

## INTRODUCTION

The idea to devote a thematic issue of *Philosophica* to the broad subject of “Jean Piaget’s scientific legacy” grew out of a symposium by the same name which the editors — a philosopher of science (Callebaut) and a psychologist (Vervaeke) — convened at the Dutch National Psychologists’ Congress in Groningen, on November 20, 1992. Their own papers in this issue are reworked versions of their symposium contributions; the papers by Bidell and Fischer and by Vonèche and Parrat-Dayane were produced directly for this issue.

The Swiss master left us almost fifteen years ago, but his rich, multi-layered genetic epistemology continues to be explored in several, indeed many directions. From psychotherapy to evolutionary biology, from mentally retarded children to cross-cultural studies, from logic to regulatory systems theory, to name but these obvious fields of attention: Piaget’s is a rich legacy indeed!

By no means is this issue intended to cover all these facets of Piaget’s intellectual personality (to be exhaustive, an entire book shelf would be required); but what we offer here are some samples illustrating not so much particular developments as ways in which genetic epistemology seems to be going anno 1995.

Our modest homage, which may at once be seen as a little prelude to the 1996 Piaget Centennial, opens with a contribution from the “center”. “La partie, le tout et l’équilibration” by Jacques Vonèche and Silvia Parrat-Dayane is a wide-ranging analysis of the complex ways in which Piaget and his school have dealt with the age-old problem of the relation between a whole and its parts (the problem of reductionism), in particular as it appears as a problem of coordinating various equilibria. Rather than tackling the problem of totality (whole, structure) at the (meta)level of Piaget’s *theory* of development, Vonèche and Parrat-Dayane take as their point of departure the level of the *child’s* coping with a whole and its parts. It turns out that it is imperative to take into account the nature of

the material, the child's action on the material, and the product of this action in terms of its effects on the child's cognitive schemata as well as the general cognitive level of the subject, which includes the interaction between logical and infra-logical schemata proper to any measure. But the investigation is not confined to this level: contrary to what one might perhaps have expected, it turns more or less imperceptibly into a survey of various interpretations of some central issues of genetic epistemology having to do with equilibration. In typically Piagetian fashion, the authors move on to the fascinating subject of the interrelations between the logical and biological dimensions of Piaget's work, in particular as they appear in his peculiar notion of self-organization (which, because of its open-endedness, turns out to depart quite considerably from other theories of self-organization). The last part of the paper is a rather systematic attempt to rebut various (Anglo-American) criticisms of core Piagetian concepts and theories, some of which turn out to be rather incongruous. This paper may also be profitably read as trying to meet some of the challenges raised in both Bidell and Fischer's and Callebaut's papers.

In "Structure, function, and variability in cognitive development: the Piagetian stage debate and beyond", Thomas Bidell and Kurt Fischer survey the Anglo-American discussion of the stage theme during the last decades. The three central questions concern (i) the variability in age of acquisition and the limitations of age-only analysis, (ii) the variability in synchrony of acquisitions across contexts and domains, and (iii) the variability in sequence of acquisitions. We take it that their excellent analysis contributes considerably to the clearing up of what has by now become the stage "muddle". Still we want to ask, (i) (supposing that the stage notion is purely an instrument of description) how "anti-stagists" think to describe the emergence of new psychological capacities without invoking phases, (ii) aren't the authors ultimately retreating from a Piagetian empiricist-constructivist to an empiricist-positivistic position? (Cf., in this respect, Piaget's critique — which to our mind still stands — of René Thom's catastrophe theory as applied to cognitive development: "Reply to Thom", in M. Piattelli-Palmarini, ed., *Language and Learning: The Debate Between Jean Piaget and Noam Chomsky*, 368—370. Cambridge, Mass.: Harvard University Press.)

In "Structures of personality along Piagetian lines", Ewald Vervaeet defines patterns of self-knowledge by extending Piaget's concept of structure. The genesis of these patterns in the child as described in Ver-

vaet's *theory of self-knowledge* runs parallel with the traditional Piagetian geneses of logico-mathematical and physical knowledge. Some applications of this theory to psychotherapy are sketched. Estimating that Piagetian epistemology and psychology are currently in a state of crisis (some of the reasons for which are analyzed in the final paper by Callebaut), Vervaeet wants to ask whether (and if the answer is positive, to what extent), his extension of the Piagetian approach to a non-Piagetian theme might provide a way out of this crisis.

The issue ends with a philosophical contribution that shares Vervaeet's worries and also strikes a hopeful note. In "Piaget among the evolutionary naturalists, anno 1995", Werner Callebaut analyses what it means to claim that genetic epistemology is a naturalistic and/or an evolutionary epistemology and/or philosophy of science in the sense of current, predominantly Anglo-American, developments. Its inclusion in an issue on Piaget's *scientific* legacy is warranted, the author thinks, because naturalistic epistemology aims to be scientific. Callebaut argues that although the actual impact of genetic epistemology on the theory of science is negligible, its relevance to it is immense. He also tries to offer an explanation for this discrepancy.

Werner Callebaut  
Ewald Vervaeet