Eduardo Ismael Murguia - Universidade Federal Fluminense, Brazil
Rodrigo de Sales - Universidade Federal Fluminense, Brazil

CNPq’s Knowledge Area Table as a Knowledge and Power Apparatus

Abstract
This work is a first reflection on what we understand as knowledge organization based on politics. To do so, we resorted to Foucault’s conceptions of politics, state and governance, aiming to analyze an instrument that guides knowledge organization in Brazil’s research and academic fields. The current version, updated in 1984 by the CNPq (Conselho Nacional de Desenvolvimento Científico e Tecnológico – National Council for Scientific and Technological Development), of the Knowledge Area Table (KAT) represents and establishes investigation in the scientific and technologic fields. We highlight that the position of Information Science in such Table was a product of national and international reflections in the 1980s on building a scientific subject. Information Science (IS) is placed higher than Information Theory, Library Science and Archival Science in the Table’s hierarchy. This led to a demand to promote interdisciplinarity which, although specific to certain periods, made the discipline acceptable.

Introduction
This work is an initial reflection aimed at expressing our interests as researchers in the fields of epistemology and knowledge organization. To do so, we intend to discuss, and analyze the classification of knowledge adopted by CNPq and the place of Library Science, Archival Science and Information Science in it. Such tables have been used to mark and map the different professions in relation to different kinds of knowledge.

As mentioned by Olsson (2010), only later did Library Science and Information Science (LSIS) researchers adopt Foucault’s ideas. And such ideas were rarely used, if ever, compared to the rest of the social sciences. Since the 1990s, however, Library Science and Information Science researchers have used Foucault as an instrument to critically analyze the institutions and research, and as a conceptual reference to understand informational behavior. Another of Foucault’s features which is crucial to LSIS’s studies is exploring the relation between knowledge and power. Foucault believed power and knowledge should not be seen as separate things, but as products of the same social process.

We must admit that power produces knowledge (and not simply benefits it because it serves power, or applies it because it is useful); power and knowledge are directly implied; there are no power relations without a correlation in the field of knowledge, nor knowledge that does not assume and constitute power relations at the same time (Foucault, 2005 b, p. 27).

What does an answer on what power is refer to? Foucault (2005 a) prefers to divert the question to observe what is at stake, to its mechanisms, its effects, these different power apparatuses and how they are wielded in society’s different fields. Foucault believes power is neither given nor exchanged, nor taken, but it only exists and is exercised in action; it is a relation of power.

I believe power must be analyze as something that flows, rather as something that works in chain. It is never here or there, never in someone’s hand, never owned like wealth or a product. Power works. Power operates in a network, and within that network, not only people circulate, they are also in a position in which they can be subject to that power or wield it. They are never a passive target or complier with power. In other words, power flows among people, it is not applied to them (Foucault, 2005 a, p. 35).

The kinds of knowledge that first appeared during the classical period – the 17th century, as mentioned by Foucault (1992), were crucial to observation and classification. The new way to observe established is more important than the desire for knowledge, and that will
be the link between words and speech. The showcase of things, the theatrical way in which objects are displayed, will be replaced by catalogues, the ruling of objects into squares linked by other kinds of relations, i.e., classifications. This is nothing short of a new way of naming what can be seen.

We believe classifying no longer refers to linking objects based on displays, but in organizing its concepts, which will manifest itself in ordering relations designed to equip kinds of knowledge with instruments. In this way, separating the different kinds of knowledge in the Classic period meant the detachment of words and things. Thus, a kind of knowledge is established based on a new way of understanding, the new organizing perspective of modern rationality.

*Discipline and Punish* (2005b) is one of Foucault’s attempts to codify and materialize (in the sense of physical completeness) the knowledge-power relationships. In this way, he turns to places where power is socially wielded: institutions. In the order established in the 17th and 18th centuries, Foucault elects discipline as society’s elaborating apparatus. Discipline means distribution, control, organization and the composition of power.

Given such premises, we select the university as the institution/place for our investigation. Foucault (2005a) believed science did not exist before the 18th century. There were different types of science, knowledge and philosophy (which was the system that organized and communicated various types of knowledge). Disciplines appeared in the 18th century, embedded in the culture called “science.” In that century, the progress of reason made the University necessary and it took on the role of selecting different types of knowledge. Although universities established a kind of monopoly, as an institutional field, they also had the right to exclude and disqualify knowledge that was not formed within them.

**Government Actions for Science and Research: the Creation of Capes and CNPq**

Tarapanoff (1993) says Brazilian science was built by sporadic events throughout its history up to the 20th century. Government intervention in the sector led to the creation, in the 19th century, for example, of the Escola de Minas de Ouro Preto, the Instituto Agronômico de Campinas, the Instituto Butantã de São Paulo and to the Instituto Oswaldo Cruz do Rio de Janeiro. These isolated interventions were later replaced by centralized planning. The year of 1951 saw the fruition of the Vargas’s policies which directly met the need for education capable of dealing with the technological innovations needed to improve productivity in several sectors. There was continuity in the policies that established public education, which started in 1930 with the creation of the Education and Health Ministry and the Commission to promote the National Campaign for the Improvement of Higher Education Staff, which led to the creation of the Campaign for the Improvement of Higher Education Staff (CAPES) in 1951. The implementation of the Programa Universitário in 1953 was a result of this. In 1961, CAPES started reporting directly to the president of the republic; however since 1964 CAPES reports to the Ministry of Education and Culture.

Another important development was the creation of the Conselho Nacional de Pesquisa (CNPq- National Council for Research). The CNPq’s goal was to promote and stimulate scientific and technological investigation in any field of knowledge by supporting research and collaboration with other Brazilian or foreign institutions, and organizing and supporting courses to train specialized researchers and technicians. CNPq also proposed to

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1 Getúlio Vargas governed Brazil between 1930 and 1945 and from 1951 to 1954. The policies mentioned refer to his second administration.
2 Currently National Council for Scientific and Technological Development.
establish relations with national and foreign institutions to exchange technical and scientific documents.

All these developments during the second Getúlio Vargas administration suggest a clear intention of the state to create conditions supportive of scientific research in the form of necessary institutional mechanisms.

I believe the word "governmentality" means a set of institutions, procedures, analyses and reflections, as well as calculation and tactics that allow wielding such specific, although very complex form of power aimed at the people, having political economy as its first type of knowledge, and safety apparatuses as its essential technical instrument. I also understand "governability" as the tendency, the power line in the entire West which has been long conducting the predominance of that kind of power which we can say "rules" over all others. (Foucault, 2009, p. 143-4).

By centralizing funding of educational and research activities, the government also established some control over the kind of research and the disciplines to be supported by the state. Such institutions became the government’s power apparatuses by directing, classifying and planning research and its use nationwide, based on the idea of development.

**Classification as a Validation Apparatus within Brazilian Scientific Production**

In a revealing article, "What is an Apparatus?", Agamben (2009) explains Foucault’s concept. Foucault himself does not set out its meaning explicitly, although he commented on it briefly:

- I believe an apparatus is a kind of formation whose main purpose was to emerge at a certain moment. The apparatus has a dominant strategic function. The apparatus is always part of a power game.
- What I call an apparatus is larger than episteme. Or episteme, I would say, is an essentially discursive apparatus, unlike the apparatus, that is discursive and non-discursive (Agamben, 2009).

Foucault takes sides in a crucial issue, which is also his own problem: the relations between individuals as living beings and their historic element. By historic element I mean a set of institutions, of the processes of subject constitution, and rules that establish power relations. Foucault’s final goal, however, is neither to reconcile such elements nor to emphasize their conflict. He researches the concrete ways in which statements and apparatuses act on power relations, mechanisms and games (AGAMBEN, 2009).

Foucault repeatedly resorts to the etymological meaning of the word apparatus, highlighting its juridical, technological and military meanings, for which there is always the apparatus indicator, such as rules and orders aimed at causing an effect or confronting a situation that requires practical measures:

An absolutely heterogeneous set that includes discourse, institutions, architectonic facilities, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions; in short, all that is said and also what isn’t said, such are the apparatus” elements. The apparatus itself is the network established among these elements (Agamben, 2009 p.29).

In this paper, we propose to investigate and interpret CNPq’s classification table of knowledge areas as a validation apparatus. That does not mean it is the only one, because publications in scientific magazines, summits, curricula, statutes, etc. also are knowledge validation apparatuses. Like any apparatus, classification supports and is supported by the discourses that include it, thus objectifying itself in institutional relations.

We believe the classification tables that arose in the second half of the 19th century, among which we highlight Dewey’s Decimal Classification (DDC), were the first encyclopedic classification proposals based on pragmatic principles. That is, organizing types of knowledge around a decimal notation that can encompass the multiple associations and articulation of the various areas of knowledge. No longer an Aristotelian vision translated into rhetoric hierarchy, but a dynamic and modern effort to organize knowledge.
Unlike Dewey’s intentionality (in the sense of problem solving), Otlet and La Fontaine’s Universal Decimal Classification (UDC) aimed at concrete application. Otlet’s universal catalogue needed a structuring element capable of answering cognitive questions materialized in the combinations and manipulation of files in the universal catalogue, still under construction. Otlet’s new development however, was intended to solve another problem; building the bases of a new knowledge/action which was called Documentation to meet the information demand that science at the end of the 19th century and beginning of the 20th century required.

In short, we can understand the DDC as an *a priori* hierarchical effort of normalization which could structure encyclopedic knowledge within any bibliographic collection. In other words, an epistemological construction of a validation apparatus of the types of knowledge placed in proposed hierarchies. UDC, on the other hand, consists of an *a posteriori* effort, which, despite its better theoretical adaptation, emphasizes the validation of a new profession based on the construction of a new object/method.

In Brazil the CNPq was the first institution to establish a classification table called Knowledge Area Table (KAT) in 1976. This was modified in 1982 and 1984; the 1984 version is still in force. This is used by CAPES and other federal and state institutions, with minor changes. Its main goal is management and evaluation of direct public funding of education and research in Brazil. Thus, the difference between the KAT table and the two other tables mentioned above is its intentionality as a political apparatus of government decision-making.

The Knowledge Area Table of CNPq (KAT/CNPq) organizes and classifies the possible knowledge areas in the country in hierarchical levels, in order to manage and assess them. In the last two decades, there were many initiatives to restructure KAT, but the 1984 version is still in effect (SOUZA, 2011).

**Knowledge and Politics: IS’s Position in the KAT/CNPq**

Table 1 shows the divisions of Information Science according to the KAT/CNPq:

<table>
<thead>
<tr>
<th>Classification Level</th>
<th>Broad Area</th>
<th>Subarea</th>
<th>Specialization</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st level</td>
<td>6.00.00.00-7</td>
<td>Applied Social Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd level</td>
<td>6.07.00.00-9</td>
<td>Information Science</td>
<td></td>
<td></td>
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<tr>
<td>3rd level</td>
<td>6.07.01.00-5</td>
<td>Information Theory</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Library Science</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Archival Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4th level</td>
<td>6.07.01.01-3</td>
<td>General Theory of Information</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Classification Theory</td>
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<tr>
<td></td>
<td></td>
<td>Quantitative Methods. Library Science</td>
<td></td>
<td></td>
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<tr>
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<td></td>
<td>Information Retrieval Techniques</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Information Dissemination Procedures</td>
<td></td>
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</tbody>
</table>

Source: CNPq, 2012

Among the nine major areas defined by the KAT, Information Science (IS) is included as one of the 13 Applied Social Sciences sub-areas (Area 6). IS in turn branches out three ways: Information Theory, Library Science and Archival Science. Such specializations are
again divided into more specific areas. When the 1984 table was defined, regarding the IS area and its relations with Library Science, we notice that:

a) In the 1980s, when Lilley and Trice (1989) sketched out a history of IS, they identified two elements in its origin: 1) External forces such as the increase of scientific and technological reports after World War II, and the problems in organization and recovery deriving from these; the continuous increase in funds to promote documentation and organization of information and; some visionaries’ inspired thoughts; and 2) The increase and improvement of users’ services and the emergence of new technologies.

b) At the same time as Meadows (1987), Lilley and Trice proposed that the combination of Bush’s ideas of an artificial memory with Bradford’s ideas about refining and expanding Documentation’s scope, are, if not the origin of IS, at least the transition from Documentation to IS.

c) According to Lilley and Trice (1989), between 1945 and 1985, IS flourished, matured and absorbed documentation, threatening Library Science. Specialists say that IS is ready to join forces with Library Science in a new effort to supply information using the latest innovations in knowledge and technology.

It is clear that Lilley and Trice (1989) believe IS was already a ripe and an established field based on information theory and new technologies. Although Shera (1980) proposed that the term information was taken by the new professionals to differentiate from old Library Science and assert its academic superiority, in the 1980s IS already was a new science, establishing itself as a new discursive formation.

In 1988, Carol Couture, Jacques Ducharme and Jean-Yves Rousseau, wrote the groundbreaking article “L’archivistique a-t-elle trouvé son identité?” on the relationship between IS and Archival Science. This re-examines Archival Science’s traditional principles. The traditional view that Archival Science is an auxiliary science to History, a set of rules and methods aimed to make historical research easier, working as an analysis and critic of historical sources. Modern Archival Science, on the other hand, should focus on managing information, improving and making decision-making easier, increasing knowledge of culture and of organizational processes. Couture, Ducharme and Rousseau (1988) argue that Archival Science must have its place recognized by the society and for this it has to break free from its subordination to other disciplines and must have autonomy to choose alliances with other disciplines.

In the face of this, we would like to stress that, in the 1980s, Archival Science felt the urge to incorporate IS’s discourse, borrowing its objective for the reformulation of the concept of “organic information”.

We intend to set out the epistemological and professional tensions within which the KAT/CNPq was conceived. Although it was created shortly before the texts presented here, we infer that the debate on IS regarding its relations with related areas was an attempt to question the concrete consequences in the professional and academic areas. In that way, the KAT aimed to translate the Brazilian academic reflections on the subject to become a political apparatus to “cartographically” ordinate these correlative areas. We also would like to highlight that, in Brazil’s case, such reflections were based on the emphasis given to the studies of the area’s interdisciplinarity, although Saracevic (1996) helped to further the idea when he proposed IS’s appropriations and closer ties with other areas of knowledge. Some authors, however, like Fonseca (2005), believe that:

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The interdisciplinary relations with information science seem to be stronger in Brazil than abroad. The association with information science seems to be an evolution of the archival area in Brazil. It is worth questioning if this is not a “isolated interdisciplinarity,” established as a means to academic survival, given the devastating situation of national archival institutions, but the data shown here indicate that effective interdisciplinary relations between the areas have been built, considering how similar theses and
dissertations on Archival Science have been accepted in graduate studies programs in History, an area that has been traditionally considered kindred with Archival Science (Fonseca, 2005, p. 101).

Although Fonseca’s (2005) reflection refers exclusively to the field of Archival Science, it reflects the issues we are dealing with and which can be extended to Library Science. Fonseca moves away from her own original idea when she claims that the interdisciplinary relation between Archival Science and IS is due to the fact that graduate programs in IS accept Archival Science’s studies, unlike History’s resistance to doing so. Surprisingly, the thesis that aimed to demonstrate an interdisciplinary dialogue might unintentionally lead to an institutional, i.e. political conclusion.

Understanding the KAT/CNPq as a management and assessment instrument can be further improved if we analyze it also as an apparatus of knowledge validation, which occurs by means of the hierarchical relations established among the areas, sub-areas and specializations. In this way, we can observe that the KAT/CNPq, influenced by the discussions mentioned, sets IS as a sub-area (level 2) of Applied Social Sciences (level 1), which once again indicates its pragmatic nature. For that reason, we also understand, although it may seem awkward, how Information Theory and Library Science and Archival Sciences have equal importance (specialization – level 3). If we reach the fourth level (no classification), however, we can conclude that, due to the number of subjects presented, Library Science showed a far wider range of themes, possibly a reflex of the effective representation of areas when the table was drawn up. We can infer that there are two dynamic and complementary faces between IS’s hegemonic discourse reflected in the KAT/CNPq and the later rules that such reflex will impose on the future of the area’s intellectual and academic production. In other words, what is created as a consequence of a kind of discourse becomes material conditioning.

The table, as a validation apparatus, becomes a pragmatic instrument that guides future IS departments, receiving Library Science and Archival Science in Brazilian universities. We can thus conclude that in Brazil, there is a clear and established regulating and interventionist policy towards research and academic work. KAT/CNPq’s classifying relations establish hierarchy among the different areas of knowledge, leading to the control of scientific production and allocation of resources. In this way, KAT/CNPq consists of a power instrument as it rules, by directing the State’s actions on Brazil’s scientific and technological knowledge. The position of IS, Library Science and Archival Science in the KAT/CNPq, despite its current obsolescence, reflects theoretical tendencies of the 1980s, and still fulfills its role by determining those areas’ scientific production and professionalization.

References


