

**Analyzing an aspect of the inaugural lectures of the Paris Museum of Natural History:  
An appropriate concept of representation.**

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This paper is a sight of a research based on a corpus of hitherto unexploited texts, the inaugural lectures from the Paris Museum of Natural History. Those texts bring to light interesting aspects for social epistemology. Since the abstract submission, some aspects of the research drive it in a little different direction. So, to include those aspects in this paper, I changed the parts' organisation of the presentation.

Considering this central French institution of researches and teaching as a scientific community, the study focuses on the period from 1869 to 1979. During this period, each newly appointed professor is asked to perform a formal opening lecture. Given to an audience composed by institutional representatives, colleagues and friends, this lecture is a symbolic way to usher the professor into his new function: the inaugural lecture is one of the rituals of the "museum community". At the museum, this type of discourse is not so strictly defined that one might think. Instead, the newly appointed is quite free. The main theme is the history of the chair and the homage to the predecessor is recommended but, there isn't any real codified frame.

To illustrate this research, I have chosen the example of the Paleontology chair, in the period from 1873 to 1956, thanks to the three texts we have. The inaugural lectures of:

- Albert Gaudry, 1873
- Marcellin Boule, 1904
- Jean-Pierre Lehman, 1956.

In his inaugural lecture, recalling the history of the chair, the newly appointed reveals many personal points of view about:

- Paleontology: "*(Paleontologists have) the mission to consider the organized beings at their beginning and to follow them all through the geologic times, in order to try to understand the design which the Author of the world had pursued to produce and develop life.*"<sup>1</sup> (Gaudry, 1873)
- nature: "*because a design overcome nature's history and I had the trust that studying the paleontologic chains will help to understand this still mysterious design*"<sup>2</sup> (Gaudry, 1873)
- scientist: "*(he) must accept to sometimes left his "ivory tower" to run into the crowd the Truth torchlight*"<sup>3</sup> (Boule, 1904)
- rituals of the community : "*A devout habit which, as far as I'm concerned, I take care not to let lose, demands that the new professor devote his first lecture to his predecessor eulogy.*"<sup>4</sup> (Boule, 1904)
- evolution of the chair/ scientific choice of his predecessor : "*How is it possible that men so intellectually upright as d'Orbigny or d'Archiac have refused to be evolutionists?*"<sup>5</sup> (Jean-Pierre Lehman, in 1956)

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<sup>1</sup> Leçon inaugurale d'Albert Gaudry, in *La Revue Scientifique de la France et de l'Etranger*.

n°44 - 3 mai 1873, p. 1027 : « (...) la mission de considérer les êtres organisés à leur début et de les suivre à travers les temps géologiques, de manière à tâcher de comprendre le plan que l'Auteur du monde a suivi pour produire et développer la vie. »

<sup>2</sup> Leçon inaugurale d'Albert Gaudry, in *La Revue Scientifique de la France et de l'Etranger*.

n°44 - 3 mai 1873, p. 1031 : « un plan domine l'histoire de la nature et j'ai la confiance que l'étude des enchaînements paléontologiques aidera à comprendre ce plan encore mystérieux. »

<sup>3</sup> Leçon inaugurale de Marcellin Boule, in *La Revue Scientifique*. 1904, p. 683: « le savant doit savoir quitter de temps à autre sa « tour d'ivoire » pour promener dans la foule le flambeau de la vérité »

<sup>4</sup> Leçon inaugurale de Marcellin Boule, in *La Revue Scientifique*. 1904, p. 876 : « Une pieuse coutume, que je me garderai bien, pour ma part, de laisser perdre, veut que le nouveau professeur consacre sa première leçon à l'éloge de son prédécesseur. »

<sup>5</sup> Leçon inaugurale de J-P. Lehman, in *Bulletin du Muséum National d'Histoire Naturelle*, Deuxième série.

Tome XXIX. n°5, 1957, p. 370 : « Comment se fait-il donc que des hommes aussi intellectuellement honnêtes

The inaugural lecture circumstances and the relative freedom offer a great opportunity: study the newly appointed standing *as an individual person and as social member of a scientific community*.

The expressions he uses, the choice of the terms, the argumentation, gives us precious indications about individuals' points of view. In these elements of the lecture, the orator referred to components of a more or less conscious system of thoughts. So the first question of this research was: How to deal with those lectures' aspects?

But a second aspect had to be considered. As in his lecture, the newly appointed testify about some community rituals; As he presented those personal points of view without arguing to the members of his community in an official ceremony, we might admit that the other members of the community share most of them. So analyzing inaugural lectures would allow to identify some of the social aspects, which seem to rule behaviors in the community, which may drive scientific choices. ***It is a way to put back sciences, as human activities, in the sociability that holds them.*** Thus the second question was: How to distinguish the social aspects of the community?

Therefore, those questions lead to another one: How far the social aspect rules individual behaviors or individuals behaviors rules social aspects in the Museum scientific community? Recalling the history of Gaudry - his predecessor - Marcellin Boule (1904) propose a particular vision of the community:

*“ Do not forget, Gentlemen, at that time, Cuvier’s idea reign all over, the disciples of the Master had became, at their turn, real powers, and the fixity of species is a dogma which nobody can hit with impunity.”*<sup>6</sup>

Do we have to conclude that at the museum, more than individual rationality and scientific methods, the social fact determines the process of constructing knowledge? Does this mean that scientists of the period are *dependent* on social authority? But then, how can explain that, Gaudry, in the Cuvier’s ideas reign, had contributed to give to the Darwin’s evolutionist theory some of his main paleontologist basis?

As a result, the main problematic is to try to broad the places of social process and individual improvement in the scientific community of the museum. But how? Already used in many disciplines including science studies, sociology, cognitive psychology, history, and social psychology, the concept of “representation” seems to may be a helpful tool.

Developed according to many different perspectives, which can differ to the point of being opposed, the first step was to choose between the numerous “representation” concepts<sup>7</sup>. To do so, it was necessary to define the property of our object. Indeed, those aspects of the inaugural lectures have to be considered both as *mental process* and, so to speak, *social aspects, shared rules or points of view*. But the tool had to help also to answer to the main problematic about the place of social and individual process at the museum. So the other property to take into account was the systemic relationship established between the different

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que d’Orbigny ou d’Archiac aient refusé d’être évolutionnistes ? Je crois que l’on ne peut répondre à une telle question qu’en essayant de se mettre à leur place et à leur époque. »

<sup>6</sup> Leçon inaugurale de Marcellin Boule, in *La Revue Scientifique*. 1904, p. 679-680 : « N’oublions pas, Messieurs qu’à ce moment, les idées de Cuvier règnent partout, que les disciples du Maître sont devenus, à leur tour, de véritables puissances, que la notion de fixité des espèces est un dogme auquel on ne saurait toucher impunément. »

<sup>7</sup> Vidal, Julien ; Rateau, Patrick ; Moliner, Pascal *In* Blanc, Nathalie (dir.). *Le Concept de représentation en psychologie*. Paris : Inpress, 2006.

components. In order to keep to the concept of “representation” those properties, the cognitive sciences field soon appears as the way to choose.

But, as many research field, cognitive sciences are divided in many different approaches and models. Moreover, scientists of cognitive disciplines are actually engaged in a debate about the usefulness of the concept of “representation”. So to draw a suitable model of the concept for the case study, I have carefully read the arguments of the “eliminativists” – as they are called in cognitive sciences and philosophy of mind. In twenty minutes, it’s impossible to explain in details our choice. So I can just sum up my choice explaining that even if it is a real (and interesting) debate, I haven’t found in the eliminativism a reason to quid the approach or another approach as helpful as the representationism.

The representationism is the classical conception of cognitive approaches. First, I have hoped to find a representation concept in one of the cognitive disciplines, which would perfectly fit in this research. As written in the abstract, the aim wasn’t to add another new definition of the concept. But some problems have had to be faced. In the field of social psychology and cognitive psychology, the representationism had taken different forms. Choose the representation concept selected in the cognitive psychology forms would let our research without the social aspects. But to choose only the definition from the social psychology belong the individual improvement to social aspects. And this goes against a free resolution of our problematic. So, for the case study, the interesting aspects of the two definitions have been add.

So, for this research, the *representation* concept is define as:

- A mental process:
  - It links the object to a mental representation
  - It is not necessarily conscious and not necessarily accessible to the conscious<sup>8</sup>
  - It is a conversion process: so the representation is not a simple copy or a simple substitute, it’s a reconstruction of the environment.<sup>9</sup>
- A system - of representations:
  - Formed with data and beliefs, about ourselves or about the environment, it holds elements that could be seen as contradictory.
  - It has a central nucleus (belonging to Moscovici theory) sum up by Abric (1994)<sup>10</sup>: “*The central nucleus is a subset of the representation composed with one or few elements, and without it or with another one, the representation would be found without pattern or that would have a completely different meaning.*”
- As the result of the process and the global system, the representations are elaborated in a certain way for a certain use, can be describe, are not fixed image neither at community or individual level, nor in the time.<sup>11</sup>

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<sup>8</sup> Gallina, Jean-Marie. Les représentations mentales. Paris : Dunod, 2006. p.27

<sup>9</sup> Ib idem, p. 26

<sup>10</sup> « Le noyau central est un sous-ensemble de la représentation composé d’un ou de quelques éléments, dont l’absence déstructurerait la représentation ou lui donnerait une signification complètement différente. » Vidal, Julien, Rateau, Patrick, Moliner, Pascal *In* Blanc, Nathalie (dir.). *Le Concept de représentation en psychologie*. Paris : Inpress, 2006, p. 20

<sup>11</sup> Gallina, Jean-Marie. Op. Cit. p.22

This definition implies that:

- The representation of the same object by two persons is necessarily different.<sup>12</sup> (Representation is individual process)
- Even if representation has a cultural (and so collective) aspect and has common characteristics with representation build up by others, mental representation is necessarily subjective.<sup>13</sup>
- The common characteristics give to representation its social's symbolization function.
- As an interpretation system, the representations rule our relations with people in our environment so they drive and organise social communication and behaviours<sup>14</sup>.

What does this tool bring to the mains questions of this research?

At the individual level and dealing with those aspects of inaugural lectures, it warns to remember not to treat it as commonplace, to let it without analyze. Even if they are subjective points of view, they are interesting to understand the individual process of knowledge. For example, they can be traces of the "common thought" in the scientific individual organization of thoughts.

But, it recalls also that they are parts of an evolved, unfixed and not necessarily conscious system. So they must not be presented as rigid conceptions. So to speak, the representation of the newly appointed can't be reduced to the aspects founds in the inaugural lectures.

Still at the individual level, it gives a possible track answering to a naïve image of sciences activities. As a system, representation can hold aspects that seem contradictory. It is a helpful comprehension of these human activities: it leads to keep the explanation his local character.

At the community level, it warns to recall that even if representations seem to be shared, the same symbol do not cover exactly the same representation. It leads to be careful about the social representations of the community. So we will have to try to:

- Separate shared aspects of the representation from individual ones, in order not to give improper conclusions about the museum community's social representations.
- Discriminate the evolution's steps of the representations all through the period.

Moreover, this tool is helpful in intending to broad the place of social and individual process in the scientific community of the museum. The central nucleus theory, replacing the individual process in the social organization, leads to conclude that the answer is in the hierarchy of the elements of the system. For example, another track can explain the difference between d'Orbigny or d'Archiac and Gaudry: we can think that, for d'Orbigny and d'Archiac, the representation of authorities was part of the central nucleus, but that it was not the case for Gaudry. Either, considering the systemic relation between individual improvement and social process, the tool concept may help to show that, in the community representation, during Gaudry's period at the Museum, the authority principle was weaker than during d'Orbigny or d'Archiac period. This might be another possible track to broad the place of social and individual process in the scientific community of the museum.

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<sup>12</sup> Gallina, Jean-Marie. Op. Cit. p.27

<sup>13</sup> Ib idem

<sup>14</sup> Blanc, Nathalie (dir.). Op. Cit. p.14

As an epilogue, it has to be said that, of course, the tool concept will have to be improved, but it seems that this interdisciplinary approach could enrich the research and offers new tracks to explain the places of social process and individual improvement in a scientific community.