Phenomena or Noumena?
Objective and Subjective Aspects
in Knowledge Organization†

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Abstract: Main objectives and subjective aspects are traceable in the concepts of information, document, knowledge, knowledge organization and levels of reality. Objective and subjective aspects are both present in each of these entities, as it is sometimes implicitly recognized even by some of the authors that usually underline exclusively the objective or the subjective elements of these entities. "Moderate constructivism" is the synthesis of objectivism and subjectivism that consists in recognizing that reality is neither completely given nor completely built and it constitutes (beyond too marked pseudo-oppositions) the paradigm today *de facto* dominant both in epistemology studies and in knowledge organization studies.

> The sharp corner is reality,
> everything else can only be imagined
> —Ermanno Cavazzoni, *Il pensatore solitario*

1.0 Foreword

Objectivity and subjectivity are the two poles of a contraposition that goes through almost every aspect of human experience (Nagel 1979). To this pervasiveness, the field of knowledge organization is no exception: sometimes in this there is a clash (especially at a theoretical level) and more often a meeting (at a practical level) between instances that underline how the way we organize information, documents and knowledge depends mostly on the way we see them and use them and other instances that instead insist on a certain degree of independence

and resistance of these entities as regards points of view and purposes. But, before dealing with this topic, it will be useful to start by making some remarks about the objective-subjective dialectics applied to the concepts of information, document and knowledge.

2.0 Objective and subjective aspects of information

Between 2005 and 2011, in some important international information science journals, a heated debate took place between Marcia J. Bates (2005, 2006, 2011), professor of information studies at the Graduate School of Education and Information Studies, University of California and Birger Hjørland (2007, 2009, 2011), professor of knowledge organization at the Royal School of Library and Information Science in Copenhagen. The issue of discussion

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was the concept of information. For Bates (2005), all "patterns of organization of matter and energy," that is to say any disposition, sequence or configuration (even accidental) of physical elements (such as the arrangement of pebbles on a beach or of ink on a page), could already be considered relevant to that concept. Hjørland, on the contrary, underlined that it was meaningless to consider as proper information what (remaining at the mere physical level) cannot inform about anything until there is not a biological organism able to be informed or to acquire some form of knowledge by examining the patterns at issue.

This conflict, however, can probably be overcome by those unitary approaches (Hofkirchner 2010; Gnoli and Ridi 2014) to the various meanings of the term "information" that prefer to call data, configurations, information atoms or potential information the exclusively syntactic information represented by the patterns and to name, instead, contextualized data, significant data or actual information, the semantic information that emerges when patterns enter into relations with an organism, placing them in a reciprocal dialectic relation (Ridi 2010, 3-6). After all, using the words of Hjørland (2007, 1449) (who, in turn, refers to the so classical as ambiguous definition of information by Bateson (1972, 271-2, 315) "as a difference which makes a difference"), the objectivistic approach, according to which "any difference is information," and the subjectivistic one, according to which "information is a difference that makes a difference (for somebody or for something or from a point of view)," can more plausibly be seen as two successive stages of the same process, both logical and chronological, rather than in a relationship of mutual negation.

On the other hand, Bates (2015) herself recognizes that "information exists both subjectively and objectively," that her work (2011, 2038) "contains ideas that mostly complement, rather than conflict with, those of Hjørland" and that (Bates 2005) "animals perceive data, not information," so much as to place information intended as "patterns of organization of matter and energy" at the basis of a pyramid of the various meanings of the term "information" taken from Goonatilake (1991), which also includes the following steps (Bates 2006): semantically richer, of genetic, neural-cultural and exosomatic information. And Hjørland himself, although he gives the utmost importance to the subjective aspects and to the social context of information, certainly does not assert that information is created *ex nihilo* from each organism in a totally inner and autonomous way (or, we might almost say, oneiric or hallucinatory). In fact, in his many works (among which Hjørland and Albrechtsen 1995; Hjørland and Hartel 2003; Hjørland 2010) dedicated to the various knowledge domains into which the human society is divided, he has theorized a structuring of information not only in an epis-

temological and in a sociological dimension, but also in an equally important, ontological dimension, that concerns the objectivity of known phenomena as well as of the documents about them. And he even published an article in favour of the "Arguments for Philosophical Realism in Library and Information Science" in which he recommends (2004, 499) "not [to] confuse reality with users' beliefs or preferences."

3.0 Objective and subjective aspects of documents

As the discussion between Bates and Hjørland was used to exemplify the wider debate between the supporters of objectivity and subjectivity of information, so the discussion published in 2012 in the Italian electronic journal *Bibliotime* can help to synthesize the analogous contraposition traceable in literature about the nature of the material objects that contain or convey information, that is to say documents. On that occasion, Claudio Gnoli (Pavia University), Paola Rescigno (Bologna University), Riccardo Ridi (Ca' Foscari University, Venezia) and Alberto Salarelli (Parma University), starting from the various definitions of the term "document" collected and commented by Buckland (1997), wondered whether the fact that a given physical object is legitimately considered a document depends (exclusively or predominantly) on some of its objective characteristics (such as the fact that it contains DNA or alphabetic signs) or on some social decisions (such as the fact that a human being decided to use it to distribute information or that a museum decided to accept it in its collections) or on the subjective capacity of single individuals to extract from it information that was recorded also unintentionally (as it can happen to those who examine a fossil or a crime scene).

Answering these questions, each of the participants in the debate underlined the prevailing aspects found sometimes to be underestimated, remembering for example how only the objects especially created or modified by human beings for information or communication purposes are proper (Gnoli 2012a) "native documents," how the (Rescigno 2012) "constitutive power of places" deputed to the selection, conservation, organization and fruition of documents (archives, libraries, museums) plays an important role in their definition and identification, how (Salarelli 2012) "first of all the individual dimension has to be taken into account in the interpretation of the objects that populate the world" and how it is possible to distinguish (Ridi 2012) between intentional documents and unintentional documents, categories that are, however, separate only by a socially and individually malleable boundary and therefore mobile. Yet, none of the participants went so far as to deny resolutely the relevance of at least some objective, subjective or social aspects in the individuation of docu-

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ments. And reading that discussion again today, we can observe how it revealed that, paradoxically, the most unquestionably objective documents, produced by nature long before humans inhabited the Earth (like the seasonal growth rings of trees and DNA), are often acknowledged as such only after individual or social discoveries. We can also observe that, equally paradoxically, the documents that have been universally considered as such since longer and to a greater extent and that are therefore included in the collections of archives, libraries and museums, are instead unquestionably native and intentional documents created by humans (and therefore in some way subjective) like books and paintings.

Lastly, we can see how the same logical (and sometimes also chronological) gradation, detectable between syntactic information (i.e., data) and semantic information (i.e., knowledge), can also be found in documents. Any physical object is potentially (i.e., philosophically), a document (Ridi 2010, 10-14), provided that it includes or is included in a pattern that marks "a difference," but it really becomes a document (that is that it begins to be treated as such) only when somebody or something recognizes the pattern and therefore uses the object itself as a document, as actually, i.e, pragmatically, informative.

4.0 New realism

Much more extended (both chronologically and for the number of authors involved and the overall cultural impact) among the debates on the objective and subjective aspects of information and of documents is the discussion about the same aspects relating to human knowledge, which can be dated back at least to the presocratic Greek philosophers and that counts among its characters figures like Plato, Aristotle, Descartes, Spinoza, Locke, Hume, Kant and Wittgenstein, just to mention a few names of the Western tradition. Therefore, it is inevitable to be even more selective, simply summarizing those discussions through a few texts.

In this case, too, it might be useful to start from a very recent debate (Santarcangelo and Scarpa 2015), initiated in 2011 by Maurizio Ferraris, professor of theoretical philosophy at the Torino University, who fulfilled a process of progressive distancing from his subjectivistic juvenile positions to arrive at a more objectivistic position coining the effective label of "new realism," which, since then, he has been propagandizing in many publications (including De Caro and Ferraris 2012; Ferraris 2012). The fundamental thesis of new realism is that after decades of predominance on the international philosophical scene of theories about human knowledge that underline its uncertainty, its relativity and the unavoidable constructive elements introduced in it from the point of view of the knowing subject

(variously articulated and denominated by a number of authors too large to be cited here such as postmodernism, constructivism, constructionism, contextualism, perspectivism, relativism, skepticism, pragmatism, logocentrism, panlinguism, panculturalism, deconstructionism, poststructuralism, antirealism, irrealism, weak thought or transcendentalism, the latter not to be confused with the homonymous nineteenth-century American literary movement of which Ralph Waldo Emerson and Henry David Thoreau were among the leading figures), the time has come to underline that an objective "unamendable" reality exists (Ferraris 2009, 86-88; Ferraris 2012, 34-37), which is independent from our points of view and resistant to our interpretations, the characteristics of which are perhaps not easy to identify and to describe exactly, but with which we must inevitably come to terms. In other words, after a long period with a predominance of epistemology, gnoseology and hermeneutics (which are the names with which, with nuances related to countries, languages and schools of thought, the subdisciplines of philosophy that deal with how and whether it is possible to know the world are called) now metaphysics and ontology should be reevaluated, which are instead philosophical subdisciplines that deal with how and whether the world exists and is structured (Ferraris 2009, 57-84 and 317-318; Ferraris 2012, 31-33). In other words (Nietzsche 1887): "there are no facts, only interpretations," that for Ferraris (2009, 70-78; 2012, 2) constitute the fundamental thesis of the opposite front to new realism, one should reply by highlighting (Ferraris 2009, 81) "the extremely broad spheres of reality that are independent of theories and of cultural conditioning."

Nevertheless, according to various authors, not at all impressed by Ferrari's realistic conversion (Veca 2012; D'Agostini 2013; Di Cesare et al. 2013; Totaro 2014), his arguments are substantially based on the the straw-man rhetorical device, consisting of inventing a caricature of the opponent that is easier to refute, and his own positions are still largely imbued with the constructivism that he claims to have repudiated and that he wants to fight. As D'Agostini (2013, 65) asks:

> Which "realism" is a realism that is defined in opposition to a non-existent antirealism, never claimed by anyone? … And why on earth would the half constructivisim (not everything is construction, not everything is interpretation) be "realism:" a very reasonable position, but epistemological and not metaphysical, and all in all already known to anyone?

5.0 Solipsism

As for the first critique made against Ferrari, perhaps no one in the entire history of Western philosophy, and, in

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any case, surely not in the last half century, has ever gone so far as to deny that something independent of our mental schemes exists. Solipsism, that is the hypothesis that the world is only a sort of hallucination of the knowing subject, is a skeptical theory considered by many philosophers (including Descartes, Fichte, Schopenhauer, Husserl, Wittgenstein, Russell and Sartre), but only to reject it, although considering it at times theoretically unassailable from a strictly logical point of view (Thornton 2004; Mazzantini and Sacchi 2011; D'Agostini 2013, 131-137). Strictly speaking, not even the idealist George Berkeley (1685-1753), often mistakenly considered the champion of solipsistic irrealism, believed that his motto *esse est percipi* (to be is to be perceived) involved the hallucinatory (or completely creative) character of human knowledge thanks to the divine guarantee of its compliance with an external reality that coincides with the ideas present in God's mind (Downing 2011). Also, the anarchist epistemologist Paul Karl Feyerabend (1924-1994) considered one of the most radical constructivists of the twentieth century, admits that (1999, 224) "our entire universe … is an artifact constructed by generations of scientist-artisans from a party yielding, partly resisting material of unknown properties." Not even the nineteenth century German idealism of Fichte, Schelling and Hegel can be considered a form of irrealism or antirealism (Sedgwick 2000), because of its strong objectivistic component and of its acute awareness of the limits of the empirical human knowledge. Even the nihilistic thesis of Gorgias (485 AC - 375 AC) that "nothing exists" (arrived, moreover, only through later testimonies) has been discussed (Migliori 1973, 157-202; Reale 2004, 71-82; Bonazzi 2010, 39-50) for at least a century whether it is to be taken literally or is, rather, a confutation or a parody of Parmenides's thought. Not even the illusoriness of the empirical world typical of Eastern philosophies such as Buddhism, Hinduism and Taoism (Capra 1975, 130-131; Feyerabend 1999, 10-12) prevents that they involve a deeper and stable reality, called in various ways.

Therefore, in order to trace forms of explicit and resolute theoretical negation of the external world, we should carefully sound the history of thought both Western and Eastern, deepening the possible antirealism of philosophical positions that are in any case completely extraneous to postmodernism such as that of the seventeenth century French physician Claude Brunet (Mazzantini and Sacchi 2011, 10845) or the actual idealism of the Italian neoidealist Giovanni Gentile (1875-1944), who, according to some commentators (D'Agostini 1999, 117; see also Severino 2014, 31), acts "the radical elimination of all the objectivistic elements that still remain in Hegelism," achieving (Severino 2014, 21) "the negation of millennia of realistic thought, or of failed attempts to get out of realism."

Most, if not all, postmodernist philosophers would therefore have no difficulty in agreeing with the neorealist thesis that (Ferraris 2009, 81): "in very many cases, the sharing of a world depends much more on the characteristics of the objects than on the agreement of conceptual schemes," rather emphasizing that there are also different cases and that the conceptual schemes nonetheless play an important role, and that Ferraris himself (2012, 31) has to admit that "unlike ancient skeptics, postmodern constructionists do not doubt the existence of the world." Even Nietzsche, if we contextualize the incriminated sentence within the fragment from which it was extracted (Veca 2012, 520-3; D'Agostini 2013, 34-45; Gemes 2013, 557; Totaro 2014, 101), actually distances himself both from the most radical objectivism and subjectivism, showing how interpretations are the meeting place of both those instances and questioning not so much the existence of facts but rather that of inaccessible facts-in-themselves, of which not even the most radical realist could state anything beyond the mere assumption of existence. Nietzsche (English translation from Nietzsche 1901, 267):

> Against positivism, which halts at phenomena— 'There are only *facts*'—I would say: no, facts is precisely what there is not, only interpretations. We cannot establish any fact 'in itself:' perhaps it is folly to want to do such a thing … Everything is subjective, you say; but even this is interpretation. The subject is not something given, it is something added and invented and projected behind what there is … finally, is it necessary to posit an interpreter behind the interpretation? Even this is invention, hypothesis … In so far as the word 'knowledge' has any meaning, the world is knowable; but it is *interpretable* otherwise, it has no meaning behind it, but countless meanings … Perspectivism … It is our needs that interpret the world; our drives and their For and Against. Every drive is a kind of lust to rule; each one has its perspective that it would like to compel all the other drives to accept as a norm.

Not to mention the other almost coeval passage in which, after expressing a similar thesis, Nietzsche himself admits (Nietzsche 1886, aphorism 22; D'Agostini 2013, 34) that this too is, after all, only an interpretation, refusing to attribute to it an excessive explanatory claim.

On the other hand Ferraris admits (2009, 73) that "the disparity between the situations brings out the difference between the sphere of the sciences—the search for absolute truth—in which the claim that there are no facts, but only interpretations might make some sense, and the sphere of life and experience, where such a thing makes no sense whatever," an observation that probably Nietzsche

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would accept, since he expressed this thought (published posthumously, by the way) philosophizing and not having a conversation in a pub.

6.0 Natural, ideal and social objects

For the second critique, Ferraris' theses are (Veca 2012, 521) "argumentations under which lies a logic similar to the one present in most of postmodern speeches" and the basic thesis that Ferraris proposes (2012, 48) is, by his explicit admission, "a modest or minimalist realism," that is to say (Ferraris 2012, 102) a moderate constructionism, which is shaped more like (Ferraris 2012, 63) "a 'treaty of perpetual peace' between the realist insight and the constructionist one," rather than like an innovative and invincible argument able to finally defeat any form of skepticism and relativism. In fact, Ferraris divides the world into three big categories of objects: natural, ideal and social (Ferraris 2009, 32-54), building around the social ones a whole philosophy of documentality ("Papers, archives, and documents constitute the fundamental element of the social world. Society is not based on communication but on registration, which is the condition for the creation of social objects" Ferraris 2009, 319) in which the postmodern constructivism is totally included with a integrating and founding role. Ferraris (2009, 318-19):

> In the world of social objects … belief determines being, given that these objects depend on subjects .… While transcendentalism is not applicable to natural objects, it fits social objects perfectly. The Kantian thesis that intuition without concepts are blind does not apply to lakes and storms (which remain as they are independently of our conceptualizations), but it does apply to mortgages and conferences .… Naked life is nothing but a remote starting point, and culture begins very early making for a clothed life, which is manifested in registrations and imitations: language, behaviors, and rites.

As for natural and ideal objects (assuming that it is obvious to distinguish them from the social ones), which should, at least themselves, be completely immune from constructivism, but which nonetheless are strangely less central than those which are social in Ferraris' works even after his neorealistic conversion, one could, however, doubt their independence from the human gaze since Ferraris (2009, 34-35) declares that he considers natural the objects that can be met in ordinary experience and not the objects described by science (as if only science were contaminated by changeable theoretical constructs while ordinary experience allowed a direct access to things in themselves, stably universal and not oriented by social, cultural or personal

prejudices) and that he calls (2009, 38) ideal those entities that, like numbers, "exist outside time and space independently of subjects," but the numerous social applications of which cannot but share the issues of the corresponding typology of objects.

In addition to natural, ideal and social objects, to complete Ferraris's (2009, 7-54) "catalog of the world," there are also those subjects, defined as (Ferraris 2009, 22) "individuals whose prime characteristic is to have a central nervous system that is sophisticated enough to capture and fix representations," which makes us think that they are, all things considered, only a particular typology of natural objects.

7.0 Irrealism, hyperrealism and moderate realisms

The contrast between neorealists and postmodernists is made less sharp than Ferraris depicts it also by the particular consonance of the theses of two philosophers who should rather militate on the opposite sides of that conflict of ideas. On one side there is the American philosopher Nelson Goodman (1906-1998), who in his classic book of 1978 *Ways of Worldmaking* defines his own position as "a radical relativism … that eventuates in something akin to irrealism," since the fundamental thesis of the volume, synthesized by the editor of the Italian edition is that (Varzi 2008):

> There is not *one* world; there are *many* worlds, none of which all-inclusive. More precisely, there is one *world* for each different *way* to combine and build symbolic systems. There is one world for each version and vision of it in the different scientific theories, in the works of different artists and novelists, in our perceptions as influenced by those works and theories in addition to the circumstances, the past experiences, the interests that guide us, by our observation capacity and so on .… Since for Goodman these different versions or visions can be equally important and independently interesting, even *correct*, without having to presume or request their reducibility to a single common basis, it follows that the worlds that derive from them have the same degree of reality: no world can arrogate to itself the exclusive right to the title of "real world," no one can claim to be *the* world to which the different versions refer to with different languages and modalities.

On the other side is the young German philosopher Markus Gabriel, who, in his recent volume with the surprising title (especially for a declared follower of Ferraris's "new realism") *Why the World Does Not Exist* (Gabriel 2013), does not support the inexistence of the material universe de-

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scribed by astronomy and physics, but rather the inexistence of an hypothetical totality that includes not only physical objects but also (Gabriel 2013, 8): "a good number of objects … which man cannot touch" like our thoughts, national states, unrealized possibilities and numbers. For Gabriel, each of these objects exists (Gabriel 2013, 65-72), but only within a field of sense that connects it with many other objects, but never with all of them, because each field of sense (also called object domain or ontological province at page 49) corresponds to a particular perspective, which at the same time includes and excludes certain types of objects. Numbers exist in the field of sense of mathematics, rhinos in the field of biology, unicorns in the field of mythology, thoughts in the field of psychology, but there is not a single field of sense (a "domain of all domains," Gabriel 2013, 73) that contains them all (Gabriel 2013, 18) and that we could really consider "the world," that is to say "the whole," because, in order to exist, it would, in turn, need to appear in a wider field of sense, with a paradoxical effect of infinite regress.

The two theories are different, because the first one multiplies the worlds, while the second one does not recognize even one. Their points of contact are, however, considerable, because both of them doubt that there is an only all-inclusive reality, proposing in its place innumerable different realities, incommensurable with one another. Goodman (1978) presents his own theory as an "irrealism;" Gabriel (2013, 1) as a "new realism," but both theories could perhaps be best classified as forms of hyperrealism, alluding with this term (unrelated to its various meanings in mathematics, semiotics, music and visual arts) to a sort of multiplication and enrichment of reality and of admission of its inexhaustible polyhedricity. In any case, Goodman's supposed irrealism is not so extreme as to become nihilism (or "*trivialism*, that is to say that everything is true, everything is fine, legitimized by the end of legitimizing discourses," D'Agostini 2013, 86), justifying the creation, by human beings, of any world, because he (Magni 2010, 57; see also Chiodo 2006, 98-104) "refused to consider each construction of the world equally good: there would be correct constructions and incorrect constructions, and this depends on their conformity with the purposes for which they are used and on their practical effectiveness." That is to say, in Goodman's words (1978, 94), his is "a radical relativism; but severe restraints are imposed." And Gabriel's neorealism, at the very moment he admits the relevance of scientific disciplines and of personal points of view for identifying the different fields of sense, cannot leave out of consideration elements of constructivism, whether he admits it or not.

Gabriel and Ferraris are also in good company in not being able to free themselves completely from constructivism, because all of the authors (Akeel Bilgrami, Mario De Caro, Michele Di Francesco, Umberto Eco, Maurizio Ferraris, Diego Marconi, Hilary Putnam, Massimo Recalcati, Carol Rovane, John Searle) that contributed to a miscellaneous volume (De Caro and Ferraris 2012) that, in the editors' intentions, highlighted on the back cover, should have provided "an extraordinary battery of arguments in favour of realism, but also giving space to dissenting voices," turn out to be (some more and some less, but no one excluded) moderate constructivists, that is thinkers that give an important, but never exclusive, role to social, cultural, anthropological, linguistic and personal points of view in delineating the way we know the world. So much so that, after reading the book, we have the impression of having attended, rather than an epic reckoning against postmodernism, an interesting but subtle discussion within the postmodern movement itself, about which and how many constructivist elements are ineliminable from contemporary epistemology, and not about their complete elimination.

In this regard, Eco's position is exemplary; although not citing them explicitly, he refers to Popper's (1935) falsificationism (a theory is scientific only if it is possible to construct an experiment which could prove its falsity), to Poincaré's (1902) conventionalsim (scientific theories are conventions but not arbitrary) and to Goodman's (1984, 31) radical but not nihilistic relativism ("a true version is true in some worlds, a false version in none") in order to propose a negative realism according to which (Eco 2012, 105-6):

> Any interpretative hypothesis is always revisable (and, as Peirce said, it is always exposed to the risk of fallibility) but, if we can never say definitely if an interpretation is right, one can always say when it is wrong. There are interpretations that the object to interpret does not admit .... Certainly our representation of the world is perspectic, connected to the way in which we are biologically, ethnically, psychologically and culturally rooted so that we never believe that our answers, even when they appear, after all, "good," must be considered definitive. But this fragmentation of the possible interpretations does not mean that *everything goes*. In other words: there is a *hard core of the being*, such that some things that we say about it and for it cannot and must not be taken as valid.

Besides, independently of the debate about Ferraris' and Gabriel's new realism, we can also mention other forms of sophisticated contemporary realism. They accepted the Humean (Lecaldano 2007) and Kantian (Ferrini 2007) critiques that irreversibly demolished the classical realistic claim to know appropriately an external world completely independent from our gaze and therefore they came to

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terms, to some extent, with some elements of constructivism. Franz M. Wuketits (1990), for example, proposes an hypothetical realism, which links to the evolutionary epistemology of Karl Popper (1972), Konrad Lorenz (1973) and Donald Campbell (1974). Wuketits underlines how our perceptive and knowing apparatus is the result of a very long natural evolution and thus binds us to unavoidable biological limits. But, for the same reason, it is also very likely that is provides us with an idea of the external world realistic enough to allow us to survive, reproduce and, in fact, evolve. On the contrary, Roy Bhaskar's critical realism (Bhaskar 1979, Budd 2010) opposes both to the ingenuous realism of positivism and to the radical constructivism of postmodernism, trying to combine a realistic ontology with a relativistic epistemology through the concept of depth of reality, which our knowledge can penetrate more or less deeply but never completely.[1]

8.0 Objective and subjective aspects of knowledge organization

Moving from the analysis of the limits and the conditions of human knowledge in general to the analysis of a particular type of second-level knowledge which is knowledge organization itself, we often wonder whether it is better in order to classify and index objects, people, institutions, concepts, documents and information, to use categories based on an ontological approach (that is on the characteristics of the entities that we want to order), on an epistemological approach (that is on the way we know those entities), on a pragmatic approach (that is on the kind of use we want to do both of the entities themselves and of their various arrangements) or, more likely, on varied combinations and alternations among these approaches (Gnoli 2008, 77-99; Ridi 2010, 90-97).

For example, recently Kleineberg (2013) started from the ancient Indian parable of the blind men that, touching the different parts of a single elephant, give completely different descriptions of it, incommensurable with one another, to illustrate the positions of the two opposite-facing fronts in the international studies about knowledge organization in recent decades. On one side are modernists, who underline how the elephant is, after all, only one, and therefore it must be possible to integrate its various descriptions (different because partial) in a single picture that focuses on the "what" of knowledge. For this ontological approach to knowledge organization (Kleineberg 2013, 341) "a main goal is to classify the totality of entities or phenomena in a universal and often faceted knowledge organization system (KOS) as neutral and objective as possible." Inversely, for postmodernists, each blind man has not simply a different, partial access to the same elephant, but he produces through his own

experience a different type of elephant, just as real and complete as that of the other blind men. The "development of context-transcending or even universal KOSs is regarded rather skeptically" (Kleineberg 2013, 341) by those who prefer this epistemological approach that focuses on the "who" of knowledge and on its historical, cultural and psychological background.

Kleineberg considers both of these approaches incomplete and proposes to integrate them, using KOSs (knowledge organization systems, that is to say structured and controlled lists of terms used to organize, manage and search for information, documents and knowledge in a particular field or for a particular purpose, described for example by Zeng (2008) and Gnoli (2015)) which take into account both the "what" and the "who" of knowledge, and, in addition, also the "how," that is to say the methods used in cognitive investigations, trying in this way to satisfy at the same time both the ontological approach and the epistemological and methodological approaches. Kleineberg's attempt at synthesis is certainly commendable and goes in the same direction in which this article is moving, that is to say the ascertainment of the difficulty in separating clearly the objective and the subjective aspects of knowledge organization, not to mention the possible claim to eliminate completely one of the two, so much so that not even all the authors selected as representative of the modernist or postmodernist approaches always maintain consistently that position, as Kleineberg (2013, 341) himself admits. At most, one could perhaps raise doubts of a financial kind about the costs of indexing procedures that take into account so many aspects and one could note that the choice of the parable of the blind men is a little too oriented towards the ontological front, at least insofar as it might have been to take as an example in favour of the epistemological front the assistant of an illusionist, seemingly sawed in half but, on closer examination proving to be instead, two different women, only half of each is visible.

Not too dissimilar from Kleineberg's ecumenic proposal (2013) is Gnoli's (2012b). Gnoli starts from the ontological exhortation of the *León Manifesto* (ISKOI 2007) to use phenomena (rather than disciplines, as occur mainly in most current systems) as basic units of a KOS and enhances it, providing six "dimensions of knowledge organization" (Table 1). These dimensions are the elusive reality itself, phenomena, the perspectives from which phenomena are faced by human beings, the supports that carry the corresponding information, the collections of documents in which knowledge is recorded and preserved, and the homogeneous groups of users that use those documents. These six dimensions are studied by six corresponding disciplines or groups of disciplines—mysticism, ontology, epistemology, bibliology, library sci-

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ence [sic] together with archival science and museology, and sociology.

α	(reality)	[mysticism?]
β	phenomena	[ontology]
γ	perspectives	[epistemology]
δ	carriers	[bibliology]
ε	collections	[library science]
ζ	users	[sociology]

Table 1. Dimensions of knowledge organization according to Gnoli, taken from Gnoli (2012b, 270).

It is worth noting that Gnoli, one of the authors cited by Kleineberg (2013) as particularly representative of the modernist trend in the studies of knowledge organization, also includes in his pattern the epistemological dimension, typical of the postmodernist trend, as it contains (Gnoli 2012b, 271)[2]:

> The disciplines, … the domains addressed by different research communities, the human activities to which knowledge is intended to be applied, the communicative functions performed in transmitting knowledge, the theories adopted and methods applied, the historical epoch and geographical context in which knowledge is produced and, in general, all viewpoints adopted by authors.

Consistent with this multidimensional opening, Gnoli himself, during the final debate of the ISKO meeting in Bologna on 20 April 2015, accepted the possibility of adding even a seventh dimension, relating to the objectives, preferences, habits and constraints of individual users and to the characteristics of different and changing information needs and behaviours of each of them, studied by psychology and information science.

Inversely (and just as significantly) the postmodernist (again according to Kleineberg 2013) Hjørland, although he believes (2008, 338) that "concepts of phenomena (etc.) are theory dependent and interest-dependent," because "a neutral position from which the world can be observed objectively" does not exist, and therefore "all interpretations are circular, indeterminate, and perspectival" even when we are "describing and classifying phenomena in the world" (Hjørland 2008, 337; see also Nagel 1986 and Ridi 2010, 90-94), concludes that he does not believe (2008, 338) that "this leads to skepticism or antirealism, because some theories do a better job than others." This is a concept that he reaffirmed and examined closely in a very recent article (Hjørland 2015) in which he demonstrated the strict reciprocal dependence between theories and KOSs, even more relevant for knowledge organization if we think that (114)

"even every-day concepts … are theoretical constructions and have theoretical implications for how we think and act" and that (116) "often what has been considered 'facts' later turns out to be a theory." Therefore, Hjørland's constructivism and postmodernism do not prevent him from acknowledging that neither all theories nor all KOSs perform their tasks equally well in describing and organizing the world or its parts, admitting thus implicitly that out there there must be something independent from them that helps us to compare their efficacy.

9.0 Objective and subjective levels of reality

A concept that may be particularly useful to focus the difference between objectivistic and subjectivistic approaches to knowledge organization is that of "levels of reality" (Gnoli 2006; Poli 2007; Gnoli and Ridi 2014, 450-453), used by various KOSs of objectivistic kinds, among which the *Information Coding Classification* (Dahlberg 1982) and the *Integrative Levels Classification* (ISKOI 2004), as a backbone to connect to one another, at the same time in a coherent but not reductionist way, all the entities that KOSs themselves aim to classify. According to this approach, present in innumerable variants in the history of philosophy and science at least since Plato, all that exists is part of a unique hierarchical "great chain of being" (Lovejoy 1936) ranging from simple to complex and admitting no voids. In the twentieth century the prevailing version of this idea was the concept, influenced by Darwin's theories and by other forms of evolutionism, of emergent or integrative levels of reality. These are successive layers (in a logical and, at times, also chronological sense) of entities increasingly more and more complex and autonomous (Juarrero and Rubino 2008), provided with characteristics absent in the previous layer but that emerge as truly innovative, although based on them, such as is the case of chemical properties compared to physical and of biological properties compared to chemical. Among the philosophical theories on the emergent levels of reality that mainly influenced the most recent studies in knowledge organization, it is worth remembering Hartmann's (1940; Scognamiglio 2008), which provides a stratification of reality in four levels—inorganic, organic, psychic and spiritual—autonomous and irreducible among them but resting on one another in order to exist.

But, there is also at least another meaning of the expression "levels of reality:" it is the one to which the title of the homonymous conference (Piattelli Palmarini 1984) held in Florence in 1978 refers. On that occasion, some twenty philosophers, logicians, psychologists, psychiatrists, biologists, paleontologists, historians, linguists and writers (including, in addition to the same Piattelli Palmarini and the abovementioned Goodman and Putnam, also Ayer,
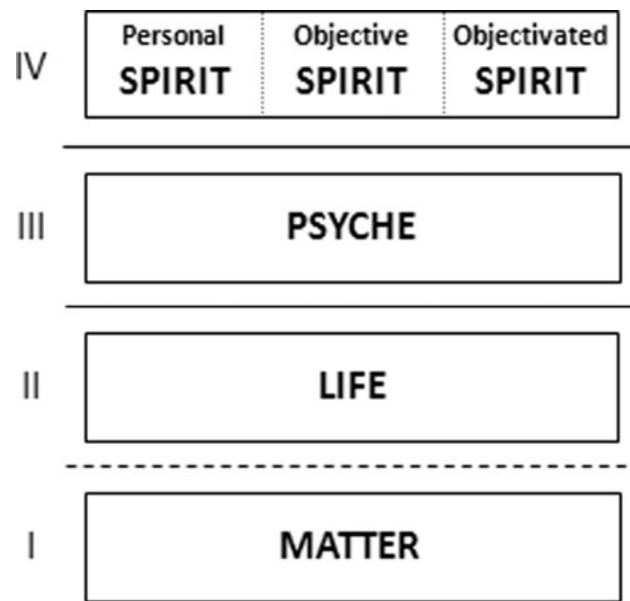
Figure 1. Levels of reality according to Hartmann, taken from Kleineberg (2016, 84).

Gould, Laing and Calvino) met to discuss how one should interpret the reality dealt, in one way or another, by their traditions of studies. They found that not only each discipline, form of knowledge, school of thought or single theory has to do with a reality different from the others (the summation of which breaks down the overall reality into a series of levels mutably manifold and scarcely integrable in a single model), but that even some of those points of view build worlds provided, in their turn, with some kind of articulation, obviously always different and only at times of the emergentist kind, in layers or levels. There were no knowledge organization specialists among the speakers, but it is easy to imagine what could be (given the strong links between theories and KOSs discussed above) the impact on knowledge organization studies of this kaleidoscopic and labyrinthine exponential multiplication of the levels of reality, that leads to extreme consequences of the "hyperrealist" approach.

The ontological approach to the levels of reality, which would constitute layers objectively connected between them in a univocal and stable way, and the epistemological approach in which the levels are built by the way in which reality is cut out by the various observers and therefore the same levels change over time and are incommensurable with one another seem totally incompatible (Poli 2007, 33), but again Kleineberg makes us suspect that they are not. Kleineberg (2016) begins his essay illustrating (Figure 1) the stratification of reality theorized by Hartmann (1940). Then he applies to it a series of formal transformations, some of which are taken from Poli (2001), that progressively move away from the linearity of the original pattern and introduce patterns in which a plurality of upper layers co-evolve from a lower layer. Then Kleineberg arrives in Figure 2 at the pattern proposed by Wilber (2000), rather complex if not even Baroque in its elegance, but which has the merit of supporting a hypothesis of solution of the millenarian philosophical problem of the relationship between mind and body (Nannini 2011), at least originally referring to the ancient tradition of panpsychism (Skrbina 2005) that Wilber tries to make compatible with contemporary science.

Both Hartmann's (1940) and Wilber's (2000) patterns are intended by their authors as ontological, that is as attempts to describe the real structure of the world, apart from outside points of view, but the formal procedures of transformation used by Kleineberg (2016), whose incipit, moreover, refers to levels of reality as a metaphor, and the multiplicity of the intermediate patterns elaborated during the transformation itself cannot but convey to readers a particular epistemological taste of the operation, also independent of the will and the opinions of its creator. On the one hand, therefore, ontological levels of reality could also be seen as epistemological levels of reality but, on the other hand, why not assume (at least in principle) the possibility of an ontological structure of levels so articulated as to absorb in its interiority also all the levels of epistemological kinds? After all, the prevailing theory today of a physical world that includes billions of consciences is not more strange from a strictly logical point of view than the theory of a single conscience that contains the entire physical universe.
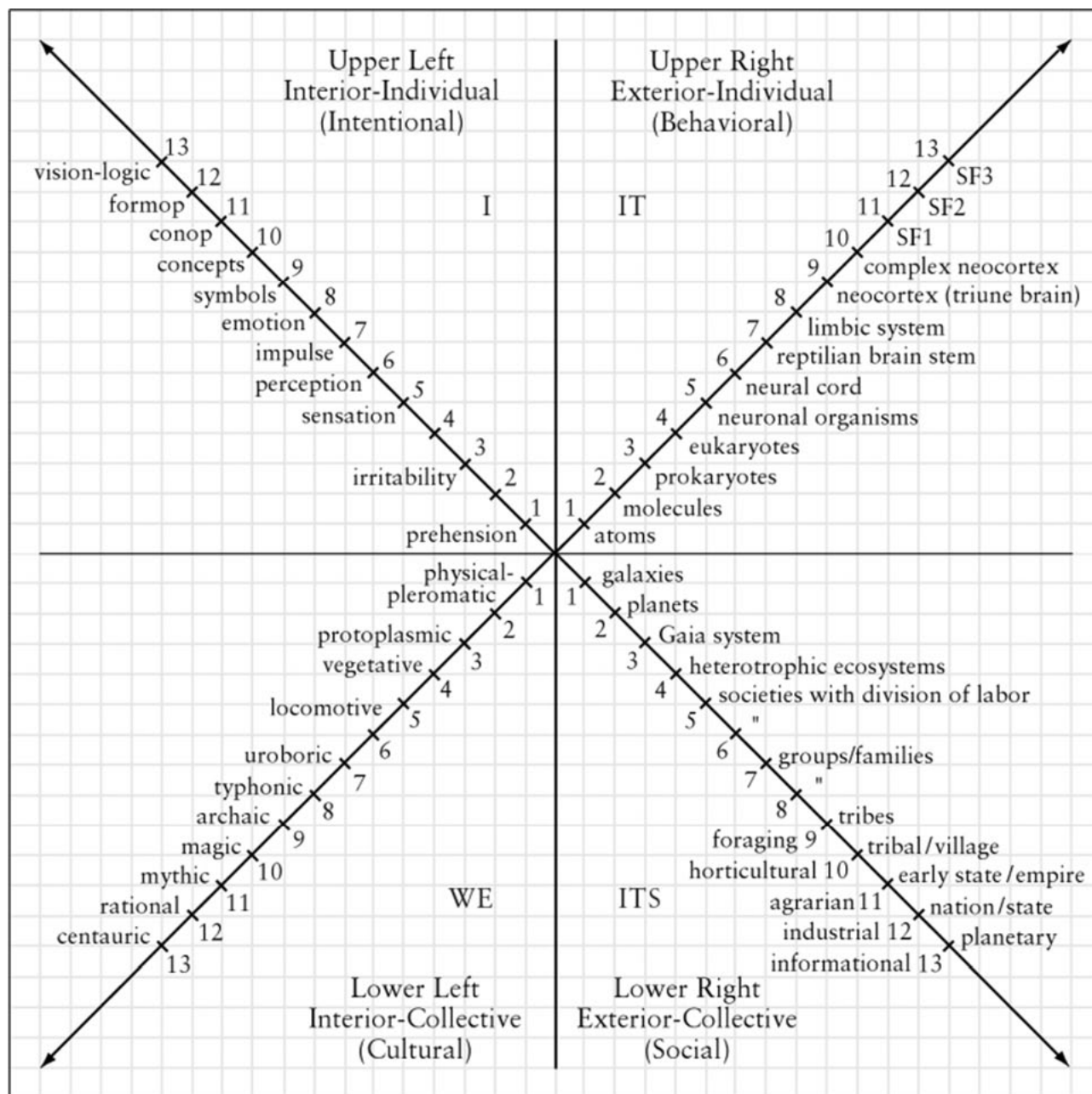
Figure 2. Levels of reality according to Wilber, taken from Wilber (2000, 198).

10.0 Phenomena and noumena

As we have seen, in each of the examined concepts (information, document, knowledge, knowledge organization, level of reality) there are aspects both objective and subjective, as indeed even some authors that are often considered intransigent objectivists or subjectivists are forced to admit, not only because of possible contradictions intrinsic to their own theories as rather for the unavoidable complexity of the issues that they would like to solve. Such a coexistence is accomplished in different ways and in varying proportions within each of the examined concepts, all, by the

way, closely intertwined. For example, at a metaphysical level, an extreme irrealism is difficult to sustain, because even the most radical constructivists admit that in any case there must be something that put up resistance to human knowledge that would otherwise be purely hallucinatory. At a practical level, instead, a position which would not be totally unacceptable is that of those who maintain that any type of KOS must be judged, after all, only on the basis of its social utility or, in any case, of its efficacy in solving specific information problems, because KOSs are basically nothing but tools invented by human beings to improve their lives.

Besides, not even radically solipsistic scenarios like the one imagined (in order to confute it) by Putnam (1977) and made popular by the film *Matrix*[3] ("Are we brains in a vat, connected to a computer that provides us with the experience of reality?," D'Agostini 2013, 131-2) exclude the existence, at least, of a brain, a vat and a computer. And even Gorgias' possible nihilism ("Nothing exists. Even if something exists, nothing can be known about it. Even if something can be known about it, knowledge about it can't be communicated to others," Reale 2004, 71-82) presupposes the existence of Gorgias himself. So much so that some (D'Agostini 2013) defined realism to be a non-controversial question, because it it impossible to deny, keeping a minimum of logical consistency, that some kind of reality exists, and, in any case, the controversy may rise only on what is deemed real and on how reality and our knowledge of it are structured. This latter question is not at all trivial (Gopnik 2009, 75-6), because "all that reaches us from the world are a few rays of light hitting our retinas, and a few air molecules vibrating at our eardrums—images and echoes. So how can we really know anything about the outside world? Where do our theories of the world come from and how do we get them right?" Starting from such minimal sensory data it is hard not to foresee in the solution of the riddle some kind of role, not minimal this time, of our knowledge structures.

If, as the philosopher and mathematician Whitehead wrote (1929, 39), "the safest general characterization of the European philosophical tradition is that it consists of a series of footnotes to Plato," it is likely that the epistemology and the ontology of the last two centuries are, in turn, footnotes to that important footnote to Plato that is Kant's *Critique of Pure Reason* (1781/1787). In this work, Kant demonstrates on the one hand the impossibility for human intellect of knowing noumena, namely "things-in-themselves" as they are, independently of our gaze and, on the other hand, that phenomena, namely the only objects that we can really know, are strongly influenced by the fundamental and universal structures, both necessary and unavoidable (transcendental) of any possible knowledge of a human being. Much of the epistemology and of the ontology after Kant (including those that are found, often tacitly, in studies on knowledge organization) can be reduced to phases of a long debate on the nature of those phenomena: are they mere appearances, compared to the authentic and unattainable reality constituted by noumena, or are they the only existing reality, relegating noumena to mere borderline cases, totally hypothetical as knowable only by a possible divine intellect? It is not easy to answer once and for all, because even Kant oscillated between a realist position in which he seemed to interpret phenomena as an appearance (in the first edition of the *Critique* of 1781) and a constructivist

position in which he instead interpreted them more decisively as reality (in the second edition of 1787). There are even some critics (D'Agostini 2013, 108-12) who attribute to a different interpretation of Kant the great division in contemporary culture between analytic philosophers, who consider Kant a constructivist, and the continental philosophers who consider him a realist.

11.0 Conclusions

The discussion on noumena and phenomena is neither purely academic nor exclusively philosophical, because from the position taken in this debate, different trends may derive as regards each of the topics dealt with in this article and also a different nuance may arise in the way one can identify and call the coexistence of objective and subjective aspects that has emerged in relation to each of them. It is therefore possible that the fact that today there are so many ways and names to describe that coexistence depends also on a different interpretation, more or less aware, of Kant. For example, I should define as moderate constructivism (or, if you prefer, realistic constructivism) the synthesis of objectivism and subjectivism that consists in recognizing that reality is neither completely given nor completely built and that it constitutes beyond too-much marked pseudo-oppositions, the paradigm today *de facto* dominant both in epistemology studies and in knowledge organization studies. Dux (2011) instead preferred to speak of constructive realism, Eco (2012) of negative realism, Wuketits (1990) and Gnoli (in Bologna) of hypothetical realism based on the assumptions that have so far passed the scrutiny of natural selection and Hjørland (2004) finally opts for a pragmatic realism. This latter would mean to recognize both (492) that "our ontologies are implied by our theories and paradigms" and that "we cannot freely invent arbitrary structures," because "the world provides resistance to our conceptualizations in the form of anomalies, i.e., situations in which it becomes clear that something is wrong with the structures given to the world by our concepts." Hjørland attributes this position also to the famous epistemologist Thomas Kuhn, yet acknowledging that often such a position is instead considered antirealist. In any case, beyond nuances, denominations and the attempt of both of the opposing fronts to annex the moderate intermediate position, I believe that this approach may share the same aspirations to the synthesis between the ontological and epistemological needs expressed by Kleineberg (2013) as does his own theory of knowledge.

In combining epistemology and ontology, this theory of knowledge seeks to integrate both the undeniable constructivism of human knowledge as well as its capability to reflect reality which is seen as partially independent

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from a human observer. In other words, neither the premise of pre-given ontic structures nor the premise of arbitrary epistemic constructions of reality are required, two extreme positions also known as the "myth of the given" invented by Sellars and the "myth of the framework" coined by Popper (Kleineberg 2013, 349).

But it is not given that such aspirations are actually satisfied by the theories currently available in the fields of philosophy and knowledge organization (including Kleineberg's and that drafted in this article), because this would mean that they had finally managed to solve convincingly a problem that has lasted since Presocratic times and that was reformulated in modern times by a post-Kantian bipolarization from which is extremely difficult to escape, also because it deeply permeates our language. This bipolarization tends both to make anyone who reflects on these issues take sides with an objectivistic or subjectivistic position and to attribute one of those positions also to the theories that, in one way or another, would rather overcome their opposition, as the readers of this article and Kleineberg's (2013) probably will do.

While waiting for a really persuasive theory of synthesis to emerge, maybe in the wake of Metzinger's (2009) reflexions, referable in turn to the empiriocriticism of Mach and Avenarius and to Husserl's phenomenology[4], on the experience as a sort of neutral film between objectivity and subjectivity similar to the walls of a tunnel, what one can pragmatically do is accept (Nagel 1979, 213) that "the coexistence of conflicting points of view, varying in detachment from the contingent self, is not just a practically necessary illusion but an irreducible fact of life" and that "perhaps we are really doomed to be *two-tier thinkers* (thinkers at two levels: *both* realists *and* relativistics)" (Piattelli Palmarini 1984, 524), striving to use the terms objective and subjective only in a relative and not in an absolute way ("this is more objective or subjective than that") as we usually do for couples like tall/short, for which sentences like "that child is tall" are commonly and correctly understood as abbreviations of "that child is taller than most children of his age."

Besides, it will always be useful to remember that knowledge organization needs or, otherwise, takes advantage of approaches not only ontological and epistemological but also sociological. In some way, they mediate between objectivity and subjectivity underlining how KOSs not only organize something and do it from certain points of view, but for the most they follow modalities and aims shared within social groups more or less at large if they do not want to be relegated into irrelevance and condemned to unsustainability, although without excluding completely the justification also of forms of knowledge organization for their own sake (Gnoli 2013) or for strictly private use (Jones and Teevan 2007).

In this way, rather than feeding a sterile debate between the positions of ingenuous pure realists and phantom pure irrealists (both in fact absent from the pages of the contemporary journals of both philosophy and knowledge organization studies) we could all accept that there are both facts and interpretations (D'Agostini 2013, 40) and discuss more calmly and more profitably how many and which more objective and more subjective elements are involved in each specific knowing situation or are useful in each specific KOS. And perhaps we all could also share and apply also to KOSs what Lecaldano (1987) wrote about philosophical theories, summarizing Williams's (1985) position, that is to say that they "can be considered as large-mesh nets built to try to grasp the world, with the awareness that much will remain out and that others, quite legitimately, will cast different nets."

Notes

1. For Eco's negative realism and other forms of moderate contemporary philosophical realism see the chapter "Strani realismi" in D'Agostini (2013, 139-46). Further forms of contemporary philosophical realism are mentioned by De Caro and Ferraris (2012, x-xi) and others are discussed in the other chapters of D'Agostini (2013).
2. For further comments on Gnoli (2012b) and on Kleineberg (2013) see Gnoli et al. (2016) and Kleineberg (2014).
3. On the philosophical aspects of the three films of the series (*The Matrix* 1999; *The Matrix Reloaded* 2003; *The Matrix Revolutions* 2003), all written and directed by brothers Andy and Larry/Lana Wachowski, see Irwin (2002 and 2005) and Cappuccio (2004). On the Cartesian roots and the philosophical fortune of the "brains in a vat" see Davies (2004).
4. See Smiraglia (2012, 12-13 and 2014, 28-29) for an introduction to phenomenology's relevance to knowledge organization studies and Budd (1995 and 2001) for the proposal of an epistemological foundation of library and information science resting on phenomenology.

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