

Editors' Introduction

(Digital Hermeneutics and Its Multiple Meanings)

Digital media and technologies have significantly transformed the ways we relate to the world, in the triple sense of Selbstwelt, Mitwelt, and Umwelt. Think of the quantification of the self, the number of followers and likes on social media, or using Google maps and similar tools to orient ourselves in a city, to find and choose a good restaurant, and so on. One might say that digital media and technologies have actually transformed our interpretation, understanding, and access to the world. Now, if hermeneutics is the philosophy of interpretation, then we might suppose that hermeneutics should pay attention to these transformations. For us, digital hermeneutics is the study of the ways digital media and technologies mediate between humans and the world. It is also the study of the ways digital media and technologies are embedded in non-technological relations between humans and the world – psychological, social, cultural, and so on.

Given the importance we generally attribute to digital media and technologies, digital hermeneutics should occupy today a preeminent position among hermeneutics research and publications. Even remaining within the limits of classic, methodological, and textual hermeneutics, let us consider the relevance that today's digital tools have for the automated or semi-automated treatment of traces, documents, and so on. Actually, one could say that digital humanities and related practices like "distant reading" are the continuation of classic hermeneutics by other means. Despite this, digital

hermeneutics still has a marginal role. The term "digital hermeneutics" has emerged in multiple contexts and with different meanings – for a detailed overview, see Romele, Severo, and Furia (2020). But digital hermeneutics has not yet become a proper research program – in Lakatos' terms – as it deserves to be.

The goal of this special issue of Critical Hermeneutics is not overly ambitious. Our intention is to demonstrate the potential of different approaches and perspectives that have been developed in the field, in the hope that a better-defined community of interests and objectives will emerge from this group of texts. In this introduction, we also want to offer an instrument that might help the reader to orient herself with the different dimensions that characterize the still-emerging field of digital hermeneutics.

1. From hermeneutics to material hermeneutics. *Hermeneutics has been classically understood as a discipline dealing with the interpretation of cultural productions, and texts in particular. During the twentieth century, especially via the work of Heidegger and Gadamer, hermeneutics took an ontological and anthropological stance. Interpretation was no longer understood as a practice among many others, but as the principal way humans cope with the world around them. Thus, hermeneutics became "universal". However, hermeneutics continued to be understood in the wake of a textual or linguistic model. Hermeneutics has constantly privileged language as the principal mediator between humans and the world. This actually corresponds to a general tendency of philosophy during the twentieth century, which was dominated by the so-called "linguistic turn".*

Several authors started to challenge the centrality attributed to language. Particularly important in this sense is the contribution of Don Ihde (1990), who explicitly used the expression "material hermeneutics". For him, texts are just one case of hermeneutic

technologies among many others. Hermeneutic technologies are all those offering a representation of the world (textual, visual, graphic, and so on) that must be interpreted and correctly understood in order to access the world. Texts are hermeneutic technologies insofar as they offer representations of the world (the world of the text) that must be interpreted through specific techniques (the capacity for reading, etc.) in order to access the world – be it fictional or not. But hermeneutic technologies are also thermometers, for instance. Indeed, thermometers represent an aspect of the world (temperature) in the form of numbers (if digital) or numbers on a scale (if analogic) that must be interpreted to access that part of the world. And think of how important such a possibility to represent the world is when access to the world is somehow difficult or impossible. This is the case of a book about history, but also a thermometer that controls the internal temperature of a nuclear reactor. Another example of hermeneutic technology is an airplane’s cockpit; it gives the pilot a series of information and feedback that allows access to the world (that is, safely flying and landing), even, for instance, if the weather conditions are bad.

Next to hermeneutic technologies, Ihde presents other “human-technology-world” relations: embodied relations, alterity relations, and background relations. Postphenomenologists have more recently introduced other relations, such as cyborg and immersive relations (Verbeek 2011). Yet, for Ihde, all technologies are somehow hermeneutic, because in giving access to the world they also “magnificate” some aspects of it and “reduce” some others – think of the telescope, which allows a better observation of a portion of the sky but also excludes some others. Therefore, one can distinguish, in Ihde’s perspective, between a special and a general hermeneutic theory of technology. Material hermeneutics is an expansion of classic

hermeneutics wondering about the effect technologies have on our access, relation, interpretation, and understanding of the world.

This first definition does not exhaust the field. We propose to distinguish between three different levels or dimensions in material hermeneutics – here, that is hermeneutics dealing with technology in general.

With the goal of distinguishing between iconography and iconology, Erwing Panofsky (1955) used a curious example: an acquaintance greeting him by lifting his hat. According to him, there are three levels of interpretation of this event: (1) a perceptual level, in which one identifies mere patterns of color, lines, and forms; (2) a level that consists of one's realization that the hat lifting represents a greeting. To understand the meaning of this action, one has to be familiar with the "more-than-practical world" of customs and cultural traditions peculiar to a certain civilization; (3) and third, the action of the gentleman can reveal "all that goes to make up its 'personality'" (Panofsky 1955: 27). With the term "personality", Panofsky wants to indicate the fact that the gentleman is a man of the twentieth century, his social and cultural background, the history of his life, and his present milieu; but the term also refers, more broadly, to a general manner of viewing and reacting to the world. In the single action of a person like the acquaintance lifting the hat, one can find the reflection of an entire worldview.

Panofsky applied this threefold distinction to a specific kind of artifact, namely works of art. We want to use this same distinction to approach other kinds of artifacts, namely technological artifacts: (1) First, "material hermeneutics" can refer to an empirical analysis of the multiple ways in which technologies mediate human access to the world. This is how the term has been used by Ihde and postphenomenologists; (2) Second, "material hermeneutics" can refer to the study of the social conditions of technology's production and

use. This is the way the expression has been used, for instance, by Peter Szondi – see in particular Thouard (2013: 109–114)¹; (3) in chapter 6 of Ihde (1990), titled "Cultural Hermeneutics", Ihde discusses the notion of "multistability", which refers to the fact that technologies essentially depend on their multiple uses, which in turn depend on different cultural contexts². Incidentally, this aspect of Ihde's philosophy is somehow neglected by most of the current representatives of postphenomenology.

2. From material hermeneutics to digital hermeneutics. *Digital hermeneutics is a component of material hermeneutics dealing with a specific kind of technology, namely digital technologies. However, there is an important caveat. Digital technologies are hermeneutic technologies, both in the special and in the general sense of the term. But one must also notice that in digital media and technologies, writing (and hence, language) has a central role. Indeed, code is a form of writing, and everything in the digital (sounds, images, texts, etc.) has been transcoded first. This does not mean to come back to the older textual hermeneutics. Instead, it means (1) to understand the specificity of digital writing and, in particular, of software as a*

¹ On the one hand, his intention was to defend an empirical approach to texts, oriented by the most rigorous philological methods. On the other, he also wanted to stress the fact that a text should be understood in the light of its material conditions of production and fruition. The work of Andrew Feenberg (2017) on the philosophy of technology is a good example of such an approach. Feenberg is interested both in social determinism (i.e. the ways specific interests orient the technological "rationality") and technological determinism (i.e. the ways technologies orient the social dynamics of power, exclusion, and so on).

² Ihde (1990: 125) offers, among several others, the example of the oval sardine cans left behind by Australians after entering the New Guinean highlands for the first time, in the 1930s, in search of gold. These cans were immediately snatched by the New Guineans as treasured objects, and made into centerpieces of the elaborate headwear they wore for special occasions. While in this case a technology has been newly "absorbed" by the culture in which it found itself, things can also go the other way around: a technology can contribute to modifying an entire culture or worldview.

new form of language and writing³; (2) to include it in a broader perspective in which digital media and technologies are also interpreted and understood in the light of their matter (cables, energy consumption, pollution, waste, malfunctions, etc.), as well as of their social and cultural implications; (3) to clarify the ambiguous notions of "information" and "data" – digital hermeneutics implies a radical rethinking of these notions starting not from language or meaning, but rather from physical information understood as relative information (Shannon 1948); one of the ultimate aims of digital hermeneutics can be seen as the archeology of information.

In particular, we propose understanding digital hermeneutics as a threefold analysis of digital artifacts and their means of mediating between humans and the world. Of course, we are not suggesting that every research study in digital hermeneutics must include all of the aforementioned three levels of analysis. We are arguing instead that all research in the field belongs to one or more of these levels – which, incidentally, does not exclude the idea that other levels may be found. We are also arguing that all research in digital hermeneutics should keep in mind the existence of these three levels, as well as the fact that each of these levels can be taken into account in multiple ways. The complexity of the levels and variations that characterize digital hermeneutics recalls the complexity that characterizes classic hermeneutics as well. Such complexity is related to the different kinds of questions and replies that are associated with the vague definition of hermeneutics as the philosophy of interpretation: Who interprets (humans, non-humans, etc.)? What does the interpreter interpret (texts, documents, monuments, the world as such, etc.)? How and when does the interpreter interpret

³ From this point of view, digital hermeneutics has a natural ally in the critical code studies that are emerging in the United States (see Marino 2020). These scholars analyze the code using the tools of literary criticism. The code is a text that, however, requires specific tools in order to be studied.

(always, sometimes, through perception, consciousness, techniques and technologies, etc.)? For instance, digital hermeneutics reveals that computation itself (i.e. the fundamental concept of digital technology) is rooted in a certain rhetoric and a certain imagination. In short, computation is not a neutral tool; it is culturally determined (Golumbia 2009).

As mentioned, our intention in this context is to offer a minimal tool to allow the reader to contend with such complexity. This tool, we believe, might represent the first step towards the foundation of digital hermeneutics as a research program:

(1) First, digital hermeneutics can be seen as a series of considerations regarding the most immediate and empirical aspects of digital media and technologies, in particular, but not exclusively, relating to their ways of mediating between humans and the world. Similar reflections have been carried out in fields like software studies and the archeology of media. We might also include works about digital tools that are used for interpreting and understanding texts.

In this issue of Critical Hermeneutics, the article Digital Reflective Judgement: A Kantian Perspective on Software by Luca Possati belongs to this research perspective. The central thesis is that software is a form of reflective judgment, namely "digital reflective judgement". Software is a new form of reflective judgment that is based on a specific type of imaginative act that mediates between physical implementations and mathematical structures. Through a parallelism between software and the Kantian judgment of taste, Possati holds that the condition of possibility of software is the principle of finality, which is shown in the design.

Julien Longhi's article (Theorising The Dynamic, Modeling the Variation, and Equipping Hermeneutics: The Meaning(s) in Question) can be included in this perspective as well. He analyses the collections of data. It shows that the process of constitution of these

collections is not neutral at all. In particular, the use of Artificial Intelligence (AI) questions semioticians, and linguists, about the possible interpretative processes based on these treatments which often come from "black boxes". Longhi develops two interesting lines of research: hermeneutics of digital corpora, and hermeneutics of digital tools that allow the analysis of digital corpora.

(2) Second, digital hermeneutics can be considered as an ensemble of reflections on the social conditions of the production and fruition of digital media and technologies and their contents. We might also include considerations regarding the impact of digital media and technologies on the social world. This level includes both descriptive and prescriptive perspectives. From a descriptive point of view, it might be concerned with the network of human and non-human actors a specific digital tool is able to constitute or transform. From a prescriptive point of view, it might deal with the effects of empowerment and disempowerment digital mediations constantly bring with them – some of which are merely reiterating social dynamics, while some others are transforming them. Digital social research and critical data studies could offer great inspiration for this perspective.

In the present issue of Critical Hermeneutics, Renzo Christian Filinich Orozco and Tamara Jesús Chibey Rivas (QATIPANA: Processes of Individuation on the Relationship Between Art, Machine and Natural Systems) follow exactly this line of research. Their article shows that digital technologies design a new space of human existence. This paper focuses more on the way that digital technologies have transformed the nature of knowledge and the affection felt by being with others (people, things, animals).

Prospero's article (Hermeneutics of Distance: Physical and Symbolic Dimensions in Teaching and Digital Communication) on physical and symbolic dimensions in teaching and digital

communication also belongs to this line of research, as well as Seregni and Toniolo's (That Dragon, Cancer: Narrative Techniques of the Gameful Experience) that focuses more on the narrative techniques and the game experience.

(3) Third, digital hermeneutics could include insights about the ways digital media and technologies are always embedded in specific worldviews, and about how some technologies contribute to frame these worldviews anew. Let us consider, for instance, the ways digital media and technologies are used differently in different cultures. Ihde's ideas about cultural hermeneutics, which we mentioned before, have been used, for example, by Blond and Schiølin (2018) to reflect on the transfer of the South Korean robot Silbot to a Danish rehabilitation center. On the capacity of digital media and technologies to frame our worldviews anew, in Romele (2020) we hypothesized the emergence of a "data worldview". The imaginaries, expectations, fears, and hopes related to technology are not just in our head, but are crystallized in discourses, images, and so on. So, the hermeneutics (classic, in this case) of these cultural productions may give access to the imaginaries related to these technologies. Let us consider, for example, the abundant use of suggestive images to represent artificial intelligence: half human-half robot (female) bodies, lines of code fluctuating in space, not to mention hundreds of variations of Michelangelo's The Creation of Adam in a human-robot version. These images do not tell us much about artificial intelligence as such, but tell about our attempts to cope with it despite its "black-boxness".

There are no articles explicitly devoted to this topic in this issue of Critical Hermeneutics. Yet it is clear that in all the contributions, the emergence of new digital technologies is presented as an epochal turning point that transcends the limits of a single experience. In this sense, it is perhaps the article by Héctor Valverde Martínez that

comes closest to this dimension of digital hermeneutics. The author uses Ricoeur's triple mimesis to describe the activity of the curator of a museum exhibition. That of the curator is in fact a real "emplotment" that has reconfiguring effects on the visitor. Digital technologies in this area, of which the author offers numerous examples, have radically transformed both the basic conditions and the results of this mimesis, so much so that the museum experience of the future will be radically different from what we have known up to now.

Digital hermeneutics can be understood as a way in which scholars, but also students, might approach digital media and technologies to gain a better understanding of their implications and effects on us. Let us imagine, for example, a group of students taking the time to deploy the several material, cognitive, social, and cultural layers that are implicated in a simple cellphone: from the coltan to the code, from the number of followers to the EU regulations in terms of cookies and privacy, from the notion of friendship to the quantification of the self, and so on. Digital hermeneutics is probably still less than a rigorous research program, but we believe it has the potential to become more than a mere group of theories and methods entertaining simply a "family resemblance".

Luca M. Possati

Alberto Romele

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