

XXVII INTERNATIONAL CONGRESS OF PSYCHOLOGY Stockholm, SWEDEN 2000

Symposium on:

"SCIENCE FROM THE STANDPOINT OF COGNITIVE PSYCHOLOGY"

Convener

: Prof. Dr. Alfredo Oscar López Alonso

Chair: Prof. Dr. María Cristina Richaud de Minzi

Participant's Abstract

"SCIENCE RATIONALITY AND INFERENCE: AN INSIGHT FROM COGNITIVE PSYCHOLOGY"

Prof. Dr. Alfredo Oscar López Alonso

ABSTRACT:

The purpose is to analyze inferential processes leading science to constitute as an assertive rational system from its irrational counterparts. Rationality is critical for science, however, it reflects a psychological need of thought's organization to achieve balances between conflicting stable categories of understanding and changing flows of inferences attending scientific problems. Dynamics between implicit and explicit inferences is assumed the way to solve rational and irrational unbalances between scientific representations and heuristics. Modality categories are analyzed as inferential substrates to knowledge justification, implicit and explicit inferences as systemic and complexity processes attending *rational needs* for order, coherence, logical closure, reversibility.

COGNITIVE MAPS ACROSS CULTURES AND ACROSS SCIENCES

Dr. Horacio J. A. Rimoldi

ABSTRACT:

Studies of how subjects search for and process information will be discussed. An approach to the problem was initiated by Gestalt psychologists, (Kohler, Wertheimer, Duncker) and some mathematicians (Polya, Russell, Whitehead.). Early problem solving investigation led to the study of learning and medical training. Afterwards, the concept of isomorphism was investigated for the same underlying system of relations across sciences and across cultural environments. Studied processes brought "order" as a main component requiring new methods that considered incoming information order in the sequence of events characterizing tactics. Scoring systems, within and between subjects, maximizing problem solving efficiency, have been developed.

SUBJECTIVE AND OBJECTIVE CAUSALITY IN SCIENCE: A TOPIC FOR ATTRIBUTION THEORY?

Prof. Dr. María Cristina Richaud de Minzi

ABSTRACT:

Attribution theory core is how are bridged gaps between reality information and causal meanings taken on it. Intuitive and scientific thought differ formally, but may coincide in decisive procedures. Do scientists work out any life attributive style on scientific events spoiling due objectivity and independence? How far operate irrational attributions on methods and theories distorting science into pseudo-science? At what degree and quality is science objectivity undermined by subjectivity? This paper examines possible attribution models in scientific thought as an approach to the study of irrationality filtering into science just as it does into all decision-making processes of lay people.

METACOGNITION AND LEARNING PROCESSES UNDERLYING SCIENCE
Drnd. Pablo Narvaja & M.A. Carolina Jaroslavsky

ABSTRACT:

The main issue lies on the relationships between science development and knowledge progression together with those of learning and metacognition as recurring processes emerging necessarily. Metacognition is treated as following Flavell's two-dimensional definition, that is: knowledge about the own cognition, and knowledge about the self-control and regulation of cognitive systems, especially those given within the context of science. Epistemology provides validity criteria to differentiate scientific knowledge from non-scientific one. Metatheory regulates critically on intellectual activities of disciplinary fields. Metacognition and metatheory guide thought optimizing processes to reach valid knowledge from epistemological justification standards.



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