
The Importance of Jean Piaget

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Abstract

Jean Piaget, along with Sigmund Freud and B. F. Skinner, is one of the most influential thinkers in psychology. His influence on developmental and cognitive psychology, pedagogy and the so-called cognitive revolution is without doubt. The contributors to the book under review aim to show his past, contemporary as well as future relevance to important areas of psychology. I argue that they fail because they use Piaget's own terminology, instead of explaining his ideas and relevance in a way accessible to someone not already familiar with or sceptical about his assumptions and ideas. Thus, the book neither meets the authors' own stated goals, nor provides an accessible exposition of Piaget for the uninitiated or sceptical reader. A companion book like this one should help give answers to questions which someone unfamiliar with or sceptical of, but curious about, Piaget's work would ask.

Keywords

Jean Piaget, psychology, child cognition, genetic epistemology, psychology

One of the editors of *The Cambridge Companion to Piaget* (Müller, Carpendale, and Smith 2009), Ulrich Müller, remarks that

Piaget's work on infant development was unparalleled in terms of its originality, scope, and systematicity, and, as I will argue, it still is today. (200)

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Of the two claims made in the quote—namely, the extraordinary historical importance of Jean Piaget and the continued relevance of his conceptions and theories of cognition to today’s researchers—the latter is the main target of the book.

In spite of the fact that most textbooks in cognitive and developmental psychology as well as general introductions to psychology have sections on Piaget, the contributors to this book claim that Piaget’s ideas have been misunderstood and that a proper understanding of especially his genetic or developmental epistemology will show the relevance of Piaget’s work to contemporary psychology.

This type of book has, I think, several roles to fill. In addition to functioning as an introduction to readers unfamiliar with the thinker discussed, it should clear up presumed misunderstandings and explain the relevance of the ideas to contemporary issues and place the ideas in an intellectual and historical context. Does the book deliver in all these respects?

Before continuing, it is important to point out that Jean Piaget (1896–1980) is not an easy thinker to characterize and to evaluate. His written output is enormous, with over one hundred books and countless articles, much of it originally written in French. Furthermore, his writings are sometimes quite obscure, which makes him difficult to grasp for the uninitiated reader unfamiliar with his terminology and his intellectual and historical problem situation. Thus, a volume elucidating Piaget’s ideas and theories is a welcome contribution not only to Piagetian scholarship but also to psychology and cognitive science more generally.

In this review, I first briefly present the book and then appraise whether the contributors succeed in presenting Piaget’s ideas, methods, and empirical research in terms understandable to the uninitiated reader and in addition provide a sense of his importance, to both past and contemporary research in psychology. Finally, I discuss whether the authors give a satisfactory account and evaluation of his most fundamental philosophical assumptions, articulated in his so-called genetic or developmental epistemology.

Summary of the Book

The book under review consists of eighteen chapters that partially overlap but might usefully be grouped.

Chapters 1, 2, and 16 deal with Piaget’s historical importance and influence. In these chapters, we get a short intellectual biography of Piaget and his scholarly output, including, in chapter 1, a discussion of the problems involved in translating his books from French into English; in chapter 2, a

discussion of his problem context and main intellectual inspirations, especially the French scholarly tradition represented by Alfred Binet, Henri Bergson, Édouard Claparède, Pierre Janet, but also others, such as the American James Mark Baldwin; and in chapter 16, a summary of his influence in the United States between 1925 and 1971.

Chapter 4 addresses Piaget's controversial biological views and ends with a short and general discussion of how to relate these to contemporary biological approaches in psychology—that is, evolutionary psychology. Piaget's changing views about the role of social interaction in cognitive development are discussed in chapter 5.

Piaget developed his own more or less unique terminology as well as a method to suit his overall scientific and philosophical project, and understanding both his terminology and his methods is, as mentioned, sometimes quite challenging. The contributors are well aware of this, and especially chapters 3, 6, 7, 8, 15, and 17 present and explain some of his central concepts, such as equilibration, generalization, abstraction, and the so-called mind's staircase, as well as his genetic or developmental epistemology.

In explaining and illustrating these concepts and theories, the authors provide a large number of quotes from Piaget and Piagetian scholars but only occasionally use well-established terminology and concepts from mainstream contemporary psychology or philosophy.

Chapter 8 discusses Piaget's so-called clinical method, showing that he was quite aware of the strengths as well as the shortcomings of this method and that he actually collected much more empirical material than has been published.

As one expects, there is a presentation of his so-called stage theory, with chapter 9 dealing with infancy, chapter 10 with childhood, and chapter 11 with adolescence, all presented in quite a bit of detail and in Piaget's own words or paraphrases. These chapters also contain short discussions and rebuttals of criticism—for example, that the stage theory assumes that cognitive development is inflexible and context independent.

Chapter 12 presents Piaget's influential theory of moral development, and chapter 15 discusses his pedagogy. Less-well-known aspects of his theories, such as his ideas on consciousness and emotions, are addressed in chapters 13 and 14. The final chapter, 18, deals with neo-Piagetian ideas.

Does the Book Deliver?

As indicated, the book provides a comprehensive account of Piaget's theories, methods, and empirical results, written by well-known and knowledgeable

scholars. There are interesting interpretations of, for example, Piaget's methods, stage theory, biology, sociology, and much else, as well as discussions of criticisms leveled against them, as one would expect.

However, as already indicated, many of the chapters rely very heavily on Piaget's own terminology in explaining and justifying his views. This might be a useful strategy if one wants to present Piaget with as few misrepresentations as possible and to show his uniqueness, but it is fundamentally problematic.

Any fruitful presentation and evaluation of a belief system should not presuppose the ideas and values of that very same belief system. To avoid circularity and self-maintenance, an external point of view is needed. This argument has been developed and illustrated by Ernest Gellner in many different contexts. The general point is argued for in *Legitimation of Belief* (1974) and applied interestingly in his book on psychoanalysis.¹ In his own words,

it seems to me the first principle of the study of any belief system is that its ideas and terms must be stated in terms other than its own; that they must be projected on to some screen other than one which they themselves provide. They may and must speak, but they must not be judges in their own case. (5)

An "internal style" of presenting ideas builds on the assumption that their importance, relevance, and even truth are contained in the ideas themselves and that there is no need to explain or justify them further, thus making an adequate characterization and evaluation very difficult. Furthermore, it becomes difficult for the uninitiated reader to understand them and to compare and evaluate them to other ideas and theories, dealing with the same or related problems.

The advice is especially appropriate in this case, since the authors clearly state that their aim is to show the relevance of Piaget to contemporary and future research in psychology. I thus argue that the authors' reliance on Piaget's own way of formulating his ideas and theories as well as their scant references to relevant areas of contemporary research in psychology has several negative consequences: the book fails as an introduction to Piaget for students and uninitiated thinkers; it fails to show Piaget's place in the history of psychology; and most important, it does not succeed in connecting Piaget with contemporary psychological research. Finally, it disappoints in its explanation and defense of his genetic or developmental epistemology.

¹Ernest Gellner (1996).

Let me now substantiate these claims.

Introduction for the Uninitiated

By using an “internal style” of presenting Piaget’s ideas and theories, the authors make it difficult for people unfamiliar with Piaget’s concepts and belief system to understand and assess them.

For example, in chapter 9, “Infancy,” Ulrich Müller gives a comprehensive overview of Piaget’s studies and theories of infancy. Most paragraphs contain a large number of quotes from Piaget’s works, explained in terms that stay close to his own. For an uninitiated reader, this makes for very dense and difficult reading.

A similar style of writing is found in most chapters, and this internal way of presenting Piaget’s concepts, beliefs, and methods makes the book unhelpful for students unfamiliar with Piaget. For example, chapters 3, 6, 7, 8, 15, and 17 aim to explain difficult Piagetian concepts yet fail, to my mind, because they stick too close to Piagetian formulations and use a lot of quotations.

Given this, anyone wanting an introduction to Piaget in his own terms is better off, I think, to turn to his writings, some of which are accessible. For example, the short *Six Psychological Studies* (1964) gives an accessible summary in Piaget’s own words and is a better way, in my opinion, to discover and become intrigued by his views than many of the chapters in this volume.

Piaget’s Influence on Psychology and Philosophy

Unquestionably, Piaget, along with Sigmund Freud and B. F. Skinner, is one of the most influential thinkers in psychology. His influence on developmental and cognitive psychology, pedagogy, and the so-called cognitive revolution is without doubt. Just as Freud gave us a new conception of sexuality—namely, that phenomena that overtly seem to have nothing to do with sex, such as potty training, suckling at the mother’s breast, and artistic activity, are sexual to the core—Piaget helped to change present conceptions of intelligence. The infant’s kicking, imitations, and other activities are instances of intelligence, albeit of a sensorimotor kind, he claimed.² Piaget’s intellectual problem context—which he shares with Freud and other thinkers

²Others helped to change conceptions of intelligence, of course; for a discussion of the sources of the concept of intelligence in psychology, see Kurt Danziger (1997).

of the same period, especially in France—of reconciling biology and psychology is touched on in chapter 2 but is not presented or discussed in terms of mainstream psychology, due to, I believe, the authors’ “internal approach” to Piaget’s belief system.

In traditional philosophy and psychology, infants have been taken to be rather uninteresting creatures, but Piaget, along with, for example, Noam Chomsky, was important in changing this and paving the way for contemporary developmental psychology’s focus on infants as intelligent, competent, and social beings. More than anyone else, Piaget contributed to the study of infants’ and young children’s cognition, language, social abilities, and understanding of other people. All these are central areas in contemporary psychology as well as some other areas that have become important in recent years—namely, self-regulation and the role of emotions in cognitive development.

Although much of research in these areas is critical of Piaget’s theories, methodology, and empirical results, they are unthinkable without his contributions. For instance, already in the 1970s, a growing body of research showed that children were more competent cognitively and socially than Piaget had claimed.³ More recently, one of the fastest-growing areas in psychology has focused on children’s understanding of other people’s thoughts, emotions, and beliefs—their so-called “theories of mind.” Most of it is a critical reaction to Piaget’s claim that young children are egocentric and unable to take another person’s perspective.⁴

A distinguished group of scholars has even claimed that these theories of mind, as well as those of children’s thought processes dealing with the physical environment, should be compared with accomplished scientists’ theories.⁵

Piaget’s assumption, that cognitive activity and cognitive development are biological processes, is shared by many psychologists, especially in developmental psychology.⁶ Although Piaget’s Lamarckianism has been criticized, his fundamentally biological, even evolutionary approach makes him a precursor of today’s evolutionary psychology. Even his ideas on so-called

³See, for example, Magret Donaldson (1984).

⁴For an introduction to and overview of this research, see, for example, Martin Doherty (2009).

⁵See Alison Gopnik, Andrew Meltzoff, and Patricia Kuhl (1999) and Alison Gopnik (2009).

⁶See John Morss (1990).

epigenesis, which for a long time were severely criticized, have actually been revived, in biology as well as in psychology.

Evolutionary psychology⁷ has become one of the central research programs in psychology and increasingly so in pedagogy.⁸ In the chapter on Piaget's biology, by John Messerly, we get a good overview of Piaget's views as well as some quotes from people connecting his ideas more generally to evolutionary psychology, but it would have been even better with a more direct engagement with evolutionary psychology—for example, with issues raised by Genovese in his 2003 article "Piaget, Pedagogy, and Evolutionary Psychology."⁹ This article discusses the well-known criticism of Piaget's idea of formal reasoning in adolescence and his failure to distinguish among different cognitive abilities, such as primary biological abilities (universal, easily learned, and not requiring formal instruction) and secondary biological abilities (requiring formal instruction in schools, e.g.).

This distinction plays an important role in contemporary evolutionary pedagogic,¹⁰ but the authors of the book fail to discuss Piaget's ideas on this, missing a great opportunity to engage with contemporary research in cognitive and educational psychology.

The role of emotions for the emergence of symbolic thought or cognition in infants and their so-called self-regulation and social control is another growing area of developmental psychology.¹¹ Would Piaget's ideas be helpful in developing this?

Also, what about Piaget's ideas on how the gap between physical causality and conscious experience should be accounted for, one of the most difficult questions in contemporary cognitive psychology and science?¹² The problem is mentioned in chapter 13, but would Piaget's ideas contribute to the present discussion?

Much of the last several decades' research in developmental psychology undoubtedly owes a lot to Piaget, even if it has turned critical. However, serious engagement with this is lacking in the book under review.

Piaget's ideas have had a wider reach than developmental psychology. Along with other developmental psychologists, such as Lev Vygotsky, he

⁷See David Buss (1999).

⁸See David Geary (2002).

⁹John Genovese (2003).

¹⁰See David Geary (2002, 2005).

¹¹See Alan Greenspan and Stuart Shanker (2004).

¹²See, for example, Antonio Damasio (2010).

inspired the so-called cognitive revolution in psychology in the 1950s by, among other things, making the study of mental processes central to psychology and by stressing the interdisciplinary study of the mind.¹³

He also introduced the systematic study of morality and ethics in psychology, developed in various ways by Lawrence Kohlberg and Carol Gilligan, who also attempted a feminist criticism of psychology based on it.¹⁴

Piaget's influence in philosophy and philosophy of science is also substantial. He revived the discussion of the demarcation between psychology and philosophy, leading to quite extensive philosophical debates in the 1970s.¹⁵ Thomas Kuhn claims that his philosophy of science, especially his idea of incommensurable paradigms and paradigm shifts, was inspired by Piaget's stage theory of cognitive growth.¹⁶ Jürgen Habermas was also inspired by Piaget's structuralism and especially his theory of cognitive development, developing his own conception of rationality and communicative action.¹⁷

In sum. Although several of the authors (particularly Lesley Smith, Marylène Bennour, and Jacques Vonèche) address Piaget's theoretical and empirical contributions to psychology, pedagogy, and philosophy, they fail to explain Piaget's ideas and methods and their influence, because they are too tied to the belief system they discuss and because they do not engage or exemplify their claims by presenting specific examples from contemporary psychology and philosophy. Thus, they have, unfortunately, not shown that Piaget's intellectual output is "unparalleled in terms of its originality, scope, and systematicity" (200).

For the same reason they also fail in explaining his long-term importance to the practical work of psychologists, social workers, and teachers, as well as to the countless children and their parents that have been judged and influenced by Piagetian ideas in schools and elsewhere.¹⁸

¹³John Gardner (1985).

¹⁴Lawrence Kohlberg (1981) and Carol Gilligan (1982).

¹⁵See David Hamlyn (1978) and Walter Mischel (1971).

¹⁶Thomas Kuhn (1962, 1977).

¹⁷See Jürgen Habermas (1984, chap. 1).

¹⁸For example, his theories of cognitive development are used by many to justify the use of technology—that is, computers (Erneling, 2010). Piaget inspired Seymour Papert (1980, 1993) and Roger Schank and Chip Cleary (1995) to promote programming exercises and computers in education.

The Understanding of Piaget's Genetic or Developmental Epistemology

Turning to the final issue, that is, whether Piaget's basic research program of genetic epistemology is misunderstood, as some of the authors claim, I think we run into the same problem once again—namely, that the authors' "internal approach" to Piaget is a weakness, since it becomes hard to characterize as well as evaluate his specific contribution.

For example, Leslie Smith's chapter on Piaget's developmental epistemology is interesting, but he stays too close to Piaget. Not only is the discussion restricted by using more or less exclusively Piagetian terminology, but there is also very little engagement with scholars with other starting points and philosophical convictions—for example, with some of Piaget's philosophical critics in the analytical tradition¹⁹ or with more current debates in cognitive science.²⁰ Engagement with critics outside the Piagetian tradition could have helped the authors to reformulate Piaget views and his genetic epistemology in a more interesting way, relevant to scholars and students not already convinced of its importance.

In their defense of Piaget's genetic or developmental epistemology, the various authors argue different things. They, among other things, claim that Piaget, unlike most psychologists, is aware of, makes explicit, and secondly defends his basic views on the mind as well as his methodological assumptions.

I think the authors are correct in this; psychologists seldom discuss or are even aware of their methodological, epistemological, and ontological assumptions in the way that Piaget was. But again, there are thinkers who make such assumptions explicit and discuss them. Why not engage with them and show how Piaget would make a difference?²¹

The substantial issue is, of course, whether genetic epistemology is valid. The basic assumption of Piaget's genetic epistemology is his conviction that all mental activity is a process of constant change and that most epistemological thinkers fail to take this into consideration. Traditional theories in psychology and in epistemology cannot, according to Piaget, explain knowledge growth, because they assume that knowledge is based on static and secure starting points, extended but not added to by induction or deduction. Examples of such

¹⁹ See Walter Mischel (1971).

²⁰ Johnson and Erneling (1997) and Erneling and Johnson (2005).

²¹ See, for example, books by Jerry Fodor, Steven Pinker, and Daniel Dennett and historical works such as Kurt Danziger's.

unchanging foundations of knowledge are, according to Piaget, Descartes's clear and distinct ideas, Leibniz's monads, Hume's strong and vivid sense impressions, Kant's categories of thought, and even Hegel's dialectical concepts. Contemporary theories of cognitive development and learning share such assumptions, Piaget claims, and this is why he rejects Chomsky's preformism²² and behavioristic learning theories as well as traditional epistemologies such as rationalism, empiricism, and, even (partially) Kantianism.

His proposed solution—that is, his genetic epistemology—turns the traditional assumptions on their heads by assuming that what they take to be the fundamentals of all knowledge is the result of a constantly changing mental activity. Traditional theories, such as the ones mentioned above, are theories of re-presentation of the basic building blocks of knowledge and thus do not give an adequate account of cognitive growth or learning. But neither does Piaget, to my mind, since in important aspects, his genetic epistemology is like the epistemologies he is critical of, in that he assumes justificationism, or the idea that all knowledge acquisition, including scientific and individual acquisition in childhood, is the quest for justification, certainty, or objectivity. This assumption he shares both with the epistemologies he criticizes and contemporary psychological thinking.²³

I believe this becomes more evident if one goes outside the “internal” Piagetian framework that, as I have argued above, the authors mainly fail to do. For this purpose, let me compare Piaget with his contemporary thinker Karl Popper, since both, more or less at the same time, proposed evolutionary epistemologies, which have become influential in psychology and philosophy, respectively. Such a comparison is more useful in evaluating Piaget's claims than the internal approach found in most chapters, and it indicates how some of Piaget's ideas might be fruitfully developed.

Both Popper and Piaget (born six years apart; Piaget in 1896 and Popper in 1902) developed evolutionary epistemologies but have very different views about the growth of knowledge. Both claim that knowledge and its growth are adaptations to the environment, enabling humans to go beyond animals through their cognitive abilities, and both argue that the organism and individual learner, by being actively involved, are seeking out and constructing their own beliefs about the world. Popper and Piaget assume that perception and cognition are in constant “flux.” A later experience is never a repetition of an earlier one, even if the stimuli are the same.²⁴ Both assume

²² See, for example, Jean Piaget (1980).

²³ Christina E. Erneling (2010).

²⁴ Karl Popper (1957) and Jean Piaget (1980).

that the individual makes unwarranted generalisations, conjectures, and other mistakes, “fallibility of knowledge claims” in Popper’s terminology and “mistaken causal generalisations” in Piaget’s. Learning occurs by error reduction in Popper’s view and by restoring imbalances in Piaget’s, which is to say that learning is a process of selection. They also view knowledge as a process, constantly changing, and both reject what Popper refers to as the “truth is manifest” assumption in traditional rationalism and empiricism.

In spite of these similarities, they end up with different views of learning and the growth of knowledge. Some of the differences can be traced to their different views of evolution, Piaget’s is a pre-Darwinian, Lamarckian, metaphysical assumption of evolutionary progress, and Popper’s is neo-Darwinian. The learner, according to Piaget, is prepared by evolutionary and innate laws to respond to the environment in specific ways, leading to more and more certain knowledge claims. This reduces the deliberative and active aspect of human reason to biological responses, akin to an animal’s immediate and adaptive response to the environment. Popper’s view is very different and stresses deliberation and uncertainty. In the end, it thus seems that Piaget ends with a position very similar to the ones that he rejects—that is, the idea of knowledge as resting on secure foundations. Why not develop this in a similar way as Popper does?

Concluding Remarks

Overall, the book is disappointing, but in closing I would like to applaud the authors for making genetic epistemology central to understanding Piaget. Psychologists studying the developing child all make assumptions about knowledge and learning, which mostly are unexamined. Piaget was different in that he clearly set out to discuss his own and others’ underlying assumptions. Although he failed to give a successful account of cognitive growth and fell back on biological processes (Erneling 2010), he set the stage for important areas of psychology by providing subject matter for today’s research in child development as well as cognitive and evolutionary psychology. Thus, I think it is important to discuss Piaget’s basic assumptions and his theories precisely because they are shared by many contemporary theories in psychology.²⁵ In this I agree with the authors, but to succeed and to convince the skeptical scholar or student, one needs to move outside the Piagetian “paradigm” and also engage more with contemporary research issues.

²⁵For examples of similarities with Chomsky, see Erneling (2010, chap. 1), and for similarities with Alison Gopnik and Andrew Meltzoff’s theories, see Erneling (2010, chap. 5).

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