

## **Symposium: Social Sciences and their Epistemological and Ontological Shifts**

This symposium discusses shifts in ID research within the Social Sciences and their overall implications. It will address ideas about ID in the Social Sciences as a whole, special research areas in particular and ID as a phenomenon. In this context, four papers will be dedicated to evaluate ID research and disciplinary relation changes within the Social Sciences and their relation to the Natural Sciences, particular cases such as changes in ID within Communication Studies and Cognitive Science, and general developments in past, present and future ID research.

In the first paper, the author will consider the Social Sciences in general. The investigation will assess the general role and implications of ID for the triangle of the Natural Sciences, Social Sciences and Philosophy. The focus will lie on the internal structure of the Social Sciences and how they epistemologically relate to the Natural Sciences.

After this general presentation, two specific research cases will be considered, namely Cognitive Science and Communication Studies. In the former case, the author will investigate a possible fading of ID in the particular area of interest and partially link this occurrence to the underlying framework of cognitive sciences. This is followed by an assessment of an alternative framework and its implications for ID. In the latter case, the author will examine paradigms and disciplinary components of the respective field. The focus will lie on the analysis of the difference between “models” and “paradigms” of communication and how confusion in this context may lead to indiscipline within ID research.

Finally, the last section of the symposium is dedicated to the essentials of ID, namely ID as a cognitive phenomenon, ID as a new disciplinary structure and ID as a cultural and civilizational trend. The author will provide an overview of the past, stress current concerns and point out future challenges for each case.

## **Mediations**

Jorge Correia Jesuino (CFCUL/CIS IUL)

When considering personalities within science we often think of Galileo, Copernicus, Einstein and sometimes Lavoisier or Darwin. It is however doubtful that academics like Weber, Durkheim, Freud or even Lévi-Strauss enter our perception of this pantheon of science. This may be the case because natural science – although we sometimes think of Kant and some of his predecessors – was of no concern for philosophers before the problem of demarcation thematized by the Vienna Circle. Around the same time, social scientists also started to get interested in how science works. The first to deal with this matter was Merton and soon after him the so called “new sociology of science” was born. In this context, it suffices to recall Bloor’s symmetry principle or the problematic laboratory studies conducted by Woolgar and Latour. Both, the philosophical and sociological, approach paved the way to a more complex pattern of a reflexive, as well as interdisciplinary, science of science.

In this paper, I will argue that the underlying agenda of this triangular dialectic between natural sciences, social sciences and philosophy has now become a vibrant, as well as controversial, field where inter-disciplinarity in the broad sense plays a central role. My presentation will focus on the specific case of social sciences and their internal disciplinary relations, as well as their epistemological links with the natural sciences. The so called “pecking-order” that demotes social sciences to the periphery does not seem to correspond to the present framework in which life sciences tend to replace physics as the benchmark of scientific excellence. New modes of knowledge production also led to a widening of the traditional interplay between academic disciplines, thus giving place to other triangles such as the thematic triangle of Science-Nature-Society or the institutional triangle of Science-Industry-Government. I will argue that, in this new

context, Social Sciences play a more active and visible part without however introducing significant changes in the overall structure of science.

## **Cognitive Science and its changes in ID**

Klaus Gärtner (CFCUL)

It is often held that one of the best examples of ID, involving the Social Sciences, is Cognitive Science. Since its modern foundations all the way back to the 1940s and over its definite implementations in the 1970s, research mainly involves the following disciplines: Philosophy, Psychology, AI, Neuroscience, Anthropology and Linguistics. The main research framework of Cognitive Science is to argue that cognition is essentially computation. This means that the mind can be described as an information processing system involving mental representations. These representations are analogous to algorithms in a computer. Basically Cognitive Science holds that the mind manipulates information provided by its surroundings. This framework spawned important and vast ID research in the last decades.

Recently, however, it has been claimed that the ID character that defines Cognitive Science might be fading. In a recent article, Leydesdorff and Goldstone<sup>1</sup> - in an analysis of the journal *Cognitive Science* - argue that despite the success of this ID area and the ID claim of the researchers involved, research is increasingly integrated into Cognitive Psychology. As a consequence, one may ask the question whether or not Cognitive Science as whole will lose its ID character in the long run.

In this paper, I will argue that this does not have to be the case. To do so, I will have look at a new and growing research framework within Cognitive Science, namely Embodied Situated Cognition. This framework explicitly challenges the traditional idea that cognition simply means processing/manipulating provided information and

<sup>1</sup> Leydesdorff, L., & Goldstone, R. L. (2013): "Interdisciplinarity at the Journal and Specialty Level: The changing knowledge bases of the journal *Cognitive Science*" in: *Journal of the American Society for Information Science and Technology*, DOI: 10.1002/asi.22953.

claims that it should rather be understood as an organism's interaction with its environment. This action based program fundamentally claims that a) cognition is not something that happens only in the head and b) complex cognitive processes arise from the interaction of simpler sub-systems. It also means that representations are not essential to cognition anymore. I will argue here that this new framework also affects Cognitive Science's ID character not only by introducing new ways of linking the traditional research areas involved, but expanding to new ones.

## **Communication models, communication paradigms and disciplinary dialogue**

Diogo Silva da Cunha (CFCUL)

In this paper, I will address the difference between communication paradigms and disciplinary components/expressions. The research area known today as 'Communication Studies' stems from a profusion of a wide range of different disciplines, disciplinary orientations and traditions. Its conceptual development as a discursive field owes a lot to the reorganization of very different - sometimes even antagonistic - backgrounds. I will start by laying out the difference between "models" and "paradigms" of communication. This means, I will consider some ideas about the process of communication and general frameworks of interpretation of that process. Then, I will show that there are two general models of communication - even if we consider a wide range of possible changes in details - and three paradigms.

In this context, I will show that the first two models and paradigms are overlapping. The first model is the so called "information exchange model", and the first paradigm is the "information paradigm". For them "communication" is interpreted in a mechanical and behavioristic way. Its primary criterion is the efficacy of intentions of a source of information. This model and the corresponding paradigm are closely connected to the relation between Engineering and Positivistic Sociology.

The second model is the so called "interaction model", and the second paradigm may be described as "culture, interaction and ritual paradigm". Here "communication" is understood in a more subjective and intersubjective sense. It is not a message, but a relation between beings socially and symbolically related. This paradigm originates from developments in Philosophy, Sociology of Knowledge and Communication.

Finally, the last paradigm is based on complex considerations. In a sense, it is a spin off of the second paradigm, while at the same time, heading towards the first. This paradigm may be called “techno-culture and networks paradigm”. Disciplinarily speaking, it results from the association of Philosophy and Sociology with political movements that mainly consider a widespread tide of Relativism of various kinds. At a great extent, this paradigm is itself part of an ideal liberation of a certain Victorian sense of “discipline”. My paper ends with a critical reflection on how to treat ID in the light of the risks of indiscipline.

## **Observations on past, present and future main determinations of ID**

Olga Pombo (CFCUL)

I will begin by underlining three main determinations of ID as an essentially cognitive phenomenon, as a new disciplinary structure and as a much large cultural and civilizational trend. In each case, I will try to make a much quick overview of its past roots, to stress some present concerns and to point to some future challenges. Even if up till now the word ID has not stabilized its meaning, even if ID is a universal password belonging to the vocabulary of scientific research as well as of teaching, mass media and entrepreneurship, context, yet the word resist, stands firm and fights for its fundamental cognitive destiny. In fact, ID is above all an answer to the extreme specialization of scientific knowledge and a new model of peers communication, a crucial heuristic strategy and a response to the complexity level which science is today dealing with, a way of facing a new kind of urgent, global problems and a methodological procedure required for problem solving.

However, even if ID is occurs in huge quantity of new practices the fact is that it gives rise to few and fragile efforts of theorization. Why do disciplines accept to cross their concepts, their methodologies and their models but do not question the groundings of such ID crossings?

I believe that some critical issues concerning ID need be thought out. In this direction, special attention will be given to the following questions:

Why is ID such a fundamental determination of actual scientific endeavor and yet is so difficult to achieve? How to understand the main difficulties put forward to the practice of ID? We know that the classical rupture between natural explicative sciences and social comprehensive disciplines is being bridged. Is it possible that one of



the reasons for that coming near is the interdisciplinary nature of social and human sciences? But, why is ID more close to social sciences and humanities than to natural sciences? Which features of social sciences and humanities are more akin to ID than those of natural sciences? Maybe the understanding of those reasons will help to fortify the practice of ID.