

The problematic of theorization in the human sciences

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Abstract

The theorization in the human sciences didn't know the same course of the sciences of Nature. Its course is hampered by epistemological obstacles and by the specificity of this field of research. We have noticed a decline in interest to the formulation of theories in human sciences. But what is certain (even in the sciences of nature) is that the advance of science has been possible only by formulating theories, as a coherent explanatory framework of the studied phenomenon. I will discuss the problems encountered with theorizing in the human sciences through the following axes:

- Sketch of theory definition
- Functions fulfilled by a theory
- The Problematic of Induction/Deduction in scientific research
- Overview of human sciences theorization
- **Keywords:** Theorization-theory-human sciences-paradigm-concept

Résumé

La théorisation en sciences humaines n'a pas et ne peut connaître le même parcours des sciences de la nature. Son parcours compose avec des obstacles épistémologiques inhérents à la spécificité même de ce champ de recherche. L'avancée des sciences n'étant possible qu'en formulant des théories comme cadre explicatif cohérent du phénomène étudié, nous essayerons de répondre aux questions suivantes, s'agissant des sciences humaines :

- *La théorisation en sciences humaines est-elle la même qu'en sciences de la nature ?*
- *Quelle est la particularité de la théorie en sciences humaines ?*
- *Quelles sont les perspectives de développement de la théorisation en sciences humaines ?*

Mots-clés : Théorisation-théorie-sciences humaines-paradigme-concept

المخلص

لم ينتهج التنظير في العلوم الإنسانية نفس المسار الذي انتهجه في علوم الطبيعة ؛ مسار تعثر بفعل المعرقات الإبيستمولوجية وبفعل خصوصية هذا الحقل العلمي .

وقد لاحظنا قلة الاهتمام بالقطب النظري. ولكن المؤكد أن تطور العلم لم يكن ممكناً إلا عبر صياغة نظريات ، كإطار تفسيري متجانس للظاهرة المدروسة .

في هذا المقال ، سأحاول الإجابة عن الأسئلة الآتية :

- هل التنظير في العلوم الإنسانية هو ذاته في علوم الطبيعة ؟
- ما هي خاصية النظرية في العلوم الإنسانية ؟
- ماهي آفاق تطوير التنظير في العلوم الإنسانية ؟
- الكلمات المفاتيح: التنظير- النظرية-العلوم الإنسانية-النموذج-المفهوم

1- Introduction

The scientific approach differs from other approaches in its ability to understand “why and how, and not a single knowledge of the existence or aesthetic or emotional resonance of the phenomenon” (Mucchielli, 2006, 85), where the researcher adopts a precise methodology with appropriate tools and references.

Whatever the goal, the approach to a phenomenon must be based on a set of methods, concepts and theories, in the deductive approaches. And based on this approach, is a sine qua non condition for the phenomenon studied to be apprehended and verifiable by all researchers, which gives the character of scientificity to the adopted approach.

We found that some researchers prefer empirical studies. On the other hand, others attach particular interest to the theoretical aspect.

The theory plays a central role in science, interpreting the observed phenomenon according to an explanatory model, putting the link between several variables that are logically related, in order to elaborate laws.

Theory highlights a set of concepts. The concepts are extracted from the stated hypotheses. But the determination of hypotheses has not always been a decisive step in scientific research.

The role of the hypothesis has been marginalized by some researchers such as Francis Bacon. Descartes reserved for it an important place in scientific research. According to Popper, a proposition or a scientific statement is a **falsifiable hypothesis**, that is, a hypothesis that may one day be refuted.

What is important to know is that each discipline has a logic of its own to approach a phenomenon, to observe it and to interpret it, through a variety of techniques, methods, theories and concepts.

As for the variables, it's not enough to determine them only, but they should be adequate and consistent with the concept they represent, hence the value of analysing them and ensuring that they are consistent with the concept.

This is not to say that we must compete with the disciplines of the sciences of nature, but each field of research has its own characteristics, but it

would also be wise to use the forms of expression of the sciences called “hard”.

The human sciences have always compared themselves to the research methods and results of the sciences of nature, which has had repercussions on the status of human sciences.

In human sciences, there are differences on the tools, methods, theories and concepts used. In addition, the complexity of human phenomena must be taken into account, that is to say that the multiplicity of dimensions to be considered when studying a phenomenon must be taken into account, and not based on the study of one dimension.

Through this article, I want to show:

- The difference between the elaboration of theory in the sciences of nature and human sciences
- The main functions fulfilled by the theory
- That the formulation of theories in the human sciences have their own logic of operation, observation and interpretation, based on the complexity of human phenomena and on the nature of their object.

And to do that, I will ask some questions that I will try to answer:

- How is the theory built?
- What is the status of theories in the human sciences?
- Have they evolved in this field?
- What are the prospects for the development of theorization in the human sciences?

To answer these questions, my article is divided into several axes:

- Sketch of theory definition
- Functions fulfilled by a theory
- The Problematic of Induction/Deduction in scientific research
- Exhibit the overview of human sciences theorization

2- Sketch of theory definition

The term **theory** is etymologically extracted from the latin word «Theoria» which relates contemplation (Dictionnaire de Philosophie, 1964, 300).

It is an explanatory system of the phenomenon studied, where we mean by system a correlating set of interconnected concepts. The notion of theory “carries in itself a highly hypothetical and speculative value; the theory of the big

bang, or even the theory of the strings, are far from confirmed, and may well be supplanted by other theories” (Vorms, 2013, 170-180).

This puts us in a dilemma: the theory is at the same time “the most accomplished and systematic form of scientific knowledge and this in essence can always be questioned” (Vorms, 2013, 170-180), which defines its provisional character. Its field of application is the observable world with the diversity of phenomenon to be studied. But it’s not a simple report of observations; it must be able to “predict and explain phenomenon” (Vorms, 2013, 170-180).

Therefore, it must be able to perform two functions: an explanatory function and a predictive function through a rigorous deduction.

The theorist must observe the regularity of the phenomenon studied, and not be content with scattered and isolated observations which can’t lead him to generalizations and to the formulation of laws, this leads him to proceed with the inductive approach. Also, as Duhem specifies that, “the transition to theory is the passage to the symbolic representation of empirical phenomenon and no longer simply to the statement of their regularity” (Vorms, 2013, 170-180), giving them a symbolic character linked to the connotations of each concept, without resorting to experience. Thus, the theorists of the structure of the DNA have represented and illustrated their theory according to this known model, giving rise to a theoretical activity.

The theory is also hypothetical in the sense that “it refers to entities and processes that are not observable and therefore hypothetical.” (Vorms, 2013, 174)

So, what is the difference between a scientific observation and an observation of every day? The difference lies in the explanation, by determining the “regular link” (Vorms, 2013, 174)

of variables related to the regularity of the phenomenon studied. In addition, a theoretical law must allow “in certain cases to predict new empirical phenomenon, never observed before.

Theories therefore owe their explicative power and predictive fruitfulness to their theoretical concepts.” (Vorms, 2013, 174) For Whitehead, all human thought (whether current

or scientific) is governed by a logical construction following specific generalizations, where each fact is interpreted according to an organization of thought.

Science is a long process of acquired and verified knowledge. It is the future of science to the extent that truth is always in the process of conquest.

As science is in constant research for the truth, it can’t grasp it in its entirety; this being valid also for the current thought.

But what differentiates current thinking from scientific thinking is that science always has a dual purpose: first, to produce a theory in accordance with experience and second, to explain, at least broadly, the common concepts of nature; this explanation consists in keeping these concepts in a scientific theory of harmonized thought”. (Schutz, 1987, 8)

This can only be achieved by going beyond common sense which is considered as an epistemological obstacle. Epistemologically, the function of theory is to be “the most powerful instrument of epistemological rupture.” (De Bruyne and al., 1974, 95)

Indeed, theory breaks with preconceptions and common sense, which hinder the process of elaboration of knowledge, by proposing an explanatory framework, providing meaning to a reality or a part of reality.

However, there is confusion that is established between theory and **paradigm**. The term paradigm belongs to Thomas Kuhn, who evokes the idea of considering the truth as the result of a cyclical process that passes imperatively through four phases.

The first phase is what Kuhn calls “**normal science**”.

“Normal” refers to “the common, customary over a period of time, for a community of specialists in a university or academic institution” (Rumelhard, 2005, 205-223), thus requiring a consensus in these two circles on the established paradigm. The status of normal science being established, doesn’t give way to a critical mind that is able to question some of its premises. At this stage, a community of scientists agrees on the facts to be explained, around a consensus that will be taken into consideration validating the established observations. At this level,

scientific knowledge will be structured around a paradigm, norms must be respected. Over time, the paradigm embraced by the scientific community calls into question the apprehended reality by bringing new facts that contradict it, by “**detecting anomalies**”.

In this second phase, scientists will have to choose between two solutions. Faced with new facts, they will either “attempt to confront them with what is known and generally accepted, or accept that the paradigm has anomalies”. (Bonneville and al., 2007, 22)

To challenge the pre-existing paradigm, the detected anomalies must be really large enough to challenge it. However, in the face of anomalies, scientists will react, with the possibility of resisting the detected anomalies that will challenge the pre-existing paradigm.

If these anomalies are numerous and call into question the foundations of the paradigm, called normal science will enter a new phase, that of “**crisis**”, where it is no longer the researcher’s knowledge and skills to deal with problems that are in question, but “the theory itself is being tested”. (Heselmans, in: Jacquemain, Frère, 2008, 90)

At this moment, “innovative scientists, often “open-minded”, will try to erect the foundations for a new model of explanation and understanding of reality” (Bonneville and al., 2007, 22), in order to rectify the pre-existing paradigm or replace it with a new one. It is the phase of the “**scientific revolution**” where a rupture will occur with the old paradigm that will be replaced by the new paradigm. To do so, it is necessary for the latter to define in a precise way the problems it wants to solve. In addition, there must be consensus among the vast majority of scientists on the validity of the new model. The paradigm circumscribes the field of research investigation and puts a brake on the anarchic use of concepts and assumptions. It is based on a critique of existing analyses, by identifying its main gaps. According to Robert K. Merton in his model of qualitative analysis in sociology¹, the paradigms present an interpretation of the phenomenon studied, fulfilling five functions.

First, paradigms “have an editorial function” (Merton, 1997, 18), which must be synthesized, in a short form, highlighting the concepts that explain the phenomenon studied. This brevity in presenting concepts plays an important role in that it “greatly facilitates the self-correction of successive interpretations, a result that is hard to achieve when concepts are dispersed and drowned in a discursive exposition.” (Merton, 1997, 18)

The second function of paradigms is “the explicit formulation of analytical paradigms which reduces the risk of inadvertently admitting hidden concepts and postulates.” (Merton, 1997, 18)

Indeed, concepts and postulates must be formulated in an explicit way. As for the third function of paradigms, it allows “to enrich the background of theoretical interpretations”. (Merton, 1997, 18) It is on the basis of the paradigm that interpretations are built, relating to new concepts and postulates, challenging previous interpretations, on the basis of new established observations.

We arrive at the fourth paradigm function, which consists of going beyond the description function and replace it with that of analysis function, by “suggesting a systematic board of concepts that seem important” (Merton, 1997, 18), raising a rigour on the part of the researcher that must be aware of the extent and gravity of the problems he may face.

Finally, the fifth function fulfilled by paradigms is specified by their contribution to “the coding of qualitative analysis method with a logical rigor, if not empirical, rigour similar to that of quantitative analysis.” (Merton, 1997, 18) As such, the researcher is required to move away from intuitive descriptions, and must be able to identify standard operations that can be followed by other researchers.

Paradigms are referred to as miniature theories, and therefore the difference lies in the degree of their generalization. Indeed, the proposals of a paradigm are more pointed and specific, while as those of a theory are larger.

So, it turns out that theory is at a more general level than the paradigm. The major difference

between a theory and a paradigm – both explanatory models – lies in the extent.

3-Functions fulfilled by a theory:

It should be noted that there is a relation between theory and empirical research, where one interacts with the other; they are not contradictory entities. Certainly, the role of empirical research is to test the hypotheses of the adopted theory. However, it turns out that this position gives a passive aspect to the theory, which on the contrary, has an active role consisting of performing four major functions.

-Serendipity:

In empirical research, the researcher may be confronted with an unexpected reality, which will arouse his curiosity, that is, it will be aberrant, contradicting itself with the adopted theory and established facts, leading to “a new theory or extension of theory”. (Merton, 1997, 43-44)

In addition, the discovered fact must be of paramount importance to the extent that it “must influence the general theory.” (Merton, 1997, 44)

There are phenomena that have always existed, but it has sufficed for example to Newton who saw in the falling bodies data that allowed him to establish the theory of gravitation, where the latter is perceived as a force responsible for the fall of the bodies and the movement of the celestial bodies.

So, a discovery being unexpected, surprising and capital, awakening the curiosity of the researcher by launching him into the path of a new hypothesis, is what defines **Serendipity** which “assumes an educated mind to unexpected discovery” (Châtel, 2013, 35-39), which will allow the theory to expand.

- Theory remodelling:

When a researcher makes observations, he must admit beforehand that he can go against certain details that are of major importance. Indeed, certain facts will seem useless to him, hence their overtaking. And at this stage, he will understand that the explanation he presents is insufficient, and there appears then the “need (...) to change the statement of the schema. This leads us to introduce into the schema variables that have not been included systematically.” (Merton, 1997, 47)

What will lead to the **remodeling of the theory** is the observation of facts that were previously

not taken into account, invoking the need to introduce new variables.

-Theoretical reorientation:

Techniques play a role in **theoretical reorientation**, as they “open up new horizons of research, and hence theory.” (Merton, 1997, 52)

Take the case of the “panel” technique, which aims to “study the changes of opinions, attitudes, behaviour”. (Grawitz, 2001, 759)

This involves conducting repetitive questionnaires and interviews on the changes and their causes in order to “draw generalizable conclusions.” (Grawitz, 2001, 760)

The remarks drawn are enriched by the field, and will create a panoply of new data, but “often impossible to obtain, suggest new hypotheses” (Merton, 1997, 53), and this is being possible only by the use of techniques well adapted to the nature of the research, its objectives and the nature of the data to be collected, which will give new orientation to theoretical concerns.

- Clarification of concepts:

Theory highlights a set of concepts. It is through concepts, that variables are determined, guiding our observations. In a theory or paradigm, there must be a significant link between the variables that relate to each other.

But what is the nature of these concepts? What is the link between their variable? And what is their role and contribution to building a theory or paradigm? A **concept** is an abstract representation of reality. It has certain properties that distinguish it from other concepts and its use in everyday life, thus rejecting other properties that make the particularity of other concepts, or even that of the same concept used as a word of the common language or by different disciplines, obviously not leading to the same explanation of the phenomenon studied.

Even more so, a concept can have different connotations, depending on the use that each researcher grants him in the same field of research.

4- The Problematic of Induction/Deduction in scientific research:

In order to clarify this point, I will discuss the principles of the two processes used for the acquisition of scientific knowledge, namely: induction and deduction, where the adoption of one of the two

approaches is not so simple. Also, I will discuss the relationship they establish with the construction or verification of a theory.

We know that there are debates in all disciplines about “the creation and use of theory and the degree to which starting from data (induction) or with a hypothesis (deduction) are more useful for knowledge production.” (Collins, and al., 2018, 1–10)

Induction is the approach taken to move from the particular to the general. It starts from observations to arrive at establishing an interpretative model, laws, that is a theory. It makes it possible to formulate new theories.

On the other hand, **deduction** is the approach used to move to the individual, through general observations. So, primacy is given to observation, to experience, to the theoretical framework.

Nevertheless, some observations are not enough; a sufficient number of observations must be made in different circumstances. Here, the **tests of scientificity** recommended by Popper take place. In “**The Logic of Scientific Discovery**”, Popper assesses the methods of the empirical sciences, the sciences studying “the real world”, that of “our experience”, refuting the thesis of induction, demonstrating the difficulty of making laws based on singular statements, as numerous as they are, and posing the problem of the justification of inductive inferences.

And the deduction is the approach that puts theories to the test, which, according to Popper’s schematic, will go through four stages.

The first step consists of “the logical comparison of the conclusions between them, by which we feel the internal coherence of the system”. (Popper, 1973, 29)

In the second step, "the research for the logical form of the theory"(Popper, 1973, 29) is carried out in order to clarify the characteristics of the latest puts to the test.

Third, there is a comparison “from theory to other theories” (Popper, 1973, 29) to see if it can withstand the tests it undergoes.

In the fourth step, the theory in question is “tested by making empirical applications of conclusions that can be drawn from them”. (Popper, 1973, 29)

This last test aims at the discovery of the impact of the requirements of the practice. Popper specifies that the theories are not verifiable, but can be "corroborated".

So, a "**corroborated theory**", showing its ability is a theory which "resist systematic and rigorous tests and what another one does not replace it advantageously in the course of the scientific progress". (Popper, 1973, 29) Indeed, a theory can be falsified, by the contribution of new experiences, showing that it is not static, and that it is in fact in continuous dynamics, but still, it is necessary to bring the proof! On the other hand, other researchers give themselves the task to prove that the sciences can move forward only by relying on the induction.

Indeed, we can go very far in history and go back to Aristotle, knowing that « he was not the first to use induction as a method of scientific reasoning. In *Metaphysics* he wrote: two things can be attributed fairly to Socrates- inductive arguments and universal definition, both concerned with the starting point of science (Met. XIII 4). But Aristotle was obviously the first one who had systematically analysed induction ». (Gálik, 2006, 495-505)

Maurice Angers and many others speak rather about complementarity between the deduction and the induction. Indeed, it is difficult to distinguish both approaches from each other.

It happens that by thinking exclusively adopted the induction, we bend towards a deductive analysis where "can intervene attempts of explanations resulting from previous reasonings"(Angers, 2015, 43), that is resulting from a deductive reasoning, because like it or not, the scientific knowledge even if it is made in an exploratory context, is never completely inductive.

The opposite is also true, because, in thinking that it has done so in an exclusively deductive way, it turns out that the researcher is making inductive reasoning, on the basis of previous observations, or on the basis of questioning the adopted theory or some of its elements, thus implying a there and back between deduction and induction, in order to arrive at the conclusion that these two approaches are in fact not contradictory, quite the contrary; they are complementary and even inseparable in the same

research, where the complementarity between theory and practice is inevitable, where theory clarifies reality and practice produces theory or recastes it.

5- Overview of human sciences theorization:

Addressing the problem of **theorization** in human sciences, we find ourselves faced with a multitude of questions about the possibility of theorization in this field, its principles and the obstacles that can hinder it, while knowing that the theorization in the sciences of nature did precede that of the human sciences, offering to the latter a model to follow, which presented a constraint to the development of research in this field.

All sciences are distinguished by the use of vocabulary specific to each of them, which is nuanced by the use of specific concepts to each discipline and having an unequivocal meaning. Disciplines such as "physics and chemistry as well as biology, geology and statistics have escaped this displaced concern for literature. Focused on scientific goals, these disciplines prefer the brevity, precision, objectivity to the exquisite forms of a harmonious language, to the wealth of the allusions and to the highly meaning verbal imaging" (Merton, 1997, 17), while the human sciences are sometimes subject to use of expressions being of the literature. It does not mean that it is necessary to compete with these disciplines, but each field of research has its own specificities, but that it would be also sensible to use the forms of expression of sciences named as "hard".

The difference in research in sciences of nature and in human sciences was the object of debates and it is it always.

The human sciences have always compared themselves to the methods and research results of the sciences of nature, which has had an impact on the status of the first. The main purpose of the human sciences is to "aim for an organized knowledge of social reality which is the total sum of objects and events within the socio-cultural world, as they are experienced by the common thinking of men living their daily lives among their peers, interconnected by all kinds of relations and interactions". (Frère, in : Jaquemain and al., 2008, 71)

The first distinction to be made between the two fields of research is to consider that what is observed in the field of the sciences of nature is not aware of its existence, and therefore can't give meaning, contrary to the human sciences which focus on the social world. This last has "a particular meaning and structure relevant to human beings who live there, who think and act there". (Frère, in : Jaquemain and al., 2008, 71)

And this interpretation is the result of constructions established by the individuals, which guide them in the daily life and help them to adapt themselves to it. And the researcher as actor in this environment can't release himself from these constructions. Then, two contradictory currents of thought explain this state of things. The first one considers that the sciences of nature have a fundamental difference with the human sciences, due to the nature of objects to be studied in both fields, and by the use of methods appropriate to them.

The defenders of current argue their position.

Indeed, the law elaboration is even truer "when you are in the sciences of nature or in the exact sciences, considering their objects of study less subject to contingency than in the human sciences and social sciences". (Bonneville and al., 2007, 18)

The theory results from observations and experiments carried out in order to study a given phenomenon and verified observations. By observing in a regular way the studied phenomenon, where these observations become recurrent, verified by experimentation, the researcher can arrive at the elaboration of laws, this being valid in sciences of nature or in the exact sciences where theorization is very advanced in these two fields. However, this routing is not as simple in the human sciences, because the conditions for observation and experimentation are different.

On the other hand, another current considers that the human sciences can access the status of the sciences of nature by adopting the methods, techniques and even the lexicon of these ones. Faced with the dogmatism engendered by the first current, researchers in the human sciences were

forced to develop their own methods “without sufficient philosophical background and stopped their efforts when they reach a level of generalization that seemed to justify their intimate conviction” (Frère, in : Jaquemain and al., 2008, 68), which hindered the development of these sciences at least on the epistemological pole, as regards the construction of the study object and the problematic, and also the nature and value of the knowledge that the researcher exploits.

Another distinction to be made is that in the sciences of nature it is possible to carry out verification and measurement more than in the human sciences.

In the human sciences, there are phenomena that are easily measurable such as the listening rate of a radio channel or the absenteeism rate of the workers. On the other hand, there are phenomena which are difficult to measure and others that are impossible to measure, such as representations of tattooing in young people or the reception of live television programs.

To add to this, in the case of the human sciences, “while lending itself to explanations, do not often allow for strict studies of causality. Where as in the sciences of nature, thanks to experimentation, widely widespread, we can provoke and control situations allowing one to study the effect of such a phenomenon on such another.” (Angers, 2015, 52) In addition, there is a methodological and theoretical consensus among members of scientific community in sciences of nature, something that is not always found in the human sciences. And we will go even further by announcing that these consensus do not always exist within a specialty in the human sciences; there are differences on the tools, methods, theories and concepts used.

In addition, the researcher is of the same nature as the human sciences research object, unlike the researcher in sciences of nature, who must be more rigorous in his research, moving away as much as possible from value judgments, otherwise his study will be considered subjective, based on personal impressions. Add to these distinctions that in the human sciences “individuals or groups are not exacts copies of each other” (Angers, 2015, 51); they have distinct characteristics, hence the impossibility of reproducing

the experiment, which will lead us to different results.

Furthermore, in the case of sciences of nature, the reproduction of experience is always possible because the objects of study have the same composition.

In addition, the complexity of human phenomenon must be taken into account, that is to say that we must take into account the multiplicity of dimensions to be considered in the study of a phenomenon, and not based on the study of a single dimension, where we must admit that the natural world is simpler than the human world.

What is certain, that theories in the sciences of nature are used in order to ensure the predictive function of phenomena. In parallel, “social scientists assume that social reality is too complex to consider variables in isolation in order to test their causal relationship.” Reeves, and al., 2019 <https://www.researchgate.net/publication/2315653>

The phenomena are not simple; they are a system of relationships that must be discovered.

If we consider the social changes taking place within the communities, we should take into account the various dimensions that trigger them, namely the economic, cultural, social and even historical dimensions, by focusing on one of them if the requirements of the analysis conceive it. And here, appears the complexity of phenomena affecting “social being” where it is difficult to measure and analyze attitudes.

Today, it turns out that paradigms that have been used for decades in the human sciences, such as the marxist and structural paradigm, are proving ineffective because of their inability to interpret social reality in all its complexity.

We know today with Kuhn that the development of science is not done by “the accumulation of knowledges, but by the transformation of the principles organizing knowledge”. (Morin, 1982, 273) Does this mean that the sciences of nature are more “scientific” than the human sciences? Are the human sciences really scientific, knowing that this scientificness requires the use of observation and experimentation, things that are not always possible in human sciences, complicated by the fact that the subject and the object are of the same nature.

And because of this, can we “make” theory in the human sciences? To answer these questions, we know that in sciences of nature the theories and methods adopted are very limited, whereas in the human sciences they are of a great diversity. Moreover, in the human sciences, there are theories which are dominant over others, because of their great use and their ideological dimension, the latter pushing the field of investigation of the theory towards a precise direction, directing researchers to invest their research towards a specific axes, according to the interests and pressures of the organization that finances this research. In these sciences, some thinkers prefer the use of the term “quasi-paradigms” instead of a paradigm, given the “more limited influence they have on the scientific community” (Dépelteau, 2010, 18) where they are located in an institution or country; their influence may widen, while for the sciences of nature the impact of the paradigm on the scientific community is felt, and there is a consensus on its methodological and theoretical principles, and where the choice of researchers is very limited.

This state of things in the human sciences is due to the absence of an “organized structure, that is, a set of homogeneous epistemological, methodological and theoretical principles which make a clear consensus”. (Dépelteau, 2010, 14) Nagel compares theorization in sciences of nature and human sciences, where he believes that in empirical sciences theory means « explicit formulation of specific relations between a set of variables where a significant amount of verifiable empirical regularities can be explained ». (Schutz, 1987, 70) And he adds a very important point, which is that “neither the fact that these regularities have in the social sciences a rather restricted universality, nor the fact that they allow prediction only in a limited field, constitutes a fundamental difference between the social sciences and the sciences of nature, since many branches of these have the same characteristics” (Schutz, 1987, 70), each field has its own reflective logic, thus determining its characteristics.

That is why, it would be wise to know the epistemological foundations of the human sciences in order to seize «the advantages and limits of each of the quasi-methodological paradigms» (Dépelteau,

2010, 29), and for the choice of an appropriate method does not happen in arbitrary way. A major problem facing the researcher in the human sciences is the objectivity to which he must always abide, otherwise his study would be subjective. Objectivity being “the attitude or disposition of observing with neutrality a given reality, in order to possibly reach impartial conclusions”. (Bonneville and al., 2007, 214) But then another problem arises: can we at the same time aim at the research for truth and objectivity? This is because a distinction to be made between the two notions: «describing a thing as it appears is not necessarily describing it as it is». (Lepeltier, in: Lepeltier, 2013, 210)

The truth is apprehended by each discipline, by each researcher, so as to reveal an appreciation of it, knowing that it is a goal in itself. The goal pursued by the truth in scientific research is to arrive at establishing correspondence between the studied phenomenon (and its components or variables) and the reality (of natural life and social life). This is a norm in that “it regulates our approach and attitude on a cognitive level”. (Lepeltier, in: Lepeltier, 2013, 210)

This norm is in fact a “recognition” guaranteed by a group of researchers to the fact discovered, and which can only be judged as such by “the strength of the arguments, the various strategies, the rhetorical forms of persuasion, the logics of careers” (Frère, in : Jaquemain and al., 2008, 55), in short this must be consistent with a recognized legitimacy within the community of researchers.

But, commented Edgar Morin, “it is undoubtedly the dogma of truth that produces the most illusions and errors. We are always mistaking by believing very strongly to be in the right. One gets lost by virtue of a blind faith in the truth.... Knowledge can reach some islets of certainty, but its trip never ends.” (Tellez, 2009, 135); it’s in constant pursuit.

Thus, another crucial question must be asked: does the theory aim to search the truth? To answer this question, two currents of thought are debating: realism and instrumentalism. The first conceives that theories “aim for truth, and must be interpreted as affirmations (...) Instrumentalism, on the contrary, restricts the function of theories to that

of tools allowing prediction, but not affirming anything, strictly speaking, on the world” (Vorms, 2013, 175), providing no explanation.

Philosophy raises questions that it tries to answer, while science deals with **problems** that it studies and to which it tries to find solutions. These problems are felt in daily life in order to cope with the difficulties of everyday life. A problem “relates to a certain number of knowledge that already describes or explains a part of reality and motivates the study of another part of this reality.” (Bonneville and al., 2007, 41)

As a result, a scientific problem is a difficulty or lack of knowledges about a phenomenon in a specific field of research. It follows, that the researcher’s mission is to solve this problem, knowing that the problems in each discipline are specific.

But today it turned out that the problems are so complex that it seems judicious that they are treated by the contribution of different disciplines, where each contributes to the solution of this problem according to a specific approach and research angle; this is commonly known as **transdisciplinary** research, where it is conducted “to establish a common scientific practice and language across disciplines.” (Angers, 2015, 43)

According to Stuart Mill, “the unity of science is based on the methodological unity of scientific reasoning” (Freund, 1973, 71), which is also defended by Maurice Angers (and many others) when he approaches the question of the transdisciplinarity of science.

Indeed, it turns out today that the character of an exclusively and only disciplinary research can’t be fruitful, although each scientific discipline has its own particular field. By stimulating studies involving researchers from different scientific disciplines, within the framework of national and international surveys, and by belonging to a research laboratory focusing on different angles of the same theme, transdisciplinary researches are imposed front of the multiplicity of variables to be treated in the same research.

The phenomena to be studied have become so complex that it would be advisable to call upon researchers from different disciplines to work together to clarify the epistemological aspect, and the

practical aspects of research, in order to establish a common language, and why not establish a common methodology that would exceed the specific methodologies to each field of research.

Unlike naturalists, Dilthey has little interest «in the problem of methods which he considers too academic and abstract, and he is particularly interested in grasping the conditions of intelligibility own to the sciences of the mind, and consequently to their positive contribution for a better knowledge of men and things». (Freund, 1973, 82) According to Dilthey, the particularity of the human sciences is that they have developed “in the midst of the practice of life”. (Freund, 1973, 71) This is precisely what differentiates these sciences from those of nature, because the phenomenon observed by these sciences are constant and identical (if they are of course observed in the same conditions), while the human sciences study the social reality created by men, their institutions and their structures, in a precise historical context and of which these sciences are the object of their study, by the singularity of the phenomenon studied. It is then that we arrive to the conviction that "the reality is unique, but it does not allow itself to be apprehended in a unique way, as naturalism claims.

It is accessible on one hand to the external experience, of the other one to the internal experience, both forms being also legitimate, without one being able to abolish the other ". (Freund, 1973, 84) Popper is among the fierce defenders of the idea of "the uniqueness of the scientific model whether in the sciences of nature or the human sciences". (Freund, 1973, 21) But, he was criticized by several thinkers, criticisms that paved the way for a new current in social science research that is **constructivism**.

This one abolishes the boundary between the subject and the object in so far as it considers knowledge as “linked to an action that modifies the object and only achieves it through the transformations introduced by that action”. (Schinckus, in : Jaquemain, Frère, 2008, 99)

That said, it turned out that knowledge develops according to the opportunities offered to the researcher and according to the new equipment available to him.

Dilthey attributes the character of “**historical intelligibility**” to human sciences, indicating that institutions or behaviours are “guided by intentions, and therefore linked by values”. (Freund, 1973, 71) Indeed, any researcher in the various fields of research is guided by value judgments, which even begin with the starting question. For Weber, the relation with value judgments is linked to the process of selecting and organizing of science because of the selection of phenomenon to be studied and the development of concepts; the human sciences have this peculiarity to make a selection in the matter by linking it to values. This selection is “subjective” in so far as there is a preliminary selection of the documents to be studied, because we can’t reconstruct the entire history, for lack of absence of all the documents related to it. In case of the presence of multitudes of documents, the selection is made on the basis of what H. Rickert and M. Weber call «esthetic, moral and political values». (Aron, 1967, 508)

In addition to the observed facts such as, related representations and norms are associated and which will guide the direction of the research, thus distancing it from scientific rigour and objectivity.

Today, the using of theory especially in qualitative approaches has included:

“(1) Clarification of epistemological dispositions, (2) identification of the logic behind methodological choices, (3) building theory as a result of research findings, and (4) a guide or framework for the study. Furthermore, methodological dispositions on the reflexive symbiosis with theory and other parts of a study are included to set the stage for focusing on the theoretical framework”. (Collins, and al., 2018, 1–10)

Here, the four **Methodological poles** of scientific practice must be taken into consideration.

First, the **Epistemological pole** is concerned with the question of the nature of knowledge and the conditions for its production. Secondly, the function of the **Morphological pole** is to determine the general form and external structure of the topic, defining the rules for its construction.

Thirdly, the **Technical pole** is about the data collected from the field, which will become important information.

And Fourthly, the **Theoretical pole** enables the organization of hypotheses and identifying concepts, making and guiding data collection. It also performs the function of analysis by interpreting the data. It guides the formulation of hypotheses and building concepts, proposing rules for explaining phenomena.

Today, in human sciences the challenge is how to construct theory in a qualitative approach?

Some researchers as Saldaña, incite to consider using the frameworks of known theorists to orient qualitative studies; that’s the case of **Grounded Theory** and **Identity Theory**.

Indeed, **Grounded theory** “can help to forestall the opportunistic use of theories that have dubious fit and working capacity”. (Glaser, Strauss 2006, 04)

Anselm Strauss and Glaser Barney defined **Grounded Theory** as “The theory that was derived from data, systematically gathered and analysed through the research process”. (Khan, 2014, 224-233)

It is an approach that opposes the hypothetico-deductive approaches, using an inductive process by which immersion in empirical data serves as a starting point for the development of a theory about a phenomenon, without detaching from the field of research, to generate new theories.

It is used for answering research questions that have never been the subject of a scientific study, but also for the possibility of taking a new look at phenomena which have already been studied.

As for the **Identity Theory**, it talks about the constitution of identity. Stets and Burke define **the identity** as «the set of meanings that define who one is when one is an occupant of a particular role in society, member of a particular group, or claims particular characteristics that identify him or her as a unique person. Identities characterize individuals according to their many positions in society.” (Burke, Stets, 2009, 03)

They specify that their approach is within **structural symbolic interactionism** that refers to “a set of ideas about the nature of the individual and the relationship between the individual and society.” (Burke, Stets, 2009, 09)

This current is different from symbolic interactionism. Its representatives are more concerned about the effects of the structure, they consider the influence of the social frameworks of experience, and that social life is predictable in order to allow theoretical generalizations.

Stets and Burke add that « the perceptual control perspective emphasizes the idea that it is the meaning that is important not the behavior itself, and meaning is subject to social confirmation ». (Stets, Burke, 2014, 57-97)

In their book, the two authors talk about the development of Identity Theory. To do this, the authors “compare the theory of identity to other similar currents, examine methodological innovations (from recent research) to the expectation of original ways.” (Labege, 2012, 151-156)

Over the past 25 years, the identity theory has known a considerable development from 1988 to the present, as “the incorporation of the perceptual control system into the theory, the introduction of “resources” in which symbolic and sign meanings are important, new views of the social structure, the relevance of the situation in influencing the identity process, the idea of different bases of identities, broadening our understanding of multiple identities, studying identity change, and bringing in emotions into the theory”. (Stets, Burke, 2014, 57-97)

There are two cases to use theories in qualitative studies, where it is possible to develop a theory or create a new one, as new advances at the theoretical level.

6-Conclusion

The human sciences have always sought to imitate the sciences of nature, using their methods and techniques taking them as a model.

In this context, is it wise to distinguish between both fields of research? Or shall we have to be satisfied to say that both fields try to make the reality (of the natural or social) understandable, with approaches sometimes concomitant, sometimes different?

Having said that, we must admit with Weber that no science is complete; the science being the future of

the science whose task is not yet complete, by being in perpetual research for perfection or at least for the overcoming of its gaps and obstacles it faces every time, when its hypotheses are always subject to rectification, and every time from new questions spring up.

Indeed, there is no perfect science except in the moment, when researchers devote all their energy and time to perfecting it, and as long as new discoveries or questions come to take away from it that perfection, in the face of the multitude of complex phenomena that arise each time and that arouse the curiosity of researchers in the social world. It has been found out that theories in the human sciences have their own logic of operating, observation and interpretation. And so that they don't remain at the embryonic stage, research in this scientific field should not only focus on the empirical aspect, but should reflect on their epistemological and theoretical poles, so neglected today.

Indeed, epistemological reflection on the human sciences has been refrained in recent decades because of the remarkable development of empirical studies.

Today, theories in the human sciences are no longer able to explain the complexity of new phenomenon, and can only capture portions of the observed social world.

In addition, we have noticed a decline in interest in exploratory studies which are pioneering studies, and which have so much contributed to provide new frameworks of interpretation to the phenomenon observed. And in order to carry out these new missions, the human sciences should be able to “dialogue” among themselves, from a transdisciplinary perspective, where they would borrow the tools, the concepts and the way of thinking, but especially the way of interpreting of philosophy, because philosophy is capable of providing the researcher in the human sciences with the appropriate tools of interpretation; it is this dialogue that could push theorization in the human sciences forward.

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