COURSE TITLE: Epistemology of Cognitive Science (Sara Dellantonio, 10 hours - 2 cfu)

PERIOD: February 2023

COURSE CONTENTS, OBJECTIVES AND LEARNING OUTCOMES

Description of activity and topics:

The course is divided into three classes. This will be followed by a session in which the students will present papers in cognitive research on topics related to the issues discussed during the course. This last session will not only serve for assessing the achievements of the students, but will also be an occasion to further explore topics addressed in the course.

First class) We will discuss the genesis of the cognitive sciences, their structure and composition as well as the methods/perspectives of the various constituent disciplines. Here we will address, among others, issues such as: how, when and why the cognitive sciences were officially launched; what relationship they have to previous research traditions (especially behaviorism); what epistemological project motivates this research; why the metaphor of the mind as a computer has assumed such a central role and what consequences the adoption of this metaphor may have; what role and function the notions of representation and information have for explanations in the cognitive sciences.

Second class) We will examine how the cognitive project mainly embraces a nativist stance and we will consider the differences between classical philosophical nativism and the form of nativism supported by the cognitive sciences. Then we will show that – even though empiricism is a minority position in the field of cognitive sciences – contemporary research is still characterized by some empiricist (i.e. anti-nativist) views and we will discuss the nature of the differences between nativism and empiricism in this debate. Moreover, we will also take into consideration the contraposition of nature and culture (which e.g. the much debated notion of 'human nature' relies on).

Third class) We will consider the historical development of cognitive science and inquire whether the objectives that motivated the development of this perspective have been achieved or not, as well as how and to what extent the original project of cognitive research has changed over time. In particular, we will examine how the project of cognitive science (in the singular) was driven by the hope of providing psychology with theoretical and methodological unity, avoiding the fragmentation that has always characterized it. We will also see how this objective has not been achieved and discuss the consequences this has on psychology as a science.

Specific learning objectives (i.e. specific knowledge and skills that the participants in the activity will acquire):

This course aims to provide PhD. students with solid epistemological tools for understanding the scientific project at the basis of the 'cognitive sciences'. The course offers a critical view of the cognitive sciences encouraging students to identify assumptions and question the theoretical foundations, methodologies and structure of various disciplinary approaches. Discussion on these topics will help students to improve, among other things, their awareness of the general context of their research or discipline as well as their capacity to reach well-reasoned assessments.

The development of the cognitive sciences will be addressed from a historical perspective. Thanks to this approach, students will become acquainted with the idea that theories are evolving systems, which enable researchers to identify their own research questions and to formulate solutions through the modification and the improvement of past models. This historical contextualization of theories will increase student's capacity for comprehension and for creating links between different traditions or lines of research, including with the aim of developing new ideas or solutions to a problem.

Finally, the method adopted for the evaluation – discussing a classical paper belonging to one of the disciplines that form the cognitive sciences – is aimed at improving the students' critical, communicative skills as well as their ability to argue rationally, to properly express their own point of view, and to analyze and summarize information.

DUBLIN DESCRIPTORS (Indicate the learning objective(s) that the activity aims to achieve, exercise and/or consolidate)

☒ systematic understanding of a field of study and mastery of the skills and methods of research associated with that field;

☐ ability to conceive, design, implement and adapt a substantial process of research with scholarly integrity;

☐ ability to make a contribution through original research that extends the frontier of knowledge by developing a substantial body of work, some of which merits national or international refereed publication;

☒ ability to critically analyse, evaluate and synthesise new and complex ideas;

☒ ability to communicate with their peers, the larger scholarly community and with society in general about their areas of expertise;

☐ ability to promote, within academic and professional contexts, technological, social or cultural advancement in a knowledge based society;

ENTRANCE REQUIREMENTS (Indicate any specific knowledge and/or skills that the student must have in order to participate in the activity)

None

TEACHING AND LEARNING METHODS AND ACTIVITIES

The teacher will introduce the class topics and engage in discussions with students about the issues that arise during the presentations, as well as the consequences and implications of specific positions taken by classical cognitive science for contemporary research. Students are expected to actively engage in class discussions, bringing their perspectives from their respective areas of expertise and backgrounds.

ASSESSMENT OF THE ACHIEVEMENT OF LEARNING OBJECTIVES (Possibily an activity carried out independently by the student functional to his/her research activity)

Students will present and discuss with their classmates a classical paper belonging to one of the disciplines that form the cognitive sciences.

BIBLIOGRAPHY /STUDY MATERIALS (video-lessons, etc.) (Specificare se il materiale va letto, visionato, etc. prima degli incontri)

The following materials offer some guidelines on the contents of the course. Students do not need to read them before the classes. They can consult (parts of) them to prepare for the presentation of the assigned article. We will agree on which article every student will prepare during the class, (as far as possible) respecting each student's specific research interests.

Baars, B. (1986). The cognitive revolution in psychology. New York: Guilford Press.
Gardner, H. (1985). The mind's new science. A history of the cognitive revolution. New York: Basic Books.
Stainton, R.J. (2006). Contemporary Debates in Cognitive Science. Blackwell Publishing: USA.