a human and social phenomenon, that derives from a subject who knows, thinks, has emotions, and interacts with the sensitive world around it and the community of subjects who communicate with each other" (Silva, 2006, p. 24, our translation). The definition proposed by Silva also presents elements that characterize information, namely:

structuring by action (human and social) – the individual and/or collective act constructs and structurally models the information;

pragnanz – enunciation (maximum or minimum) of the active meaning, that is, of the action that constructs and shapes the information;

pregnância – enunciação (máxima ou mínima) do sentido activo, ou seja, da acção fundadora e modeladora da informação;

quantification – figurative numerical linguistic coding can be valued or measured quantitatively;

reproduction – information can be reproduced without limits, permitting subsequent retention/storage; and

transmission – informational (re)production is potentially transmissible or communicable. (Silva, 2006, p. 24, emphasis in original, our translation)

Internalizing the definition and the characterizing elements from an image, it can be seen that they present and justify themselves based on the subject-world-object relationship, as shown below:

Fig. 1: Mario Bros tattoo. Source: Cayoo. Super Mario Bros. Creative Commons, 2011. Available at: https://bit.ly/36G40x8.
[Accessed: Oct. 29, 2019]

In figures 1 and 2, we see a representation of the main character of the Mario Bros games. Analyzing them, we can perceive the characterizing elements of the information as proposed by Silva (2006), when an action that shapes the information according to the individual or collective interest is present. Thus, the information was presented in a tattoo and a poster. Dynamic integration is related to the subject's context, the internal and external motivations for representing Mario in the manners mentioned above. The images above demonstrate the perception of how the character Mario is seen and how it ended up in the figures shown: that is *pragnanz*. Regardless of the form or format in which it is presented, all information can be quantified and thereby becomes reproducible on various media, such as human skin and paper, on which it can be communicated and transferred.

Speaking of which, the support medium chosen is important. The tattoo and the poster are artworks elaborate and approved for specific purposes, even in relation to their exposition. As will be explained, tattooing has a history of being shunned. However, over time, having an image engraved on one's body has become a symbol of rebellion or even transgression of established social paradigms. A tattoo modifies the body and its exposure causes social uneasiness as a result of the information incorporated and presented on the skin. Therefore, "work on the body automatically brings consequences in relation to the world" (Ramos, 2001, p. 57, our translation). These characterizing elements are observed when Ribeiro (2012, pp. 10–11, our translation) understands information as:

> A structured set of encoded mental representations (significant symbols), socially contextualized and that can be recorded on any material support (paper, film, magnetic tape, compact disc, etc.) and therefore communicated in an asynchronous and multi-directed way, [...]. Since information is a human phenomenon that originates in the brain, closely related to the socially contextualized action of the individual, the study of this phenomenon cannot fail to refer us to cognitive and sociological approaches [...].

As an asset that promotes social processes in its many spheres – political, cultural, economic, natural, and technological – information merits constant and broad study of its definitions depending on the social and scientific transition, as the materiality of information is presented under various aspects. With regard to that, it is certain that:

> Information harmonizes the world. Like a wave or a particle, it participates in the evolution and revolution of mankind's consciousness toward its history. As an organizing element, information connects people to their destiny even before their birth, through their genetic identity, and during their existence, it acts in the role of elaborating the information to establish their individual odyssey in space and time. (Barreto, 1994, p. 1, our translation)

Therefore, Barreto (1994) conducts the understanding of information by observing cognitive and social aspects that serve for social construction, based on relationships with other subjects, according to the biological, historical, and social structures.

2   Tattoo: an original product of semantic and aesthetic information

Information, when registered through an image or text - the tattoo – comes under the scope of this work from the moment it is seen as a human product of the subject's experiences with the world.

Recognized as an ancient manifestation on skin with diverse justifications and purposes, the art of tattooing comes from a questionable past, when men and women in nineteenth-century Europe and America were seen as circus attractions, with their bodies covered in drawings, presented together with defective animals, dwarfs and giants, that is, people considered as freaks for not conforming to society's standards (Caroni and Grossman, 2012, p. 1064).

Peres (2015) reports that, in the twentieth century, tattoos were used by prostitutes, criminals, prisoners, and sailors, becoming popular among Second World War soldiers. Referring to Brazil, Peres (2015, p. 5, our translation) complements:

> The history of tattooing is closely related to marginality and the lowest social classes. Firstly, the indigenous population drew on their bodies in an ephemeral way, then the tattooed colonists and sailors arrived, more recently enslaved Africans were scarified and marked, and then prisoners, cart drivers, porters, shoeshines, newsboys, store owners, and cobblers adhered to the practice. In the sixties and seventies, with the student demonstrations for liberalization and autonomy and the rise of the henna tattoo fashion, tattooing started to become national news, and the children of the pop culture and counterculture appeared with tattoos.

Therefore, Rodriguez and Carreteiro (2014, p. 751, our translation) define the tattoo as a mark or representation of memories experienced, immortalized on the skin:

> Tattoos as marks made with a 'needle and ink', attach themselves to the living flesh, draw, modify, and redraw it, recording and restoring important feelings and situations for those who get tattooed. They represent memories, homage, important events, changes in life stages. They show dates, symbols, portraits, with the explicit functions of remembering and identifying. Faced

with the fast changes each person experiences every day in life, a tattoo seems to function as something that remains, as a repository of memories or personal characteristics that people want to keep, embody, make 'real'.

Social contexts raised tattooing to a position of respect and acceptability in the eyes of society. Peres (2015, p. 6, our translation), in his definition, lists the properties of a tattoo:

> While it is extremely personal, it is also social; in addition to being irreversible (although not anymore) it is ephemeral; marginal and central when it relates the margins of society to its centers of power; it identifies and at the same time differentiates; it can incorporate meanings from institutionalization to subversion; and it can be regarded as a simple everyday communication or a specialized practice. In the end, it always means something. And it becomes a kind of evocation, a communication that depends on symbolism and goes beyond its intentionality when it is shared./p>

Thus, a tattoo contains elements of information that permit the generation and reconstruction of meanings. With changeable meaning and behavior in face of a new context or subject, it is clear that the social reality in which the subject is inserted interferes with a person's processes of interaction with the world (Moles, 1969).

> Information carries an element of meaning. It is a meaning transmitted to a conscious living being through a message inscribed on a spatio-temporal medium: printed, electric signal, sound wave, etc. This register is made through a system of signs (language), which are an element of language that associates an acoustic image with a meaning: alphabetic sign, word, punctuation mark. (Le Coadic, 1996, p. 5, our translation)

Visual information through tattoos demonstrates ways of presenting informational elements with meaning through the medium in which they are found. A tattoo is a record chosen to register information contextualized and elaborated from a dialogical relationship with the aim of marking something to be remembered.

This relationship takes place through verbal interaction, with the use of language, between the tattoo artist and the subject to be tattooed, with the intention of defining the tattoo to be recorded. Usually, the subject to be tattooed has a theme and/or an idea of what it wants. Therefore, it is through the verbal exchange that the outlined information object, the tattoo, emerges.

> Thus the personality of the speaker, taken from within, so to speak, turns out to be wholly a product of social interrelations. Not only its outward expression but also its inner experience are a social territory. Consequently, the whole route between an inner experience (the "expressible") and its outward objectification (the "utterance") lies entirely across the social territory. When an experience reaches the stage of actualization in a full-fledged utterance, its social orientation acquires added complexity by focusing on the immediate social circumstances of discourse and, above all, upon actual addressees. (Vološinov, 1973, p. 90)

Such a relationship is important for the subjects involved to present their utterances according to their experiences and thoughts. Thus, the tattoo should express what the subject desires, and also commemorate a discursive relationship between the tattoo artist and the subject.

The creation of a tattoo, as a work of art, occurs for a multitude of reasons. A tattoo is a very individual expression of information, but with concrete and eloquent justifications about thoughts, facts and conjectures concerning existence as a social being. That is, it is from the social to the social, not an isolated action of the subject. That is why,

> Therefore, nothing verbal in human behavior (inner and outward speech equally) can under any circumstances be reckoned to the account of the individual subject in isolation; the verbal is not his property but the property of his social group (his social milieu). (Vološinov, 1976, p. 86).

On this point, Gonçalves et al (2016, p. 111, our translation) add:

> Man - as a cognitive being who processes information to develop knowledge - makes use of various languages to convey ideas and feelings, thereby realizing the act of communication. We can, therefore, identify internal and external resources and their interrelationship, through the constructs of cultural and cognitive elements of individuals, as formal foundations for the elaboration of language, resulting in symbolic systems of representation and communication.

In a message, whether visual or oral, originality and banality are two aspects considered in relation to the information. Let us examine a passage from Moles (1969, p. 185, our translation) as an example and brief idea:

> Thus, the same printed page has a different repertoire and different information: for a savage or a child, who understand the visible patches of light on the surface as a whimsical drawing; for a proofreader or a foreigner who has not mastered the language, who read the letters; for an ordinary reader who reads the words; for a layout professional who reads the blocks of characters. Each one has their own repertoire, each one finds in it their own redundancy and

originality, depending on their knowledge, their mental habits, and their education. In practice, when we speak about the information of a written or printed text, we implicitly refer to the interpretation of an average 'reader', who reads the words and gathers them according to the global knowledge supposedly possessed by the social group of individuals that have approximately the same statistical culture. (Moles, 1969, p. 185, our translation)

Further ahead, the same author discusses another possibility involving the same receiver, the reader, of the citation above:

What would happen if this receiver, as a result of their culture, their prior knowledge or for some other reason, had a deeper, wider and ever-increasing understanding of the transmitted message, about how it is structured, about its symbols and its frequency, etc.? (Moles, 1969, p. 185, our translation)

In such a way, the inferences, inspirations, and influences presented by the subject in a society facing information situations are enlightening and valid. Subjectivity is perceived to be present externally and internally in the creation or reception of information, and this has to do with original and redundant aspects. According to Oliveira (2006, p. 56, our translation), "the more original the image, the more it can sustain itself (while fulfilling its functions and infringing the prevailing aesthetic norms)".

Originality is related to ignorance while redundancy is related to knowledge. If the subject knows about something, "the information is null, the redundancy is 100%, the message is of no interest, banal [...]" (Moles, 1969, p. 186, our translation). Assertively, Moles (1969, p. 188, our translation) states: "there will always be something to take away, some residual information to find."

Enveloped in the originality and banality - redundancy - of the information, Moles speaks about the message that brings Semantic Information (SI) and Aesthetic Information (AI) when perceived through a melody, a painting, a sculpture, a newspaper, among others. Therefore, "the *semantic* point of view is a question put to the outside world regarding its state, material evolution and should prepare decisions – decisions on the present or future acts, decisions on attitudes" (Moles, 1969, p. 188, emphasis in original, our translation). Thus, it is essential to understand the SI and AI in an image and the aspects that differ between them.

Elaborating a discourse, an idea, or a drawing tends to represent the logical association of the information about a specific subject. Nowadays, tattooing is seen as an imbricate set of information and, to understand it clearly, it is important to analyze it based on SI and AI because the events perceived and cognitively represented by each subject are encoded in an image in order to convey a message that has meaning and realism.

All information is semantic information due to its meaning because SI carries meaning, as it has a universal logic, structured, speakable, translatable into a foreign language, which, in the behaviorist conception, serves to prepare actions (Moles, 1969, p. 192). About SI, Coelho Netto (1973, p. 10, our translation) argues that:

Belonging to the level of reason, semantic information is a structure of previously coded symbols, manipulated with a certain logic, from the domain of a relatively large group of individuals (a sociocultural matrix) which conveys from one to another of these subjects (receiving source) a certain message of a clearly utilitarian character, that is, a useful message for the receiver, which serves it as an instrument for something well defined.

In order to better understand AI, let us consider that "the word aesthetic derives from the Greek language; it comes from the word 'aisthetikós', which in turn derives from 'aisthanasthai', and means to perceive, to feel" (Oliveira, 2006, p. 29, our translation). Aesthetics is always thought of in relation to beauty, but beauty must be standardized by the subject's personal taste and not by the social imposition of those who hold power. AI is:

Untranslatable, and refers, rather than to a universal repertoire, to the repertoire of knowledge common to the transmitter and the receiver, and it is theoretically untranslatable into another 'language' or systems of logical symbols because that other language does not exist. It can be considered as similar to the concept of personal information. (Moles, 1969, p. 192, our translation)

It is interesting to mention that Moles (1969, p. 193) believed that AI had no utilitarian character, as it did not allow the subject to act. However, Coelho Netto (1973, p. 10, our translation) disagrees with this idea because "aesthetic information, belonging to the level of sentient perception, would be placed on a plane completely opposite to that of semantic information (level of reason)". The author emphasizes that, even with this opposition, the knowledge acquired through meaning and the knowledge acquired through reason complement each other.

In face of such conflicts of ideas, it is possible to reflect and ask: do individuals become subjects by being challenged by society and its ideological structures? Therefore, are those who are inspired by a song, a poem, a work of art, moved or not toward the success of their actions?

Given the multitude manners and possibilities of incorporating, internalizing and reworking the information that renews the subject and makes the world go round, and the considerations presented, below we give the criteria suggested by Coelho

Netto (1973, pp. 13–14), also mentioned by Moles, for distinguishing semantic information from aesthetic information. They are logic, circulation, translation, and exhaustion. Let us examine them.

2.1   Logic

Semantic information: The existence of logic in information is what allows the understanding and comprehension of a message and the effectiveness of communication. For example: "Go ahead" / "1 + 1 = 2".

Aesthetic information: "It does not necessarily resort to the postulates of universal logic; it may or may not do so, and the absence of logic does not prevent its existence or degrade its value" (Coelho Netto, 1973, p. 13, our translation). For example interpretation of Figure 3, the character Mario permits various interpretations. Even without transparent logic, however, for the artist of the work or for the observer, according to their intellectual and individual repertoire, the elements presented carry a logical meaning for the interpretation of the image.

Fig. 3: *Mario Bros*. Source: Tonkr, Sari. *Mamma mia!* Creative Commons, 2012. Available at: https://bit.ly/2Cshm2o.
[Accessed: Oct. 29, 2019].

It can be seen that the logic in the image is a collection of information (colors, space, the arrangement of objects) that generates meaning because these items together constitute a coherent unit for a subject.

2.2   Circulation

Semantic information: The message that has semantic elements must be understood by members of the same social group. For example: "Go ahead", understood by those who speak English; "π (Pi) = 3.14", although π is a Greek letter, is information understood by mathematicians, that is, information with restricted circulation.

Aesthetic information: "To be characterized, it does not need a large number of receivers, and may even be restricted to interpersonal communication. It continues to exist as such, even if there is only one source and no one able to receive it, to understand it" (Coelho Netto, 1973, p. 13, our translation). For example, A painting not exposed to the public.

Fig. 4: Mario flying tattoo. Source: The Pug Father. Flying Mario tattoo. Creative Commons, 2011. Available at:https://bit.ly/2Q0iyBZ. [Accessed: Oct. 29, 2019].

In Figure 4, we see a tattoo of Mario on a subject's belly. Let us imagine that this subject does not have the habit of exhibiting his artwork and, according to the AI circulation criterion, the fact that this tattoo is never exposed does not reduce its meaning, because its existence does not need to be accepted by members of the same social group, as is the case of SI. Thus, the informational meaning of the tattoo matters only to the tattooed subject.

2.3   Translation

Semantic information:it can be translated from one language to another, from one symbol system to another, from one medium or channel to another. For example: "Siga em frente" (Portuguese) = *Go ahead*(English) / *Allez* (French) / *Vorangehen* (German).

Aesthetic information: it is not translatable. Coelho Netto (1973, p. 14, emphasis in original, our translation) postulates the existence of "[...] an eventual possibility of recreating the original information, but this re-creation implies mutilation, transformation of the information, which only exists fully in the form attributed to it by the source and in no other".

In Figure 5, we see a reproduction of Mario in a tattoo. It is worth noting that, even if the cultural vector translates the images or words into other images and words, the integrity of the original information is not maintained. Coelho Netto (1973, p. 14, our translation) himself warns that "a painting will only transmit its private information as long as it remains itself, that is, as a painting: as that painting"; therefore, any other attempt at translation is a re-creation of an original work.

Therefore, the translation of the character Mario in Figure 5 does not reproduce the Mario created by Shigeru Miyamoto, since the translation of an image implies reproducing the image with the same strokes, the same colors and, consequently, on the same medium.

2.4   Exhaustion

Semantic information: the same information obtained more than once is devoid of novelty or originality, therefore it is redundant and predictable. For example a dialog between two people about the location of store X:

"Where is store X?"

"It is on the 2nd floor."

If at another time, the same person who is asking about store X repeats the question to the same respondent and gets the same answer, it is confirmed that this information has been exhausted. However, this exhaustion could be prolonged if the respondent were to offer new alternatives for the location of store X, such as: to the right of store Y or in front of store Z, among other options.

Aesthetic information: "The aesthetic message of a work of art is not easily exhausted and may never be exhausted. [...]" (Coelho Netto, 1973, p. 14, our translation). For example reading and rereading a book like *Alice in Wonderland*; hearing a song or contemplating a painting.

Concluding the understanding of the two kinds of information, aesthetic and semantic: a ball will always be a ball because it will always be round, but aesthetically it may be made of paper or any other material or it may be colorful and sportive. However, semantically it is still recognized as a ball.

Fig. 6: Mario Jedi tattoo. Source: ANJRUED. Jedi Mario. Creative Commons, 2009. Available at https://bit.ly/2WVHf41 [Accessed: Oct. 29, 2019].

The Mario tattoo is an example to be understood under the "exhaustion" criterion. Mario is the main character of a video game franchise and may be represented in different ways because the character's behavior is expressed according to its trajectory in the game, modifying its features according to the games' versions, stages, and achievements. Costumes may also receive some complement, as seen in Figure 6, in which Mario receives a tunic, a belt, and a sword, representing a Jedi. Therefore, the possibilities that the character Mario offers for a tattoo are not exhausted.

However, the subject to be tattooed may want a tattoo retaining only the character's face and putting it in a context different than that in the video game. In fact, the criteria make it easier to understand the information derived from the tattoo, as they serve to give meaning to the non-oral information and direct the subject to understand how the tattoo is maintained and acts in a singular and plural unity like the body in society.

The criteria allow human thinking to question if an image has logic in common for all those who view it, if it circulates only between members of a group if the attempted translation came close to the original object and also if creativity has been used to avoid exhaustion. Therefore, these criteria demonstrate a subject's ability to use information, whether tattooed or not.

3   Reflexive conclusions

The study of information is continuous and it is found that the concept to be used is in accordance with the objectives of each researcher, and therefore there will be appropriate concepts for all the areas of knowledge.

We have seen the construction of information from the tattoo which comes from social development. Its main element, information, maintains a persistent application in all spatial and temporal contexts. Due to the existing dialogical process, information may modify states of internal and external order of the subject due to social and informational interaction. In that way, being in the world guarantees the use of information to dialog, construct, and create meaning for our actions.

A tattoo is a product of information and an act of communication. Its importance is social, not individual, otherwise, there would be no record of stigma in its history. However, it is emphasized that greater acceptance does not mean the eradication of the prejudice surrounding an ancient and consecrated art form.

Since the use of information is unrestricted and has multiple scopes, it is necessary to enlarge the study of semantic and aesthetic information in order to understand a visual image, because the interpretation of an image, besides promoting new information, is totally related to the cognitive and sensitive properties of the subject.

Finally, it is understood that the tattoo is part of a creative process in which the object "information" is a principal component for the satisfaction of a human desire and that this art, even on human skin, can be preserved, thus ensuring the contextualized record of a people and safeguarding remembrance.

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