

CONCEPTUALIZING DIGITAL REALITY THROUGH METAPHORS IN PUBLIC SERVICE ANNOUNCEMENTS: A SEMIOTIC PERSPECTIVE

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Abstract

This article discusses the conceptualization of digital reality through metaphors in public service announcements (PSAs), employing a semiotic perspective. PSA is viewed as a complex sign in the space of culture generated by social institutions to be shared with the general public and to raise awareness about important issues of society.

The discussion is based on three basic claims: firstly, as digital reality increasingly spreads throughout modern life, digital technology shapes how we understand and experience the world and profoundly alters meanings and cognitive structures; secondly, the creation and reconfiguration of meanings and cognitive structures caused by digital artifacts occurs through metaphorization processes resulting in the creation of digital metaphors; thirdly, digital metaphors are the driving force behind creation and a way of producing original PSAs and display commitment to innovation reflected in the selection of signs.

The article proposes a theoretical framework that integrates the concepts of “digital metaphor” and “representation” in Peircean view, thus creating a semiotic perspective of interpreting the “discoverability” i.e. public perception and comprehension of PSAs.

Special attention is paid to the multimodal nature of the complex cultural signs under study and the representative characters of different representamens. The analysis of some PSAs containing digital metaphors is provided to substantiate the potential of the suggested theoretical framework.

The article draws inspiration from works by Charles S. Peirce (1903), Umberto Eco (2014), Ibrus Indrek and Peeter Torop (2015), Kristian Bankov (2022), Eric Chown and Fernando Nascimento (2023), and others.

Keywords: digital reality, digital metaphor, public service announcement, complex cultural sign, multimodality, representation

Sign production involves the adventures of sign or signs
(Hugh J. Silverman)

1. Exploring Digital Reality: Foundations and Semiotic Insights

1.1. Understanding Digital Reality

Present-day society has become digital. Because of technological advancements, digital reality has affected numerous spheres of human existence and has called for new approaches and methods of creating and interpreting diverse texts borne by this reality. The latter emerges as a multifaceted phenomenon that brings together different digital technologies, virtual environments, and human experience, blurring the distinctions between the physical and virtual realms. Therefore, being innovative and multifacet, digital reality provides new objects for interdisciplinary research:

“The new era of global, digital, networked and transmedial cultures, and their visibly dynamic change has, however, again brought about new perceptions of the value of interdisciplinarity” (Ibrus & Torop 2015: 4).

Though technical domains such as computer science and engineering remain basic for the study of digital reality, the latter significantly engages social sciences and humanities. Psychologists study the cognitive and emotional impacts of digital phenomena; sociologists and anthropologists explore their cultural and social implications; media and communication studies analyze changes in media consumption and storytelling; education

researchers investigate the potential of digital realities for innovative learning and training approaches and more.

Digital reality, as a new space of sign reality, revolutionizes the use and interpretation of language because natural language signs merge with visual, auditory, and other non-lingual codes, creating multimodal forms of communication that transcend conventional text. Those revolutionary changes call for new approaches to discourse studies as new modes of discourse emerge. Semiotic theory views the text as the space of sign reality. With the emergence of digital reality the sign reality of texts has been modified and semiotics has become a powerful tool for their description.

Reconfiguration of sign systems and meaning-making processes within digital reality has sparked the interest of researchers. Lev Manovich in *The Language of New Media* (2001) examined the semiotics of digital media, highlighting how new media technologies create new forms of visual and interactive signs that alter traditional signification practices. Marcel Danesi in *The Semiotics of Emoji: The Rise of Visual Language in the Age of the Internet* (2016) studied how emojis and other visual signs are integrated into digital communication, forming a new layer of semiotic complexity. Sara Cannizzaro (2016) analyzed Internet memes in new media communication. Kristian Bankov in *The Digital Mind: Semiotic Explorations in Digital Culture* (2022) explored how digital environments alter traditional semiotic structures, emphasizing the dynamic nature of digital signs and their role in shaping contemporary culture and cognition. These are but a few researches having reference to some issues of encoding digital reality. The very notion of the latter does not have its final definition yet.

Different researchers offer diverse definitions of digital reality. Digital reality is a general term for all kinds of immersive experiences, including virtual reality, augmented reality, mixed reality, and extended reality (Ebbesen & Machholdt 2019 n.p.). The majority of scholars agree that digital reality refers to the wide spectrum of technologies and affordances that include virtual reality and augmented reality. Virtual reality is a computer-generated environment, and augmented reality is a combination of the physical and digital worlds (Nijenhuis 2023 n.p.). In virtual reality, users find themselves in digital spaces that go beyond mere entertainment or technological innovation. Technologies enable individuals to engage with virtual digital reality through immersion in the designated environment, for example, virtual tours and excursions. Augmented reality provides the ability to combine digital information and the physical world and enables the simulation of a scenario or experience. For example, we are all well aware of the reason why people do not always want to rent commercial real

estate online: it is difficult to imagine whether the premises will meet the commercial intent. However, now, with the use of mixed physical virtual reality, owners can help buyers design the placement of equipment in a proposed space so that clients can understand whether it suits various parameters for their business purpose.

Applying the semiotic perspective, we can venture the definition: digital reality is a multimodal environment formed by a set of signs of different types, the objects of which belong to virtual, augmented or physically mixed virtual reality.

1.2. Metaphors in Digital Reality: Semiotic Perspective

Digital technologies are a source and a product of inspiration, as they provide new ways of creating, transmitting, and perceiving information. Simultaneously, digital technologies not only enhance communication tools but also generate new meanings, altering our perception of things. They “not only produce new tools and social structures, but they produce new meanings; they change how we see things” (Chown & Nascimento 2023: 2). Meanings and cognitive structures are profoundly altered through digital technologies. Digital artifacts create and reconfigure meanings and cognitive structures primarily through metaphorization processes resulting in the creation of digital metaphors. Discoveries are supposed to be cast in terms of things that everyone understands and the primary vehicle of this strategy is most commonly a metaphor:

“Today, however, it is scarcely an exaggeration that metaphor is more respectable than rhetoric itself <...> Today metaphor is no longer one figure among others but the figure of figures” (Culler 2001: 210);

“Metaphors are privileged ways in which language and technologies blend. Metaphors can be used to create new meanings and are therefore an essential mechanism when developers want to introduce a new technology through language” (Chown & Nascimento 2023: 27).

It is generally acknowledged that the term “metaphor” is used to describe a correlation between distinct ideas, thoughts, and emotions, wherein one idea or emotion leads to another. Different concepts and approaches have been developed to explain metaphorization. Linguists apply the notion of association and define metaphor as a method of conceptualizing reality by interpreting the essence of one sphere of human experience in terms of the essence of another (Martyniuk 2011: 74). Thus, one concept serves to structure another one through associations based on similarity.

Olena Selivanova emphasizes the semiotic nature of metaphors and considers them to be a manifestation of linguistic economy and semiotic laws (Selivanova 2008: 97).

The semiotic view on metaphors suggested in this paper relies on the semiotic doctrine of the American logician and semiotician Charles Sanders Peirce (1839–1914), who considered a sign to be an inextricable connection between a representamen, an object and an interpretant (Peirce 1991: 28). To denote *a sign*, Charles Peirce initially used the term *representation*. When considering various instances of the action of a sign, Peirce paid special attention to the interpretant:

“every comparison requires, besides the related thing, the ground, and the correlate, also a *mediating representation, which represents the relate to be a representation of the same correlate which this mediating representation itself represents*. Such a mediating representation may be termed an *interpretant*”
(ibid.: 28).

Charles Peirce categorizes signs into three types based on their relationship with the object:

“the first is the diagrammatic sign or *icon*, which exhibits a similarity or analogy to the subject of discourse; the second is the *index*, which like a pronoun demonstrative or relative, forces the attention to the particular object intended without describing it; the third is the general name or description which signifies its object by means of an association of ideas or habitual connection between the name and the character signified”
(Peirce 1993: 243).

Speaking about metaphors, Peirce remarks that they reveal parallelism with something else (The essential Peirce 1998: 273–274). He defined metaphor as a new sign relation and, consequently a new thought. Thus, the semiotics-oriented definition of metaphor based on Peircean doctrine should emphasize that: a) metaphor represents triadic relation between representamen, object, and interpretant, b) the object possesses marks of similarity with another object for the interpreter and c) the interpretant reveals the relation between the representamen and the object shaped by the similarity mentioned in b). The definition holds for a digital metaphor. Its representamen belongs to digital reality and object – to physical reality. The interpretant establishes their similarity.

Digital metaphors are crucial for increasing the efficiency of communication in public service announcements (PSAs). They are the driving force behind creation and the way of producing original PSAs. They are often

encountered in the form of iconic signs. This facilitates the perception of the text and displays the commitment to innovation reflected in the selection of signs. Moreover, visual iconic signs attract the audience's attention and deepen their understanding of complex social problems. In particular, digital metaphors can evoke emotional responses of compassion, outrage, or hope, as well as attract viewers and make the advertising message memorable. A wide range of digital metaphors allows messages to be tailored to the needs of different consumers and cultural contexts.

2. Public Service Announcement as a Complex Sign

PSA is a powerful instrument for reassessing social values and altering recipients' behaviour in socially significant situations. In the era of grave global challenges and social problems, it serves as a guideline for selecting optimal solutions. Digital technologies that penetrate the advertising discourse, provide innovative opportunities for PSA to attract a wider target audience and increase the effectiveness of message transmission.

PSA (in the USA, also – public service advertisement, in the UK – public information film (PIF), in Hong Kong - announcement in the public interest (API)) stands out among advertising discourse genres due to its potential to alter behavioral stereotypes and draw attention to current social issues. The most prominent examples of texts belonging to this genre include anti-drug campaigns, traffic enforcement, promotion of healthy lifestyles, and environmental protection, among others.

The development of PSA in the English-speaking world began at the end of the 19th century in the context of the protection of the Niagara Botanical Garden, which, according to 1894 data, contained more than 900 species of plants and many rare and endangered animals (Environmental Protection at Niagara Parks). Another vivid example of PSA was the call of the American Civil Association (1904) to protect Niagara Falls from the negative environmental impacts of the activities of certain energy companies. Subsequently, during World War I, the Social Revolution in the United States led to the condemnation of child labor and strengthened the patriotic feelings of citizens through such campaigns The War Savings Stamps, The Red Cross campaign and The Selective Service campaign (Goodwill 2022).

In the flow of history, PSA has undergone significant modifications, and the scope of its application has expanded. Currently, PSA has become the object of interdisciplinary research for sociologists, political scientists, psychologists, historians, linguists, and other.

According to the Cambridge Dictionary, PSA is an announcement made on TV, the radio, or the Internet, in order to give the public an important

message, for example about a health issue (Cambridge Dictionary: n.p.). PSAs are non-commercial messages aimed at raising awareness and knowledge, influencing attitudes, and/or inducing or molding certain behaviors, using mass media platforms (Bator & Cialdini 2000: 527; Martiniuk et al. 2010) “While PSAs are a type of advertising, they differ from regular advertising as they are intended to persuade consumers to change attitudes and/or perform behaviours that are beneficial to them and society as a whole, whereas advertisements are designed to get consumers to purchase a product.” (Sivakumaran 2023). According to the Law of Ukraine “On Advertising”, PSA refers to any information of any kind that is disseminated in any form and aimed at achieving socially beneficial objectives, promoting universal human values, and whose dissemination is not intended to make a profit (Law of Ukraine). Oksana Buhaiova views PSA as a crucial instrument for ensuring the political, economic, moral, and psychological stability of society (Buhaiova 2019: 33). PSA is a type of non-profit advertising aimed at changing patterns of social behavior and bringing attention to social problems.

From the perspective of communication theory, PSA is a form of mass communication, in which expressive-suggestive texts are created and disseminated, in order to incentivize recipients to make appropriate socially significant choices and actions. In this paper PSA is viewed as a coherent multimodal text represented by a unity of signs of different types that convey socially significant messages aimed at altering the social consciousness and behavior patterns of society members to promote their well-being.

Multimodality has become a fundamental feature of the contemporary communication space. In the wake of a digital era, the production of textual meaning has increasingly become a consciously semiotic affair. Multimodal texts refer to communication which involves multiple forms of expression or modes, such as natural language, images, sounds and others. Each mode possesses its own semiotic resources, thus multimodal texts present a combination of signs that, on the one hand, belong to different types, and on the other hand, – to different sign systems

The text of PSA becomes a complex sign in the space of culture, and the selection and combination of different types of signs in PSA is purposeful and aims to provide a specific interpretation of their complex combination. By virtue of its persuasive nature PSA possesses intentionality that is “held by cross-cutting intentions” (Arhypova 2002: 13). Umberto Eco emphasizes that signs “serve to communicate different things according to the circumstances and properties highlighted” is notable (Eco 2014: 191). For PSA to be successful, it is of paramount importance that it makes sense to

its intended audience. As a complex sign involved in semiosis, it possesses code, informational and cultural dimensions.

The code dimension focuses on the nature and systematic organization of the means of representation. Primarily the interpreter determines the nature of signs and their belonging to the particular sign system. The informational dimension relates to the relationship between the sign and the conceptual interpretant. The notion of a code is inseparable from the information that can be derived from a range of stimuli and phenomena. Not all of these are intended to convey a message but can be informative with the appropriate interpretation. The cultural dimension of semiosis provides the evaluative interpretation of signs predetermined by the cultural space of the interpreter. This approach offers a comprehensive framework for studying the semiotic processes within multimodal texts (Andreichuk 2021: 147–149).

3. Studies of Digital Metaphors in PSAs

3.1. Case Study 1: Icons

In order to illustrate the combination and mutual complementation of signs belonging to sign systems of different types, let us consider an example of PSA aimed at preserving wildlife (Figure 1) (the total corpus of research material is 40 units):



Figure 1: An example of a PSA from the advertising agency Springer & Jacoby Werbung (Public service advertisements about... 2014)

PSA depicted in Figure 1 encompasses natural language signs, namely: a) “Stopp den Handel mit Wildtieren” (Stop the Wildlife Trade), a call to action to halt the wildlife trade; and b) IFAW (International Fund for Animal Welfare), one of the largest animal welfare organizations in the world. Besides that there are two non-verbal (visual) signs: a) a barcoded image of a bear, which serves as a symbolic sign of wildlife, emphasizing the threat of its extermination; and b) the misty and serene landscape as the natural habitat in the background, evoking the pristine environments that are being disrupted and emphasizing the importance of animals being in the natural environment.

The barcode image is a digital metaphor represented by an iconic sign and requires a two-level interpretation. In fact, here we encounter double metaphorization, as the barcode: 1) is associated with the bars of the cages in which captive animals are kept (Metaphor A); 2) represents a method of recording data (product identifier) which is convenient for reading by various devices, thus it is associated with trade (Metaphor B). Although double metaphorization is not typical of digital metaphors used in PSA, it is an example of how different semiotic systems can interact to create a message. In the example analyzed, verbal elements serve as signs indicating the problem and the organization (company) working to solve it, while non-verbal elements complement this information, creating a visual context and strengthening the emotional connection with the audience.

3.2. Case Study 2: Indexes



Figure 2: An example of a PSA from Cramer-Krasselt, Milwaukee, the USA (40 strongest social posters...2015)

PSA shown in Figure 2 is another multimodal text. Verbal signs are the following:

- a) “46 days in hospital bed.” The inscription suggests a serious consequence of an accident, indicating that an individual can spend 46 days in the hospital if he has an accident;
- b) “speed limit 25.” It highlights the speed limit in a specific area, and the number 25 signifies a residential or school area where children or pedestrians may be present, further emphasizing caution;
- c) “slower is better”, which implies that driving slower is safer and can prevent accidents;
- d) “Elm Grove Police,” which is the name of the police department, suggesting they are involved in a campaign to promote road safety.

The non-verbal (visual) elements include the following:

- a) the digital display of “46” on a radar speed sign likely reflects the actual speed of an approaching vehicle, providing immediate feedback to drivers;
- b) a moving car, the blurred image of which reinforces the context of driving and speed;
- c) the roadside, where the sign is placed, directly in the line of sight of passing drivers.

“46” on a radar speed is interpreted as a digital metaphor represented by an indexical sign. It suggests a direct consequence of speeding, namely that the higher the speed shown on the display, the higher the potential number of days spent in the hospital bed, whereas the latter is not shown directly.

This PSA employs a sophisticated mix of verbal and non-verbal signs to create a clear and impactful message to encourage drivers to adhere to speed limits and drive carefully in order to avoid accidents and the severe consequences that can come with them.

3.3. Case Study 3: Symbols

Figure 3 depicts a PSA that also incorporates both verbal and non-verbal elements. The verbal elements are the following ones: a) the note “A big part of the story is lost when it becomes a movie”, which conveys that significant portions of the narrative, character development, and thematic depth that are lost in the transition from book to movie and b) Sebo Museu Do Livro, the book museum in San Paolo, Brazil.



Figure 3: An example of a PSA from the Advertising Agency RockerHeads, São Paulo, Brazil (Sebo Museu do Livro)

The non-verbal (visual) elements include the following: a) a “Harry Potter” book with a large circular hole, representing the missing parts of the story that are often left out in movies; and b) the removed pages stacked next to the book resembling a DVD.

The book and disc convey the symbolic metaphorization and the symbolic critique of movie adaptations, all of which work together to highlight the value of reading books. This semiotic approach aids the viewer in comprehending and empathizing the significance of what is lost when a story is transformed from a literary work to a film.

Conclusion

The use of metaphors in public service advertising communication is shown to achieve pragmatic goals and ensure a predictable impact on the audience. Despite being a relatively new concept in metaphorical communication, digital metaphors align with Aristotle’s belief that metaphor brings a sense of freshness. New technologies profoundly impact our understanding of the world, refreshing fundamental concepts. Digital artifacts serve as representations of digital reality objects and, similar to real objects, can be incorporated into metaphorization processes.

Digital metaphors are becoming increasingly popular in various genres, particularly in advertising, as they interpret the new through the known due to their similarity. In PSAs, digital metaphors can be represented by different types of signs, including non-verbal ones. Digital metaphors use the unique and functional capabilities of digital technologies to convey di-

verse aspects of physical or virtual reality by utilizing the language of these technologies. Thus, the successful interpretation of PSAs depends on the skillful manipulation of semiotic resources, particularly through the use of rhetorical means, among which the leading place is occupied by metaphor. To transmit messages creatively and effectively, it is beneficial to intensify work with associations by similarity, thereby producing signs rich in information and analogies.

Metaphors, including digital, go beyond the boundaries of conventional categories. The different types of signs singled out by Peirce, can convey metaphoric meaning, evoke associations, and foster interpretation of multimodal texts content. In PSAs, icons evoke perceptual similarities with their referents, thereby creating immediate and intuitive associations. Such metaphors rely on visual resemblance, structural similarity, or perceptual correspondence to convey meaning and foster emotive engagement. Indexes establish direct relations between signifiers and referents, conveying concrete associations. Indexes with metaphoric transference in PSAs establish explicit or implicit relations and create connections through contextual cues and associative links. Symbols acquire meaning through convention, representing abstract concepts, cultural meanings, or conceptual associations. Symbols with metaphoric transference in PSAs rely on shared cultural codes to convey complex ideas. Thus, metaphors enhance the semiotics of digital media, encouraging creative expression, symbolic innovation, and cultural resonance in contemporary communication. The analysis of digital reality conceptualized through metaphors in PSAs illustrates the potential of a semiotic perspective.

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