

REPLY TO ALVIN SCHRADER ON THE DOMAINS OF THE INFORMATION SCIENCE

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RESUMO

MOSTAFA, S. P. Reply to Alvin Schrader on The Domains of The Information Science.

Trans-in-formação, 5 (1,2,3) -, 1993.

Discute falácias na conceituação e delimitação de um campo de ação.

Palavras-chave: Conceito. Teoria da Ciência da Informação.

The title by SCHRADER (1) "The domain of Information Science: problems of conceptualization and consensus building" is quite encompassing as it expresses two paradigmatic issues on the identification of the purpose of Information Science, as a matter of fact, the purpose of all sciences: I -The conceptualization; II - The consensus.

Ever since Adam men have never ceased to name things and the rest of the time, to destroy them to see what they look like inside (2). Those gestures are given the name of lovely metaphors, theory and practice. Or analysis and synthesis.

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It is impossible to master something by the name given to this something, although since Adam, passing through the ancient Greeks and the Medieval priests, then through British empiricism and French rationalism until Kantian synthesis is reached in the 18th Century, it has always been thought that to master something was to describe this something in its constitutive parts.

Such description varies historically: classical metaphysics (Greek and Medieval) rise a major dispute on the name of things - the dispute of the Universalists - while Modernity launched by Descartes and consolidated by Kant, introduced a new manner of naming based upon an experimental concept.

Hegel transformed all this when attributing dominion of the thing not to the name of all things in the world but on how names are related with themselves. For Hegel, concept is relation. That is: a table to be a table must reject itself as table, for at this moment of denial the table might perceive the chair and only then re(build) itself as table. The principle of identity had forever been the foundation of conceptualization, until Hegel, when this principle of identity was replaced by the principle of contradiction. The table **is and is not** at the same time and under the same semblance what it is.

PART I - CONCEPTUALIZATION

It is important to conceptualize the world. Man speaks. When I say man I am already conceptualizing. Therefore, concept is worded by the mouth of the universal: specific is worded by the mouth of the universal. However, the universal is only important for analysis, classification, division and comparison. Dominion of the object will only be total upon return of the universal to the specific because, as Marx has proven already (3), the general serves only not to let differences go unnoticed. It is the specific which explains why only within it the universals become manifest. The universals in turn can only be understood by means of the specifics.

The interplay universal-specific must then be historized for one as well as the other are historical, that is, they come into being

in a definitive time and space and not at any time and space. As Marx explains, **even the more generic categories are historical**, that is to say, they are categories produced by the social relationships of each historical moment.

The ancient Greek and the medieval scholastics studied conceptualization and the interplay universal-specific because theirs was a stage of rational discovery of the world; a first stage of systemization of knowledge. Forever until the Middle Ages, the attained knowledge did not intend to create new knowledge. For this historical stage the identified and descriptive knowledge of the world sufficed. To name things was sufficient (4).

However, the 19th Century social and economic conditions, among others, enabled Hegel to free the name of things from their constraining strait jacket. Concept progressed from the primitive stage of **identification** to that of **production**: for Hegel, veracity of a concept is only possible if its production is questioned. The notion of production introduces something entirely new which is the **turning out the process**, the thing advancing, that is the progress of the concept. Names are no longer fixed 'labels', but the proper 'historical' relationship of names and things with themselves.

During the same century another rupture is to be stressed, this time insurmountable until today, that is Marx' surpass of the Hegelian reasoning. According to Marx, Hegel believed that reasoning "creates" reality. Reasoning does not create reality, it merely reproduces it. But it does so in the only possible way: by reason. It is not by smell. Nor through the skin. Indeed it is by reasoning.

Two thousand years of philosophy are thus displayed. From Plato to Hegel we have a philosophical idealism based upon the fact that reasoning creates reality (even the reasoning resulting from empiric-experimental research).

Marxist revolution is materialistic for it believes in the **logical and historical** prevalence of practice. Marx' concept of praxis (union of theory to practice) overwhelms modern scientism and its notion of 'experimental research' for it does not separate moral or estetic aspects when undertaking the cognitive construction of the world.

Conceptualization and Information Science

During its thirty years of existence Information Science has been defined in thousands of ways. It is sufficient to enunciate the key concept of the famous Georgian Institute of Technology meeting, in 1968 (5).

Such definition was followed by many others, always intending to allviate or to exhaust. In the Information Science literature numberless pages have been written in an effort to encompass all its phenomena. Schrader's endeavor is just a few more of such pages. Many others shall follow, without bringing about a substantial change in the original definition.

Moreover, such definition can always be recognized in the more current ones. Thus, a circle is drawn. Why? Because dominion of the thing will not result from 1) exhaustion of definitions nor by 2) listing the more precise terms, neither 3) by methodological fastidiousness and not by 4) the interdisciplinarity comprised in the original concept; as Schrader endeavoured to do.

Let us envisage each of these endeavours.

1) Exhaustion of definitions

So called bibliographic revisions are common in the Information Science. Schrader's text is an example of this. Every bibliographic revision is an updating and systematization effort carried out by an author to facilitate the reader's understanding. Bibliographic revision, therefore, produces a spatial - temporal compression and historically emerges as a literary style, by means of the modernization of social relations in their pathological aspect of super (production). Super (production) pursues the repetitive dynamics of the content's dilution in the 'industrial' production of knowledge. Production of knowledge, according to the industrial logic and especially after the Second World War, is mass production. Not only merchandise is mass produced but so is knowledge, as were it a merchandise. Therefore, more of the same. To revise produced knowledge is not to produce more knowledge but only to contribute to the dynamics of the gyrating inertia. As a result we have a spiralled production of knowledge, adequate to the geometry of the circle. Any point within the circle can

be the beginning or the end. It is an inert geometry for the end is instantly the beginning and vice-versus. Thus, bibliographic revisions cannot attain syntheses that differ from the revised ones. The Information Science resorts to bibliographic reviews to mock the exact sciences, more often than all the remaining social sciences, such as history, anthropology and philosophy itself. A philosopher cannot proceed to a bibliographic review of a philosophical concept practiced in the last 100 or 10 years, because philosophy does not warrant conceptual apposition, solely radical ruptures. The same is found in the social sciences. Where we find commented bibliographies quite different from the reviews. Revisions are normal excerpts or summaries of formerly adopted opinions by the revised authors. That is why, Schrader's revision remains in bondage of all the reviewed authors; the author is prey to all he intends to criticize, that is, the circling of the information discourses.

2) Listing of the more precise terms

In Information Science quotation of expressive terms like those of the controlled vocabularies such as thesaurus or subject classification, decimal or by facets, is quite frequent.

Schrader's list (6) is innovative in the sense that it brings a librarian methodology to the Information Science but it is retrograde because it falls into medieval Universalist conceptualizations. The list of terms is based upon two intentions:

a) **quantification**, by which the commonest terms are assembled to become real concepts. Such procedure is the basis of automatic classification. Again, quantification does not define the content. Hegel, for example, instituted the dialectic method however the word dialectic practically does not appear in the **Phenomenology of the Spirit**;

b) **development** by which the object is fragmented into its constitutive parts. It is the disassembly of the object. Analysis is considered synthesis leading to a joined presentation of the terms. Thus, synthesis is achieved by gluing or sewing the parts that analysis has brought forth. The core of the object is lost in the effort to identify its parts.

The list of terms presented by Schrader (7) precisely points out the process of evaporation of the object which Schrader recog-

nizes as "confusion and ambiguity among writers, in the first place, and therefore lack of consensus"(8). We agree with Schrader that terms are divergent from a formal point of view. But, never from a substantive point of view; a set of activities becomes an art as much as a practical necessity encompassing techniques and technologies, being conjointly profession, art, science and technology. All fields of knowledge are thus at the same time, profession, art, science and technology (a simultaneity rejected by Schrader). To avoid yielding to the arts esthetic- expressive intuition or to the explicative cognition of sciences, neither to the liberalism of professions, Information Science has been located in Mostafa (9) as "**Labor**" **socially conditioned**, in which the Marxist category of **labor** affords a better explanation. Not because it is the most used word in literature. On the contrary, it was, then used for the first time because it permitted to break with the previous formal connotations. But, unquestionably, in essence Information Science is at the same time, science, art, technology and profession. As much as medicine or engineering, for example.

Domination of a field of knowledge, will therefore not result from the quantification of terms aiming at a consensus nor from the development of terms pertaining to the analysis of the object. Synthesis is not achieved through what is common to the parts. It is achieved through the organic relationship of the parts which does not warrant interrupting the division. Progress of the concept is achieved by the rupture of the general with the specific. The anecdotic conceptual architectures of the Information Science are not only restricted to the domains analyzed by Schrader. Information Science as a whole is plunged into the barren conceptualization of every one of its parts. For instance, in the survey of users, LINE divides by four the users' information requirements (10): demand, requirement, usage and desire. ROBERTS (11) considers four a small number and doubles to eight LINE's demand, which becomes: Total Potential Demand, Potential Demand of the Group, Expressed Demand, Manifested Demand, Latent Demand, Attended Demand and Not Attended Demand. The functional paradigms of this barren Information Science have been recently discussed twice (12 and 13).

Albuquerque's statement (14) becomes more understandable now; we shall reproduce it in its entirety to clarify the second point of the research process referring to the object's functioning

(furthermore it is one of the most elegant methodological texts in the Portuguese language):

"Two different procedures are the only means granted men to attain dominion of reality . Since Adam, men do not cease to name things, and the rest of the time to destroy them to see what they look like inside...But dominion - exception made to that which is illusion, proportioned by the ownership of a thing's name - only emerges, if after destruction, one begins to reassemble the object. Destroy, a practice that aims at domination, therefore appears as disassembly. To name each piece, will only be useful if the intention is to classify, as such facilitating the assembly...Once assembled, it remains to be seen if it works. Therefore, dominion emerges as re(construction) of a concrete wholeness, which resets the previous disassembly into its constitutive parts. In the sequence of practice , the illusion that gluing of all the parts of the whole does reassemble it, must be avoided. Indeed it is required to assemble and thus avoid the ad hoc added parts as well as later amends. Furthermore, the illusion of restoration must be avoided: there is always transformation, production of a new object, thereafter mastered by the order of things as well as by the order of reasoning".

Let us take a toy; when disassembling a doll we name each of the parts: arms, legs, feet. When we want to assemble the parts, their name is no longer an orienting principle, for now, the functioning of the parts must be known. If not, we run the risk of exchanging legs for arms. The same takes place in the disassembly and assembly of an area of knowledge; operation of the Information Science or of any other science can only be undertaken within specific contexts. The same science is not applicable to all regions, sites or lands. From the universal, it shall only maintain the rationalizing procedures , as is the case of all sciences. These are the local requirements (geographical and historical), which will determine the technical and social procedures of the Information Science.

3) Methodological fastidiousness

Schrader claims for more methodological rigor to attain dominion of the Information Science. Such rigor would be offered by philosophy understood as method. Therefore, the author mentions logic as if it were philosophy itself. According to the author "techniques" of philosophical research - logical and conceptual analysis - are

required (15). He thus, confuses method with the area and with the object of this area. In philosophy Schrader is seeking a method for the Information Science. Others seek it in psychology. Some in sociology. Or in philology, mistaking it for lexicography. As such, epistemic areas, methods and objects are mixed up and reach Information Science in a confused manner. Thus, Schrader confounds theory and practice with method. As the concepts uttered to date, result from the practice of research or services he proposes the derivation of concepts based upon the combination of theory and practice. Behind organizational methods and planning rests a functionalist philosophy; behind the quantitative methods there is a positivistic philosophy; behind the qualitative methods there is a phenomenological philosophy, etc. However, it is inadmissible to confound method and philosophy. That is to say, it is inadmissible to confound both theory/practice with method. Theory and practice are two universals into which any philosophy might fit. Joined as **praxis** or separated as **idealisms**.

To date, Information Science does not have its own method because it does not have an object. That is not a liability. Moreover, it is an asset. Because it is by **praxis** that a method and an object are constructed. not by the mind, the concept, the logic, the reasoning or by philosophy, psychology, sociology or philology. Support from these disciplines can only be given **post-factum**, subsequently. Not **ex-anti**, as we have been doing along the 30 years of Information Science, within a temporal inversion and within a methodological-philosophical confusion.

4) Interdisciplinarity

Positivism has divided knowledge in disciplines or imperious areas which should circumscribe, with no ambiguities, their objects and methods which would thus become irreducible among themselves. In the last 30 years the positivistic paradigm begins to decay and an interdisciplinary project takes its place (16). However, as the interdisciplinary project is also being approached in an analytic and not synthetic way, what we perceive is once more the apposition of concepts. Precisely as is the case with methods and within them the apposition of concepts. Interdisciplinarity is not attained by mixing areas of knowledge (philosophy, philology, etc.): this mixture expresses a reality which, being singular, radically emerges, notwithstanding the disconnecting efforts of the particular sciences.

PART II - THE CONSENSUS

For Schrader, "without a sensible identity, progress in conceptualization is impeded, and so knowledge cannot advance". The author then proposes as solution for the conceptualization of Information Science, the systematization of linguistic terms which would lead to the knowledge of the area therefore to its dominion. The author considers that for this systemization the category of **consensus** is fundamental (17). However the quest for consensus is the quest for the universal. There are two ways to attain the universal: by the specifics as do the empirical-analytical inductors or within the universal itself, by-passing the specifics as Schrader proposes.

Consensus as historical category was first developed by a) Greek idealism; then by medieval nominalism and retrieved by b) the 19th Century positivism.

a) Greek realism and medieval nominalism

Plato comprehends the essence of the thing as being its idea or concept, whereas, conversely, Aristotle condemns Platonic duality between the sensitive world and the intelligible world setting the essence of the being in the "res", that is, in the thing itself. As for Aristotle the thing is defined by its concept, Aristotelianism is a return to Platonism. Such division between reasoning and thought was interpreted in the Middle Ages as the "dispute of the Universals"(18). In this question, the sole innovation brought forth by the Middle Ages was to displace the "site" in which the concept is located: in the Lower Middle Ages, truth of the concept was located in the mind of God, whereas in the Upper Middle Ages, time period when this polemic was developed, the *conceptus menti* was displaced towards the mind of men (among the Greek concept was located in the cosmos oriented by destiny or moires, because neither the Jewish - Christian God nor man in its interiority existed for the Greeks). The medieval dispute of the universals entails a change in the relation of men with God and with nature. Not per chance: were the new trade bourgeois relations being conceived in the ambit of a movement later called Renaissance Humanism where man is turned into the center of the world.

Thus, when Schrader claims for greater terminological precision to construct a domain of knowledge, he places himself in the classical Greek versant which extracts the truth from the consensus

exposed by the universal. A position differing from the medieval one only by displacing the theological towards human rationality.

As such we can state that the problem of the universals is just one: is truth to be sought for in the concept or in the notion of the thing. As concept is denotative and never connotative, the issue lies in how to express truth using an objective visualization of the words.

The nominalistic vision does not admit connotations, only denotative propositions. Thence the impossibility to find consensus even in words, for, even in definitions, words connote. Connotation implies "meanings", be it associated to words, be it to the absence of meanings. A list of denotative words striving for full coincidence between reasoning and thought is impossible, due to the connotations inherent to words.

PART III - DOMAIN AS PARADIGM VERSUS DOMAIN AS PRAGMATICS

Schrader's main request in the article we have analyzed; that domain of the Information Science must and can be attained by means of a conceptualization and consensus building process, seem preposterous. Dominion of a field of action is not achieved by terminological rigor (that is why all thesauruses and vocabularies have to be periodically updated).

Dominion of a field of actions is socially defined by the interaction (always questioned and negotiated) between different action fields. A field of action **closes** when the issue is to define it terminologically and **opens** when considered in the disputing social practices. The concept of informational action field (IAF) held in the masters presentation of the Brazilian MARCHIORI (19) is therefore much richer and more concrete than dominion of the field through conceptualization and consensus. An honorable mention must be made on the supervisor of this presentation who, instead of proposing "homogenizing paradigms" for the informational action fields proposed the pragmatism of the communicative action according to Jurgem Habermas' **Theory of Communicative Action** (20).

Habermas theory has been enthusiastically discussed for the last 10 years all over the world, because it approaches social actions under a real interdisciplinary focus, in which sociology (in charge of social actions) and philology (responsible for the language) fuse in a **communicative action** , a linguistically mediated action. As Information Science operates with texts or speeches, significance of the communicative action is obvious.

Such theory draws a pragmatism as it comprehends the language as social inter(action) therefore as a "programmed" always mediated in the negotiation of an agreement, in which consensus or understanding is not subject to a structuralizing "theory" of the language but to an universal pragmatism".

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ABSTRACT:

MOSTAFA, S. C. & MURGUIA, E. Reply to Alvin Schrader on the Domains of the Information Science. **Trans-in-formação**, 5 91,2,3): -, 1993.

It discusses Fallacies in conceptualization of Information Science concluding that the dominion of a field of action is not achieved by terminological rigor or conceptualization enclavour.

Key-words: Conceptualization. Theory of Information Science.