Luciana de Souza Gracioso (Federal University of São Carlos)

Pragmatic approach to virtual information action from Wittgenstein

Abstract
Information science is concerned with human actions to the extent that it deals with their constitutive elements of communication. Today, a large part of information actions is configured in the virtual technological plane. For us to think of the possibilities of signification of information in the rhizomatic and interactive spaces of communication, we propose to broaden the cognitive matrix of information science in favor of a pragmatic (Wittgensteinian) perspective of understanding of language, and then, of information. We further venture to rethink based on the pragmatic concept, the instruments of intermediation of information broadly developed in the area, therefore, considering the complex and dynamic nature of the language that is constituted in its use in acts of communication (virtual or not).

1: The repositioning of the subject and the use of language in the virtual field
We feel that information science hovers over (and even “crosscuts”) human actions to the extent that it deals with their constitutive elements, that are related to the “communication of communication”. To pin its object of study to some physical or symbolically static substrate would be to reduce its power to that of a simple intermediary area of knowledge. However, this science should have the competence to germinate and fructify knowledge. Sustaining and basing itself on theories, on concepts and methodologies that broaden its perception of the subject and its interrelationships (between them, between them and the world, and between those that intermediate with the world), we believe that such an area will have the conditions to do justice to its potentiality, independently of technological tendencies and developments. At the present time, the technological configurations of communication known as post-media hold as their horizon of perfection the communication of everyone with everyone and, in real situations, they increasingly extend and contemplate the interaction between the offer of information and its demand. We use the concept of virtual, in the first place to designate applications, planes and technological configurations that contemplate information, computerized or not, available on the World Wide Web, on the Internet.

In the current technological mediations characterized by the Internet, and that we judge to be close to a rhizomatic structure (Deleuze & Guattari 1997, 221), we situate three conditions for information production and use:

- the virtual syntactic planes, in which contents offered do not necessarily pass through institutional filters, being in a certain way decontextualized in terms of origin and authorship. They configure themselves as a syntactic set of data that will be retrieved, generally by computer search engines, based on logical connections established by the system. This system, in turn, will link the descriptor used by an individual in an information search, to the descriptor used in the content of the documents. But this operation does not consider the context of the proposition in which the concept was registered and neither the context in which it was found;

- the virtual semantic planes, in which propositional contexts of use of concepts become considerations in the connective actions of the retrieval of information;

- the virtual pragmatic planes in which contents are constituted and retrieved interactively on the basis of direct or indirect interventions between their searchers.
Sharing this virtual space, in which syntactic, semantic and pragmatic relationships are configured, are the systemic units, such as specialized databases, for example, the contents of which are subjected to institutional criteria that established their physical structuring and the use of words, both for the composition of the contents themselves, and for their retrieval. To analyze the virtual technological space we go back ultimately to Levy’s definition of cyberspace, that considers virtualization as a process of “deterritorialization”, at the same time (and, perhaps, because of this), as a space “that offers objects that circulate between the groups, shared memories, community hypertexts for the constitution of intelligent collectives” (Levy 1996, 129). Levy goes on to say that cyberspace “is an original way of intelligently creating society”. This conceptualization, on the level of arguments in favor of interactive technological platforms of communication, does not amount to a categorization of the virtual. The author, in the formulation of her epistemic conception of the term virtual, would refer to Deleuze and shares with him the understanding that virtual is related to a question of problematization, of possibilities (p. 16).

We take as point of departure for the contemplation of the virtual the investigation of Deleuze (2006, 294-295), who exposes the relationship between the real, the simulacrum of representations of the real and the virtual as representation of the real, and of the representation itself. It would not merely be a potential for realization, nor something conceptual or merely a simulation of the real, but a constitutive part of the real and vice-versa. We understand, then, that the virtual would have a relationship with the real, but not in an exclusively representative or specifically descriptive way, it would be surplus in relation to the actual and the possible. Thus, we position ourselves in relation to the concept understanding it not as an ascendant world, although it shares this conception to the extent that the real also contemplates it. The virtual, for us, is not a parallel environment of significations, but rather a plane in which significations may go on to be broadened, potentialized, modified and redefined, such as occurs in the real, but with some different characteristics. We should be able to say that informational actions are virtual, even when not mediated by technologies.

Still basing ourselves on Deleuze, we will relate its understanding of the virtual to information technologies. In this sense, the rhizome concept (Deleuze & Guattari 1997) would approximate, in many aspects, the implications inherent to informational acts on the Web. The rhizome concept is taken as ontological and pragmatic: that which is always in the middle, is not exact, but is a set of vague elements, disordered, without fixed or reference points. In an aleatory manner, a line would be traced and led through multiple possibilities of connections between things. If it should break, it would “reconnect itself”, both to what it was and to other lines, and would continue. This represents more an open map, like a jigsaw puzzle capable of being reconstructed in an infinite manner, pieces connecting without these connections having been provided by the game, rather than a generative model. In this map there would be an opening for the receiving of pieces from other games and for adaptation to them. The representation of the rhizome is almost antonymous to the representations already used to structure knowledge as tree or as root.

In the structural plane approximate to a virtual “rhizomatic” technology of information, we would locate three conditions of production and of information use: the systemic units we mentioned previously (such as specialized databases, for example),
the syntactic set of information (that does not share uniform systematizations and is retrieved specifically using computer search engines without filters or explicit intermediations – such as Google) and the contents constructed interactively from direct or indirect interventions of its searchers (such as wikis, blogs and others). We have three informational conjunctures, each with their validation characteristics, whether by formal (systemic environment), logical, syntactic or semantic (by open computer search engines) intermediations, or by pragmatic (established by the network users) mediations. In a general way, we could say that these three informational circumstances are made available by means of open search sites, but each one will present itself depending on its concept of origin (systemic, syntactic or semantic, or interactive) faced by the searcher. With these possibilities of possible significations, different criteria of informational validation may be actioned in relation to the contents acquired.

Practices of description and discrimination of virtual contents are growing and, in some situations, overlap. Syntactic, semantic and interactive criteria of institutional validation share the same space of signification. The fact of the pragmatic interactive criteria composing this conjuncture of description and discrimination is what renders unviable, or at least imprecise, any fixed method of verticalized control on the Web. On the other hand, users of information contents on the network, having broadened their conditions of search and interaction, could bring to their search actions (through search sites) their universe of daily use of language (as well as their validation criteria). For this reason we believe that the pragmatics may show us some points of reference for the reflection on this recent scenario that we’re passing through.

2: Philosophy of language: an open category
The philosophy of language coexists with philosophy in a general way; however, the forms of this approach to language have over time been rethought. The philosophy of language is an open category that contemplates all philosophical studies that set their objective on language and meaning. Cabrera (2003, 14) starts from the principle that it “would be all that which philosophers thought and developed in terms of reflections on language, regardless of their perspective and their methodology of access”. Different premises in the philosophy of language gain force according to what is considered significant and how this significance could be reached and reformulated. To Cabrera (2003, 17), to provide a signification for the world is to find the conditions for acting within it, to interact with it and enjoy the advantages of it, and not merely find linguistic-conceptual conditions to know it. This defense sits well with the aims of a tendency in language studies that we could consider communicational.

The interest of philosophy in this tendency is to understand language not just as a vehicle of concepts, but as a field in which these concepts – that enable the world to be articulated with the aim of making it significant to us – are constituted. Given this, the philosophy that we shall concern ourselves with below is that which investigates the possibilities, validities and the limits of linguistic mediation, so that the question of the statute of truth is detached from a philosophy of consciousness (that considers the supremacy of the cognitive apparatus, attributing to it the production of human instances of judgments, values, desires, beliefs and that, on account of this also is recognized as philosophy of subject) in favor of an analysis of language in its social use, pragmatism (Habermas 2002, 53).
However, it is necessary to consider that this posture derives from an intricate philosophical movement established at the end of the 19th century and which proposed, for philosophy, for science and for society, a redirectioning regarding the function of language. It began to be thought that the entire knowledge process is mediated by language and, based on this, a critique of psychologism through transcendentalism commences. The first step in this movement was to risk breaking with the exclusively representational function of man’s language on the world. As a consequence, an ideal refined language was instituted, with specific ends, and that could be analyzed and calculated, with the fulfillment of these operational actions being the condition of its validation as truth. In this context, it is the pragmatic philosophy of the Austrian L. Wittgenstein (1889-1951), presented most succinctly in his work *Philosophical investigations* (1953), that offers us a set of concepts, arguments and examples that allow us to understand minimally the implications of signification in communicative situations. And we believe that this conception of his approximates to the plane of signification promoted in the spaces of virtual interactive actions.

We would say that in *Investigations*, a reconfiguration of the relationships between philosophy, language and actions was proposed by Wittgenstein. To a certain extent, the philosopher inverts the classical starting point for the construction of the meanings of the concepts, detaching it exclusively from mental processes and conditioning them to interactive processes of the use of language, but without attributing differentiated evaluation to actions related to this use, without establishing elements universal to it and, furthermore, without proposing methods for such action. What Wittgenstein offers us are indications as to how we should understand the signification, the family resemblances, the rules, the grammar, and forms of life and language games. To him, these would be the points that permit the tessitura of the meaning of language. This complex of relations between uses that are situational and (at the same time) related to language would be the backcloth of the Wittgensteinian conception of signification and understanding of the world. Here, in the general way, are some of the principles that make up this complex:

- the meaning of words is not descriptive or figurative, but a practical construction;
- family resemblance suggests the non-existence of a unique foundation that might delineate the possibilities of understandings of the concepts – this interlinking of possibilities of signification would occur in a dynamic and interactive manner, since there would be merely kinships of uses between concepts that would permit it to pass through one communicative situation to another;
- the rule, which is not related to the structural grammatical rules of the language, but which involves them and permits the behavior and the social actions constructed collectively in the experiences of the subjects;
- grammar, as a tool which is actioned and used situationally to enable interaction in the use of language;
- the way of life which, although barely touched on by Wittgenstein, would be the set of habits and actions shared situationally by means of the use of language;
- language games, which, to a certain extent, are the locus where the interactions occur and where significations emerge intersubjectively.

We will seek, on the basis of this, to understand a little this universe of signification proposed by Wittgenstein, reaffirming that we viewed this scope of language from an
epistemological perspective that “liberates” our structural conceptions of its understanding when we think of the implications on the conditions of validation of informational actions (in whatever spaces of action, among them, those technologically virtualized).

Blair (2003; 2006), Frohmann (1990), Nedobity (1989), Hjørland (1998) and Novelino (1998) are some of the authors from the information science area who have established a theoretical and conceptual contact between Wittgenstein’s theory and this area of study. However, it was done just relating the philosopher’s discussions to the information systems. Nearness to the virtual space as the basis to possible methodological articulation in order to understand the ways of knowledge organization in the Web has been suggested in this research.

3: Wittgenstein in information science: virtual information actions

The most innovative reference in Wittgenstein with regard to signification was to encourage us to cast our eyes on the practical and, in this way, on another possibility for the understanding of the signification of language – based on its use. In the world of practices, there would be no universals for Wittgenstein, therefore, in the world of language (that governs practices), none either. Information science, in the course of its history, makes investments opposed to the conception of Wittgenstein’s second moment, trying to identify universal points of departure, or rather, punctuating invariances in order to sustain and guarantee its proposals of representation, organization and retrieval of information. The guarantees undoubtedly used by this science are reflections of the need to base them on fixed points for the registration of knowledge registered as an object of study in this area. However, the articulation and expansion of technological changes on the channels of communication would disarticulate many of the consolidated, disciplined and linear bases of the production of knowledge. For this reason, the efforts for the identification of universal elements in this medium and their fixed representation have become proportionally unsatisfactory outside the conditions of control and precision (which were sought to be attained in systemic information environments).

Furthermore, the detachment between the signification of language and exclusively mentalist, cognitive, representational and descriptive relationships, raised by Wittgenstein in the *Investigations*, would also clash with many of the methodologies of organization and representation of knowledge, developed and applied by information science. To attribute linguistic meaning to its use in practical situations in life is equivalent to saying that it would not be possible to pin down meanings, *a priori*, since, for this, we would need to pin down life actions. Information science, given this, would have to deal with an open concept of signification that would permit its constant reconstruction. This, principally, if we think of the deterritorialized informational implications on the Web. What Wittgenstein proceeds to propose to us is that we understand signification in the ambit of interaction. In this scenario, we affirm the importance of information sciences turning its eyes to the theories, the methods and the concepts which have the greatest epistemic potency and range, since only in possession of this understanding will it be able to transit the contexts of interaction in which the use of language and consequently the construction of significations occur. If this area only considers positivist premises on the descriptive signification of a concept in an informational environment, it presupposes a preliminary knowledge on the part of the
searcher for information on the content sought. Furthermore, on the Net, for example, this presupposition about the previous knowledge of who is conducting the search for information would be impossible to verify.

More specifically, in the systemic domain (even if offered virtually), the practices of representation of information could incorporate in their instruments of informational intermediation simple concepts of daily use (instead of giving primacy to the specialized concept and that commonly considered to be the most precise). Even if we add to it the explanation of some of its uses in life situations. Thus we would be potentializing the representation, attaching to it some contexts of action related to the concept. Based on this, it would be possible not just to delimit the possible meanings of concepts represented, but also to understand how their meaning could be reestablished in different situations of practical use. In the language of explanation of the use of the concept, more concepts and familiar expressions would be provided under which their practical uses would also be prescribed. The language of explanation is harnessed to practice and this attaches certainty to the situational meaning of the concept explained (Alvarenga 2003, 160).

To Wittgenstein, the approximation of the calculus model to language is an impoverishment. The elaboration of exhaustive lists of descriptive characteristics and of equivalences for general concepts may propitiate the generation of incomplete products of representation at the same time as it obscures some possibilities of strict understanding of the general concept. Our competence to construct meanings acceding to the situations in which the use of the concept is required would come from a competence of interaction which is made possible to us by the understanding and the sharing of rules (in terms of Wittgensteinian modes of behavior and action), based on the use of language, in a way of life. The competencies that we develop as we “learn” to live and as we “learn ourselves” to relate (in a non-linear, unpredictable and dynamic mode) are also the competencies we have to mean.

In the field of virtual technological interactions, we think that, where Wittgenstein most enlightens us has to do with the significative nature of language, which is instituted in its daily use, while this daily use has been ever more present in the searches and in the configuration of the contents available on the net based on argumentative dialogal relationships within language games. In light of Investigations we can grasp a dimension of unpredictability governing the establishment of meanings in cyberspace.

As to the implications for studies of information seeking, we think that Wittgenstein’s proposal should make us attentive to the “linguistic behavior” of the information seekers (users of language). This could be done starting with the analysis of the explanation of the use of linguistic expressions within a language game (the search game), since in this explanation the rules (of life actions) appear that regulate the use of expressions. Rules these, that simultaneously regulate behavior and social actions, while they learned only during the explanation of the uses of the language. For this reason, there is no way to establish or predict information searching. In this process, there would be no way to institute truths, merely construct (situational) certainties.

The very doubt, inherent to the process of information searches, already presupposes a set of certainties (practices). The certainties would be related to the grasp of the (Wittgensteinian) rules. For this reason, it would not be just through the means of reflexivity that we would cure our doubts about informational actions. We would only reach this state to the extent that some practical solutions related to our doubts had
already been found. If we had the conditions to analyze the explanation for some of these practical solutions already found, we would be able to identify agreements in the use of language or in the forms of life – we would have conditions to signify both in order to define concepts as well as judging and establishing certainties.

We would say that the reflective panorama traced by Wittgenstein on the signification of language linked to its use does not give us a theoretical methodological model for us to apply to the practices of information science, but furnishes us with epistemic contents that extend our judgment regarding the implications of signification, given that this is a central question in the scrutinies developed by this science. We hope to have been able to open up, based on *Investigations*, some non-traditional perspectives regarding signification with important consequences for the processes of representation, of retrieval and of information searching. We wish to add to this the possibility of an approximation to the virtualized technological mediations that rearticulated some of the conditions of use and signification of language (based on the notions of language use).

Given the breadth and scope of the signification process proposed by Wittgenstein, we sought to bring him closer to the impalpable and fluid virtual universe of information production and searching. Our proposal was to pay close attention to performative attitudes in the language games that present themselves and are established in this universe. These games mirror, and, at the same time, create rules and forms of life. As information professionals, in order to try to understand the meanings of these games, we would need to share their rules. This signifies, participating in the game.

4: Final considerations

Wittgenstein’s proposal on the signification of language in terms of use is much broader and more complex than the snapshot we have presented. But the gathering together of his main premises which we have done in this text, was with the aim, not just of acquainting ourselves with his Philosophy, as information scientists, but of justifying the relevance of his epistemological premises for informational questions, independently of whether the information is attached to computerized technological spaces or not. In the light of Wittgenstein, we were able to grasp the dimension of the non-dimensionable in relation to signification. But this does not lead us to stagnate in our representative actions, on the contrary, it causes us to ponder elements formerly not given credit in the conception of these representations or intermediations and that can interfere positively in information retrieval processes. Specifically the concept of language games presented by the philosopher alerted us to the subtleties of a signification that is established situationally and is dependent on ways of life, rules, grammar and family resemblances, in fact, on various and simultaneous actions that weave the web of signification. Rather than indicating applications of Wittgenstein’s thought in information science, we are concerned with initiating ourselves in his philosophy so that, through it, we can find the necessary spaces to contemplate the implications of signification, principally in the virtual game.

We are now developing two researches using these perspectives. One of these studies is named “Proposal for of theoretical and methodological parameters identification and application in the constitution of pragmatic instruments to represent and organize knowledge”. It is an approved project by CNPq (National Counsel of Technological and Scientific Development) in 2009. The other study is “The daily language as a
mechanism of information nets: analysis about the significance conditions from specific and social information mediated by virtual and interactive platforms”. Both of them which have made possible the extension of the research begun in thesis presented.

We continue to seek for a theoretical contribution that could minimally recognize and articulate the process of language meaning in use, but that at the same time could be more “operational”. It was the formal pragmatics by Habermas that indicated, within a consistent communicative theory, the parts and actions that would need to be articulated even before initiating the use of language. By using Habermas’s (1981) theory of communicative action, we did not intend to detail its assumptions. We seek to acknowledge, in the completeness of its proposal, the key elements we believe relate to the fulfillment of these fundamental demands in order to have communication and, thus, to deliberate as a condition for communication, interaction in the Web. Mainly, because this computational platform of information is increasingly configured by the interactive actions of language use by the users. For us, the world of institutions (with specific rules and specialized jargon) transverses into the living world (public knowledge, everyday language) in virtual information and is the subject, the one responsible for this transversal movement, by means of its communicative actions. As today collaborative, cooperative and associative human interaction is the main searching “tool” for knowledge building in the Web, it is justifiable that we recognize some of the conditions of significance that can enable such a pragmatic action of information. Accordingly, Habermas can give us some support measures to deliberate on the first steps of significance and meaning. From this, we believe that many of the analyses and practices related to the treatment of information in the cyber multicultural concept can be considered more broadly and dynamic, but, aware that behind the movement of meaning there are communicative assurances than do not make them aleatoric and hence enables individuals understanding one another other, as well as the world, and within that process, produce knowledge, whether it is in the “physical” or virtual reality. From assertions which have been made in this research, a study from different perspectives has been developed besides aiming the analysis of some situations in which the communicative guarantee is shown and actions of information in the web are validated.

References
Blair D., 2006, Wittgenstein, language and information: "back to the rough ground!", Springer.
Cabrera J., 2003, Margens das filosofias da linguagem: conflitos e aproximações entre analíticas, hermenêuticas, fenomenológicas e metacríticas da linguagem, Universidade de Brasília.

*Web documents have been accessed 31 August 2009.*