

TITLE OF TRACK n. 09:

The Philosophical Roots of Organization Studies and Organizational Practice: Epistemologies, Methodologies, and Approaches

TITLE:

PHENOMENOLOGY, ARCHAEOLOGY,  
GENEALOGY: A METH-ODOS FOR INFORMATION  
SYSTEMS PRACTICE

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## Abstract

In this paper we discuss some issues emerging from the phenomenological analyses carried out by Claudio Ciborra, in particular in the *Labyrinths of Information*. Despite the clear issues raised against the adoption of methodologies and the claim for an approach to the management of information systems based on concepts such as e.g. *Kairos*, *Drift*, *Bricolage*, we point out that these latter concepts unveil a specific *odos* for the information systems as a discipline. In our perspective, this *odos* covers a *meth-odos* towards new opportunities offered by answering the provocation coming from the infrastructures (*Ge-stell*). These opportunities raise from a deep understanding of the philosophical background of the work of Claudio Ciborra, namely from the idea of phenomenology of Martin Heidegger, that is often confused with the one of his mentor Edmund Husserl; whereas the position of Heidegger is radically different from an ontological perspective. It refuses the idea of a subject (no matter how pure or transcendental) as the original foundation of our relationships with reality. Despite the effort of Claudio Ciborra and other scholars to overcome both the simple objective and subjective stance, the separation between the practices carried out by subjects and the technologies as instruments separated from these practices is still an open issue in the information systems area. The challenge in information systems design is to unveil schemas as a path to social practices and social practices as the founding of living schemas in an evolutionary process, challenging the institutionalized and disciplinary division between the organization and the systems considered as separated assets producing standing reserves (*Bestand*). Based on the concepts of Claudio Ciborra with reference to their ground in the philosophy of Martin Heidegger, we try to introduce a *meth-odos* in order to trace a path for unveiling the openness in the presence-at-hand of the infrastructure as institution.

*Keywords: Institutions, infrastructure, genealogy, archaeology, phenomenology, conceptual schemas, methods.*

## 1 Introduction

In this paper we discuss the issues emerging from the phenomenological analyses carried out by Claudio Ciborra, in particular in the *Labyrinths of Information* (Ciborra, 2002). Besides other contributions to the theoretical foundations of information systems as a discipline (Gregor, 2002; Jones et al., 2008; Lyytinen, 1987), the work of Ciborra provides not only a deep analysis and understanding of the organizational issues involved in information systems design, but also an initial attempt to provide a philosophical foundation to the discipline. Furthermore, despite the clear argumentations raised against the adoption of methodologies and the claim for an approach to the management of information systems based on concepts such as e.g. *Kairos*, *Drift*, *Bricolage*, we point out that these latter concepts unveil a specific *odos* for the information systems as a discipline in the area of organization science. In our perspective, this *odos* covers a *meth-odos* for the new opportunities offered by answering the provocation coming from the infrastructure (*Ge-stell*). These opportunities arise from a deep understanding of the philosophical background of Claudio Ciborra's work, namely from Martin Heidegger idea of phenomenology, often confused with the one from his mentor Edmund Husserl, that is radically different from an ontological perspective (Heidegger, 1962a).

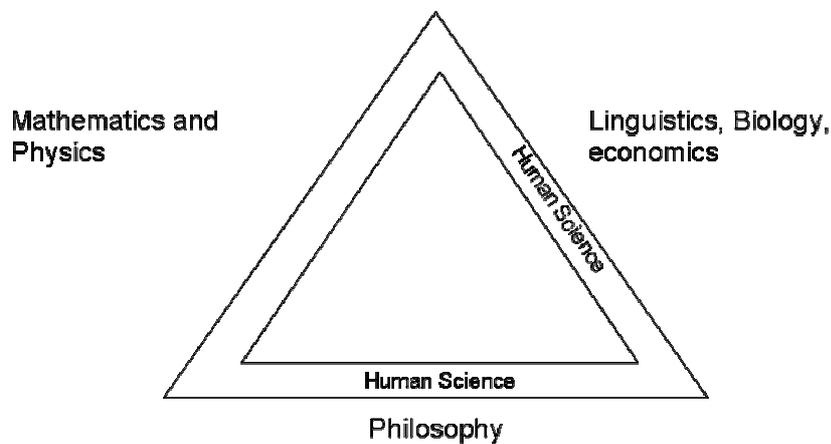


Figure 1. The field of the modern episteme, adapted from Foucault, M. (1966)

In particular, we discuss the concept of *Ge-stell* in order to let the *Bestand* as “stock” emerge, or “standing reserve”, the term Heidegger uses often. In this sense the *Ge-stell* is the provocation that leads the human being to collect what is unveiled as a “stock” or an asset, rendering the world and human being into a stockpile of raw materials (Heidegger, 1977). It is out of the scope of the paper to provide a deep philosophical analysis of the thoughts of Martin Heidegger, rather we try to use a perspective closer to the concepts of Claudio Ciborra, trying to open new paths from the ones he traced.

Ciborra’s choice to adopt a foundational perspective rooted in phenomenology led to the definition of relevant concepts that are peculiar to the information systems domain, such as e.g. the critical concept of *infrastructure*. We claim that this path is the most suitable one to define the specificity of information systems concepts and *meth-odoi*, beside the ones of the disciplines that concur in the design and development of information systems, such as sociology, psychology, economics, management, and engineering. In fact, the information systems research area has its place among human sciences in a sense close to the analyses carried out by Michel Foucault (M. Foucault, 1966) shown in Figure 1: following this perspective, human sciences emerge from the margin between (i) hard sciences, such as mathematics and physics, (ii) the science that tries to define the human being in terms of his life (biology), language (Linguistics), work (Economics), and from (iii) philosophy (for a detailed discussion we refer to M. Foucault 1966). What is worth noting here is the *boundary nature* of human sciences using concepts and methods from the previous cited disciplines without identifying with any of them, but providing a representation of the issues carried out by each one of them; for example, by providing a sociological representation of the working man. Focusing on organization science (but only as a discursive example, with no reference to a particular theoretical position) the concept of organizational structure refers to a representation of what are the structural relationships between working human beings in a bounded domain.

Due to these issues, the role of modelling and formalizations, that is the *representations*, makes information systems something different and peculiar among human sciences (as shown in Figure 2), where the concept of representation is the provocation for the design.

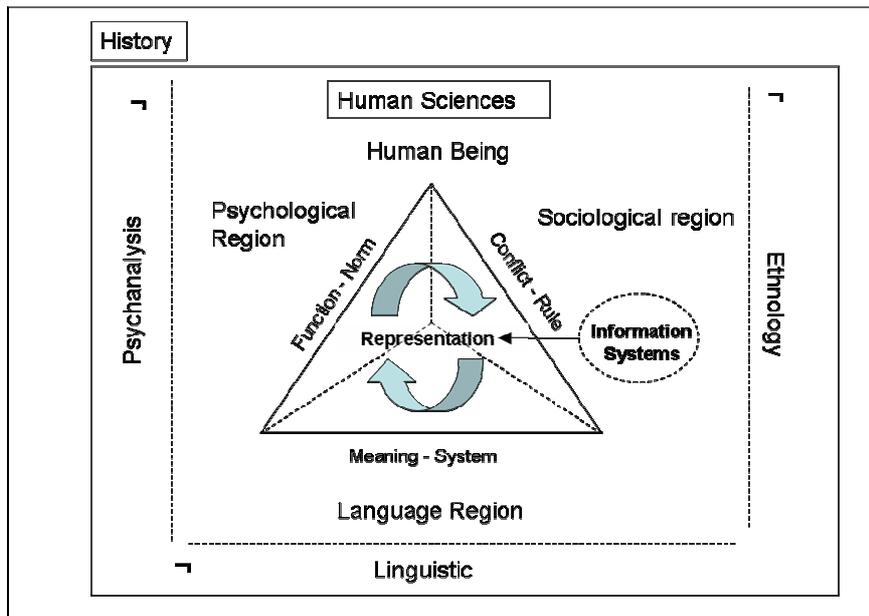


Figure 2. Human Science and representation: the place of information systems

The main lesson from Claudio Ciborra is that focusing only on one *facet* of the *Ge-stell*, it fails to answer the challenge of systems and of information systems as a way to unveil the *stock* as something different from an asset, both at the organizational and technological level. Otherwise, we have sociological, organizational, economic or technological analyses in the information systems area, but what an information systems research means remains veiled and forgotten. The consequence is the design of good organizations for ideal systems or the design of complex systems for unready organizations. At disciplinary level, the consequence is the question about the usefulness of information systems design, both by socio-organizational scholars and engineering scholars. Furthermore, these issues explain why the adoption of methodologies rooted in a neo-positivistic tradition fail in the information systems development (Ciborra, 2002). On the other hand, unveiling the *meth-odos* is a way of considering their positive insights in a phenomenological perspective; indeed, in our perspective *meth-odos*, is a way of answering the challenge of the infrastructure, by highlighting the idea of a path (*hodòs*) of research to cover. The *meth-odos* exploits the literal Greek meaning of *methodos* (*meta-* + *hodos*) that is “to find the way”, representing new ways to be unveiled as different (*meta*) from the actual destination of the *Ge-stell*. The

*meth-odos* claims for a phenomenological *praxis* of information systems, considering modelling and representation as an unveiling *poiesis*.

These issues are discussed in the following Sections in order to provide insights into organizational design frameworks (see, e.g. Jacucci, 2007) towards a phenomenological approach answering to the provocation of the infrastructure. Section 2 discusses the *Ge-stell* concept by briefly analysing insights from the works of Martin Heidegger, focusing in particular on the relationship between *theory* and *praxis*. In Section 3 we discuss the issues of representation in the information systems area, focusing on conceptual models and classification schemes; these latter introduce the theme of the *archive*. In Section 4 we propose *meth-odos* as a way to challenge the *archive*. Conclusions and future work conclude the paper (Section 5).

## 2 The *Lichtung*

We first analyse the position of Heidegger on the technique, in order to understand the challenge of the infrastructure as *Ge-stell*. This position is in part different from the interpretation raised by Claudio Ciborra, pointing out the issues that must be challenged in an information systems design, where infrastructure contributes to defining the social practices (Bowker et al., 1999).

Heidegger's perspective does not consider machinery, and the other products of the technique as per se negative (Heidegger, 1977). They depend on how the unveiling is carried out by the technique, that is a specific kind of unveiling but not the only one. The problem for Heidegger is to unveil the essence of the production technique. The modern technique is considered as an instrument for human activity, leading to consider the world as a source or a "stock" (*Bestand*) for human activity. Nevertheless, the technique is not simply an instrument, rather it is a way to unveil, a way to answer a provocation. The unveiling is related to the complex definition of truth as *aletheia*, whose analysis is out of the scope of this paper (Heidegger, 1962a). For our aims, we point out that Heidegger considers every production (*poiesis*) not only as a way of producing something but as an unveiling: every production activity unveils to manifest something. The

technique belongs to the *téchne* that is something poietic (in the ancient Greek terms); *téchne* refers to both manufacturing and to the arts; the main characteristic of the *téchne* is not to handle, rather to unveil through production (Heidegger, 1977).

Nevertheless, the unveiling of the modern technique is not a poietic way of production, rather a provocation asking nature for energy and resources to be stocked and stored (Heidegger, 1977). The being as a *stellen* characterizes this unveiling. The *stellen* is a provocation which considers the world as a standing reserve (*Bestand*), as something that is measurable, that can be ordered and available for human activity; that is an object available for a subject. This separation is the provocation of the *Ge-stell*, and for Heidegger it is the accomplishment of the metaphysic, considering the being as the rational representation of the entities; in the terms of *Being and Time* (Heidegger, 1962b) these entities are merely *present-at-hand* and worldless, pointing out the unthinking existence that mere entities have. In a simplified perspective, the danger in the provocation of the modern technique emerges when this wordless perspective is considered by humans as the only essence of the technique, which lets nature be controlled (and in part other humans) considered as merely a stock of resources to control. This way, the *Ge-stell* is considered only as provocation and can not be perceived as a call for other forms of unveiling found in the openness of the *Da-Sein* as *Lichtung*. The machineries are not dangerous per se; rather the closure for humans of an original form of unveiling from the call of the original openness of the *Lichtung*.

In Heidegger's *Being and Time* (Heidegger, 1962b), the *Da-Sein* (literally "being-there") is always in an original relation with the world. This relation precedes every division between subjects and physical objects; the being of the things that we meet in the world is part of the *existenzial* structure of the *Da-Sein*. As already noted by Winograd and Flores (Winograd et al., 1987), Heidegger rejects both the simple "objective stance" (i.e. the objective physical world as primary reality) and the simple "subjective stance", arguing that both are intertwined and that the interpreted thing and the interpreter do not exist independently. Furthermore, the entities in the world are encountered as *ready-to-hand*, discovered through their use, and as *present-at-hand*, when entities are encountered as isolated things, with a

breakdown occurring in their use (see also the interpretation from Winograd et al., 1987).

Taking that into account the *Da-Sein* relates itself to the others beings in different ways, because it is opened to the world and always thrown into the world and within a tradition. These different ways are the *Befindlichkeit* (i.e., affectivity), the *Verstehen* (i.e., the understanding) and the *Rede* (i.e., speaking) (Heidegger, 1962b). They are co-originated and indivisible, that is an understanding always has a kind of affectivity and is articulated in a meaning expressed in a language. By referring to the Greek concept of truth as *aletheia* (non-hidden), this openness of the *Da-Sein* represents for Heidegger the background of the means for the compound of meanings of the understanding of the world; this openness of the *Da-Sein* as original openness to the truth as *aletheia*, as a non-hidden disclosure, is the *Da* of *Da-Sein* (literally the “there” of being) (Heidegger, 1997) and is called *Lichtung* by Heidegger.

The *Lichtung* is viewed as an open field of sense-making relations, the world is an “opening” that “clears” things and makes them clear, i.e., intelligible as something. The human being as *Da-Sein* is characterized by *to-be-the-open* (to be able to take-as). The facticity (*Faktizitat*) of our “cannot-not-be-the-open” is what Heidegger calls our “belonging” to the open (*das Zugehren*), but reciprocally, the open or *Da* works only as long as there is a human being. There is a necessary reciprocity between our thrown-open essence (*-sein*) and the possibility-of-sense-making (*Da-*), and this constitutes the dynamic structure of *Da-sein* as openness to the being. The *Lichtung* is that ontological space of *openness* to the being. The *understanding* allows *interpretation*, this latter becoming *assertion* (*Aussage*) when the entity ready-to-hand becomes *present-at-hand*, the *Who* of the *Da-Sein* becomes a subject, *Circumspection* becomes knowledge, and the discovery of the entity becomes a predicate of a judgment. Assertion in the history of metaphysics has been considered the place of truth, without considering that assertion is founded in the openness of the being-in-the world. Furthermore, Heidegger considers *theory* as the descriptive attitude aiming at the truth of the things. In the theory the world emerges as presence-at-hand and the entities are communicated through assertions. While *poiesis* is the productive attitude aimed at producing work (of art), under the *techne* disposition where the world emerges as

ready to hand. The *praxis* is the way of making of the *Da-Sein*, founded in the original ways of being in the world, guided by the *phronesis*. The novelty of the Heidegger perspective is that theory is not the original orientation of the *Da-Sein*, rather it is founded in the *praxis* as the original attitude towards the openness of world. *Theory* is considered as a defective attitude with respect to *poiesis* and *praxis*. Theory considers nature as present-at-hand, as an object representation of a subject; the danger here is the provocation for humans in considering nature and the world as object of their own research, until the object itself disappears in the absence of the object (*das Gegenstandlose*) of the stock (*Bestand*). The foundation of theory in the readiness-to-hand of the being in the world and the representation of the rationalistic tradition (as called by Winograd et al., 1987), forget the non original existence of the concept of “subject” and “object”. The entities as things present-at-hand can be ordered, measured, stocked, while forgetting their original readiness-to-hand.

### **3 Representations, institutions, and IS design**

The previous general and simplified discussion of Heidegger’s thought allows us to understand why the *infrastructure* as *Ge-stell* is the way to uncover other ways of challenging the systems, by acting on the representations that found the infrastructure itself, bounding its openness. The concepts introduced by Claudio Ciborra fail to support the design of new systems if they are considered as separated, by focusing only on affectivity and readiness-to-hand, leaving covered the representational power that is the real provocation of the system. Furthermore, a main issue in information systems design is to introduce a *meth-odos* allowing to uncover the original openness under the provocation of the “objective” view of the systems, presently considered as originally separated from a “subjective” perspective on the organization.

The challenge of the infrastructure is to uncover the formalized representations, by grounding them in the *praxis*, namely as an understanding with affectivity, articulated in a meaning that is expressed in a language. To reply to the provocation of the infrastructure means to overcome the distinction between a system considered as “stock” for a

subject, acting on the formal and institutionalized representations, making them living (Bowker et al., 1999). Challenging the provocation of the infrastructure claims to unveil an original space that is dynamically characterized by both discursive and non discursive practices (M Foucault, 1972), these latter being the ‘way of making’, founding and defining their own *Rede* not as standing reserve. This original space where the practices are unveiled in their contribution to the emergence of *institutions* can be described by using the Berger and Luckmann’s phenomenological approach (Berger et al., 1967). The institutions emerge from a process which is characterized by the *typization* of *abitualized* actions. This process has an historical development, providing schemas of action for the participants in the institutions. The institutions cover the historical process at their basis, representing itself as present-at-hand and original. These representations are the way of unveiling of the infrastructure (as we have discussed above), inscribed in infrastructure as presence-at-hand, representing the technological systems as a stock for a subject that is an asset for an organizational system. The infrastructure as an institution is inscribed in representations such as documents and schemas, that must be investigated through a *meth-odos*. In the information systems area the *meth-odos* must support a change, considering documents as monuments (M Foucault, 1972), unveiling from the representation, (i) *what* is represented as an institutionalized presence-at-hand, (ii) *how* it has been represented, (iii) and *why* it has been represented in that way (unveiling the path of construction and the related practices).

These research issues find support also in the tradition of the analytical philosophy, in particular in the complex work of Donald Davidson (Davidson, 2001). In a simplified way, we point out that Davidson claims that there is no supposed external reality, with no interpretation (in the terms of Heidegger the reality present-at-hand of the *Ge-stell*), a reality to which a conceptual schema is applied. For Davidson reality is a continuous process of interpretation that is expressed in a language (see above the *Assertion*), but a language (see above *Rede*) that is not a filter between a supposed reality for a given subject, rather a point of access to the openness of the being in the world. We can say that every schema is founded in a reality, and the danger arises when the schema is seen as something separated and institutionalized as the original representation (covering the object of the representation).

The challenge in information systems design is to unveil: (i) schemas as a way to social practices; (ii) social practices as founding living schemas in an evolutionary process, challenging the institutionalized and disciplinary divisions between the organization and the information systems, which are considered as separated assets for producing standing reserves (*Bestand*). *Meth-odos* tries to use the Claudio Ciborra's concepts in order to trace a path for unveiling the openness within the presence-at-hand of the infrastructure as institution.

#### **4 Meth-odos: challenging the archive**

Meth-odos challenges the infrastructure as institution, by considering infrastructure as *archive* (M Foucault, 1972). Following the perspective in Foucault (1972), we consider the archive as “[...]the general system of the formation and transformation of statements [...]” the “[...]law of what can be said, the system that governs the appearance of statements as unique events[...].” Due to these issues, the archive encompasses both discursive and non discursive practices; due to our belonging to the archive, we need a way to uncover the archive as “the general horizon to which the description of discursive formations, the analysis of positivities, the mapping of the enunciative field belong[...].”(M Foucault, 1972). The infrastructure considered as an *archive* requires an archaeology of schemas and representations that raise from both discursive and non discursive practices. The term archaeology “[...]does not imply the search for a beginning; it does not relate analysis to geological excavation. It designates the general theme of a description that questions the already-said at the level of its existence: of the enunciative function that operates within it, of the discursive formation, and the general archive system to which it belongs. Archaeology describes discourses as practices specified in the element of the archive”(M Foucault, 1972).

Furthermore, borrowing the concept of *simulacrum* from Gilles Deleuze (Deleuze, 1969a, 1969b) we can define the first path of meth-odos as an *archaeology of schemas and representations* (considered both from the engineering and organizational perspectives) as *simulacra* of uncovering units; the archaeology must provide a detailed description of the

representations and a definition of all related rules which have allowed their emergence as separated simulacra. The description of schemas and representations as not reducible simulacra in the archaeological path of *meth-odos* unveils the status of *bestand* of the schemas and of the representations used, e.g. at engineering and organizational levels as different names for a unique being, that is in our case the information systems we have to design. As previously noticed, *meth-odos* considers documents as monuments (M Foucault, 1972), and archaeology can unveil from the representation, (i) *what* is represented as an institutionalized presence-at-hand, (ii) *how* it has been represented.

Once described as not reducible *simulacra*, a *genealogy* can be carried out to uncover in a critical perspective the institutional constraints related to their adoption and use (Doolin et al., 2002). Furthermore, genealogy has been considered in the literature as a way to escape the dualist paradigm separating humans and non-humans (Latour, 1994). In fact, using a perspective drawn from the work of Michel Foucault (M. Foucault, 1971), genealogy allows to describe both a provenance (*Herkunft*) and an emergence (*Entstehung*) for a simulacrum as an institutional fact. Genealogy can unveil from the representation (iii) *why* it has been represented in that way (unveiling the path of construction and the related practices).

## 5 Conclusions and future work

In conclusion, *meth-odos* aims to provide a preliminary support to uncover the foundation of the theory in the readiness-to-hand of the being in the world, towards the unit of *Befindlichkeit* (i.e., affectivity), *Verstehen* (i.e., the understanding) and the *Rede* (i.e., speaking) (Heidegger, 1962b). Focusing on the situated and organisational oriented perspective of the information systems design, we point out that one of the main dangers is related to the focus on one of the simulacra which emerge from the infrastructure as *Ge-stell*. We propose to integrate *meth-odos* in state-of-the-art methodologies in order to challenge the *bestand* of schemas and representations inscribed in the technological and engineering facets of the infrastructure (in line with the analyses carried out, e.g. by Bowker and Star

1999). In particular, we propose to integrate the *archaeology of schemas* (*Krisis*) and a *genealogy of simulacra* (*Gestell*) paths in the early phases of information systems design as organizational practice; these paths must be introduced either (i) in the observation phase in the social and participatory design oriented methods (Jacucci, 2007; Kensing et al., 1998) and (ii) in requirements analysis in the engineering oriented methods (Byrd et al., 1992; J. Krogstie, 2007). In particular, the meth-odos integration in the early phases of systems design should support the uncovering of the opposition of organisational and engineering/technological simulacra as not reducible facets, which must be analysed and synthesized together in an evolutionary design of information systems.

In this paper we have proposed the theoretical background and motivations for the meth-odos approach; starting from the analyses of Claudio Ciborra we have introduced a high level description of the two main paths of meth-odos and the related objectives. Furthermore, we have proposed the integration of meth-odos with traditional information systems design methodologies and approaches. In a future work we further detail the paths of meth-odos, and we test them on case studies while trying to reinforce the claims introduced in this paper.

## 6 Acknowledgments

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