

Piaget and Marxist Philosophy

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There are two ways in which Piaget's views on philosophy are not only wrong but incompatible with dialectical materialism. He is well aware of Marxist criticisms of him, and has a number of shots to take at Marxism, some of which are noted below. Piaget has a right-wing version of "dialectics," not based on contradiction, but on the supposed tendency of living things to move to ever higher stages of equilibrium. This view is the direct opposite of Marxist dialectics, and was thoroughly refuted by Soviet philosophers in the 1930s, but not until it did a lot of damage. Bukharin in particular used the idea that society necessarily moves toward equilibrium to argue that the contradictions between the working class and the capitalist peasants (kulaks) would gradually die out as equilibrium was approached. The rosy view of the world that living things and society moved toward equilibrium fit in well with Piaget's Christian socialism and pacifism, which were his social starting points. In his early work, Piaget used the concept of equilibrium to "explain" morality, beauty, and religion (see F. Vidal, *Piaget Before Piaget*, Harvard University Press, 1994, Chapter 14). In later works, he continued to equate morality with a kind of equilibrium.

Piaget also has an idealist theory for knowledge that deals with logic and mathematics, a theory usually called "constructivist" or "neo-Kantian." He divides experience into two types, *physical* and *logico-mathematical*. The former extracts knowledge from objects, the latter does not come from objects, but from the actions (physical or intellectual) of the subject which confers properties on objects. This latter kind of "experience" involves the subject's *imposing properties on objects that they do not have in advance*. This "imposing properties on reality" is necessary, in his view, for essentially all of mathematics and logic. In physics, where mathematics is directly involved in knowledge of the world, he claims that the subject "constructs the real" and "inserts" relationships into the real.

Although Piaget admits that there is an objective external world, he says that the properties and relationships of things in that world are partly imposed on it by the mental activities of the knowing subject. This view is utterly incompatible with materialism, but Piaget denies that he is an idealist. The passages in part II below are only a few of the many in which Piaget discusses his take on this, often in an extremely obscure way. Simply put, however, his view is that relationships between objects--including spatial and causal relationships--do not exist independently of their being thought by the subject, but are imposed on the object by the subject. This is idealism in spades. In passages quoted from Piaget's works below, words in square brackets have been inserted for clarity, or in a few cases, to show the French words which were translated.

I. J. Piaget's "Dialectics" Without Contradiction

1. *What Piaget calls "dialectic" is not based on negation or contradiction, but is a "dialectic" of "putting together":*

" ... there is already dialectic when two systems, which up to that point are distinct and separate but *not opposed to each other*, fuse into a new totality whose properties go beyond the two, but are sometimes much the same as they were.... [There are examples of] dialectical construction without contradictions to overcome.... On the whole there are thus three dialectical movements to consider: (1) Putting in interdependence

the forms necessary for assimilation, (2) putting into interdependence the properties attributed to the object, and (3) synthesis of these forms and of these contents which thus acquire the form of 'models'..."

--J. Piaget, et. al., *Les formes elementaires de la dialectique* [*The Elementary Forms of Dialectic*], Gallimard : Paris, 1980, pp. 213-4, 223, emphasis added.

2. *The basis of his "dialectic" is his metaphysical principle that all life moves toward equilibrium:*

"... equilibrium is ... an intrinsic and constitutive property of organic and mental life.... the theory of [human] development necessarily appeals to the notion of equilibrium, since all conduct tends to secure an equilibrium between internal and external factors ..."

--J. Piaget, "Le role de la notion d'equilibre dans l'explication en psychologie [The role of the notion of equilibrium in psychological explanation]," *Acta Psychologica* XV (1959), pp. 51 - 64

3. *Piaget denies that there can be contradiction in living beings:*

"... if there were not at all levels co-ordinations requiring a form, however crude, of non-contradiction, life would long since have disappeared from the earth's surface."

E. W. Beth and Jean Piaget, *Mathematical Epistemology and Psychology*, W. Mays, trans, Dordrecht: D. Reidel, 1966, p. 290.

4. *Piaget claims that only statements contradict each other, not actions:*

"It remains for us to speak of the status of contradiction in a dialectic founded on the implication between actions or operations. The big difference between these actions or operations and statements is that statements consist of "what is said," while actions (including the case where statements are subordinated to operations which integrate them into operatory structures) are characterized by "what is done," which are prior to language (at the sensory-motor level), prior to the constitution of the first statements, and are afterwards in competition with those statements.... In general, contradiction between statements is always possible, and it is easy to formulate them without seeing that they contradict other statements previously affirmed. It is also clear that implications between meanings are protected from contradictions to the degree that actions and operations thus signified are already protected from contradiction by the fact that contradiction between two actions is equivalent to the impossibility of doing them both. "

J. Piaget, et. al., *Les formes elementaires de la dialectiques* [*The Elementary Forms of Dialectic*], Gallimard : Paris, 1980, pp. 225-7.

5. *Piaget denies that contradiction is inherent in human thinking:*

"Philosophers propounding the 'dialectics of nature' have with some exaggeration seen 'contradictions' in things that operate in opposite directions in the physical world--in actions and reactions, and so forth. Causal models of such phenomena, however,

contain no logical or normative contradiction. ... Likewise in sociology Marxist dialecticians stress the fundamental role played by conflicts and disequilibria, but we do not consider ourselves competent to judge that idea. As for cognitive development, it is difficult, at least in our current state of knowledge, to maintain that disequilibria or contradictions are inherent characteristics of thought because up to now no one has provided a formal elaboration of dialectical 'logic'.... [O]ur previous remarks on negation and the experiments we have done on contradiction ... [b]oth indicate that the mind spontaneously centers on affirmations, or the positive characteristics of objects, actions, and operations. Negations are neglected or are constructed only secondarily or laboriously."

--J. Piaget, *The Equilibration of Cognitive Structures*, Chicago : Univ. of Chicago Press, 1985, pp. 12-13.

6. *Piaget denies that contradictions drive dialectical development:*

"It is true that the dialectical schools, so fashionable today, posit contradiction as a primary and necessary fact, and one that constitutes the motive force for all noetic [mental] as well as praxeological [practical] progress. But the point here is precisely that what dialectics calls contradiction is not a logical or formal contradiction, otherwise it could never be "transcended" but only corrected and eliminated.... natural thought is essentially dialectical in its development, being a succession of disequilibriums and reequilibrations, [but] ... *these contradictions, "dialectical" and natural alike, are merely the expression and not the causal sources of those disequilibriums.*"

--J. Piaget, *Experiments in Contradiction*, D. Coltmann, trans, Univ. of Chicago Press, 1980, pp. xiv, 304, emphasis added.

7. *Given the above claims, it is to be expected that Piaget rejects real dialectics:*

... [Mueller] would like me to say that my psychology is closely bound up with the Marxist dialectic... If there are definite points of convergence between my interpretations and the dialectic... I would like to make it clear that it is a matter of convergence and not influence... As we have seen in Chapter three, ... either the [Marxist] dialectic is a metaphysics like any other, which claims to direct science, and this can only harm science as well as itself, or its strength is due to the fact that it converges with all manner of spontaneous scientific ideas, and the only thing to do therefore is to work in complete independence [of it].

--J. Piaget, *Insights and Illusions of Philosophy*, W. Mays, trans, London: Routledge & Kegan Paul, 1971, pp. 203-4.

8. *Rejecting Marxist dialectics, Piaget is happy to endorse Althusser's revisionist "dialectics" that eliminates the struggle of opposites, and that is the basis of much of "Postmodernism":*

"Althusser's work, whose meaning is to constitute an epistemology of Marxism, thus aims at two very legitimate goals, among others, of disengaging the Marxist dialectic from that of Hegel, and giving the former a contemporary structuralist form.... The second remark which we will retain from Althusser is that dialectical contradiction in

Marx does not correspond with that of Hegel, which reduces itself finally to the identity of opposites: it is the product of an "overdetermination," that is to say again, if we comprehend correctly, of the play of indissociable interactions."

--J. Piaget, *Le Structuralisme* [Structuralism], Paris: Presses Universitaires de France, 1968, p. 106.

II. Piaget's Idealist Theory of Knowledge

9. *This passage describes Piaget's concept of "logico-mathematical experience." This experience is supposed to give objects characteristics--order and other relationships--that the objects themselves would not otherwise have, but which are put there by the subject:*

"... there are two kinds of experiences, ... physical and logico-mathematical. The physical experience ... consists in acting on objects to extract knowledge by abstraction based on the objects themselves... The logico-mathematical experience ... begins by *conferring on objects characteristics they did not have*.... In the case of the sum and order of the pebbles counted by the child ... [w]hat the subject then discovers is not a physical characteristic of pebbles.... the experience is authentically logico-mathematical, dealing as it does with the very actions of the subject and not of the object as such."

--J. Piaget, *Psychology and Epistemology: Towards a Theory of Knowledge*, A. Rosin, transl, New York: Viking Press, 1971, pp. 70-1, emphasis added.

10. *Another statement of the view that mathematical properties would not be present in physical objects unless the subject had put them there:*

"In fact, *the first steps in mathematics can appear empirical*: to join or separate the elements of an abacus, verify the commutativity by permutation of subcollections, etc. But contrary to physical experience where the information is taken from characteristics belonging to the object itself, the reading of *these "logico-mathematical experiences" rests only on properties introduced by action in the subject* (collections, order, etc.): it is then natural that these actions, once interiorized in operations, can then be executed symbolically and hence deductively, and that to the degree that multiple operatory structures are elaborated beginning with these elementary forms, *their agreement with "arbitrary objects" remains assured in the sense that no physical experience could refute, since they concern properties of actions or operations, and not of the objects.*"

--J. Piaget, *L'Epistemologie Genetique* [Genetic Epistemology], Paris: Presses Universitaires de France, 1970 p. 94, emphasis added.

11. *This passage says that the mathematical aspect of physical facts is not built into the universe, but are put there by the knowing subject:*

"More questionable is the belief that if formulation is the work of the subject and if the object exists, then it must be possible to trace a stable limit between the mathematization and the objects themselves, since a physical 'fact' does not itself

include a mathematico-logical dimension, but receives it [from the subject] only after the event. Not only is there an absence of a clear frontier between the contributions of the subject and those of the object (since we can only know about the interactions between the two) but in addition, it is only to the extent that logical and mathematical structures are applied that one can come to attain the object, and objectivity improves as a function of richer logico-mathematical structures."

J. Piaget and R. Garcia, *Psychogenesis and the History of Science*, translated by. H. Feider, New York: Columbia University Press, 1989, pp. 3 - 4.

12. *This passage is a fairly clear statement of the idealist view, made famous by Kant, that our knowledge of space is not extracted from the universe in the process of coming to know it, but that spatial relationships are imposed on the world by the knowing subject:*

"The 'intuition' of space is not a 'reading' or apprehension of the properties of objects, but from the very beginning, an action performed on them. It is precisely *because it enriches and develops physical reality instead of merely extracting from it a set of ready-made structures*, that action is eventually able to transcend physical limitations and create operational schemata which can be formalized and made to function in a purely abstract, deductive fashion....

... spatial concepts are internalized actions, and not merely mental images of external things or events--or even images of the results of actions.....

It is precisely because of its monolithic, unitary character that Kant was led to regard space as a form of 'sensitivity', to consider its intuitive character as fundamental. This does not, of course, rule out treating space as operational--that is, intellectual--but only necessitates drawing a distinction between sub-logical operations concerned with mental construction of the object as such (and therefore, with a single schema) and logico-arithmetical operations dealing with collections of discrete objects."

J. Piaget and B. Inhelder, *The Child's Conception of Space*, F. Langdon and J. Lunzer, translators, New York: Norton & Co., 1967, pp. 449, 454, 456, emphasis added.

13. *This passage shows how close and also how far Piaget's view is from materialism. He believes that there is a real world, but that how it is divided into entities depends on the knowing subject:*

"In order to act on the object it is necessary for there to be an organism and this organism is also part of the world. I therefore evidently believe that the world exists before all knowledge, but that *we only divide it up into individual objects* and as a result of an interaction between the organism and the environment."

--J. Piaget, *Insights and Illusions of Philosophy*, W. Mays, trans, London: Routledge & Kegan Paul, 1971, pp. 203n14, emphasis added.

14. *The following question was asked of Piaget by Leo Apostel, a logician who worked closely with Piaget. It illustrates some of the contradictions that Piaget's idealism gets him into. It is from a book made up by some of Piaget's friends who got together to help launch one of his books:*

Apostel's Question:

"There remains a third question. I am somewhat occupied by the question of causality, as is Piaget as well. His conclusion, if I have understood it correctly, is that causality is introduced *by attributing logical operations to material objects*. Consequently, I pose the following dilemma: If it is a matter of attribution in the sense of "projection" of something which is internal to us on an external system, which does not objectively execute these operations, then the problem of causal explanation, in general, and of epistemic development, in particular, takes on an idealist appearance and the question becomes: its it true that I, an epistemologist and scientist, can project into external development logical operations which are not found there, and can believe that I have thus attained a causal explanation? I think that Mr. Piaget would not want a similar answer. Thus I think that the he must choose the second part of the dilemma, and I find myself confronted by the necessity to believe that logical operations which the knowing subject attributes to known material objects must be found there in some fashion as objective exterior reality. But how can physical reality, the pre-existing material correspondents of logical operations be grasped? It is in this second sense, I believe, that the problem of explanation of the genesis [of knowledge] truly takes on its value. I suggest another future work: combining work on *causality* with work on *explanation of development* and self-application of a part of the Piagetian system to another part of the Piagetian system...."

Piaget's answer:

On my part I see no sort of contradiction between the attribution by the subject of his [mental] operations to the object, and the fact that the object already contains something analogous [to the subject's mental operations]. When the physicist or the child, since it is a trait common to all the levels [of mental development], attributes its logico-mathematical operations to physical objects to try to understand them and transform them into operators, there is of course an element of projection there. But the important fact is that, if the subject did not possess these operations, it would not comprehend the object. On the other hand, the object offers no resistance [se *laisse faire*]. Note that this offering no resistance is not a trivial general proposition, since everyone knows that it does sometimes offer resistance: but, if it offers resistance, it is precisely because one did not find good operations, etc., and when one arrives at true theories, it is because the object offers no resistance, which comes back to saying that it contains something analogous to my [mental] operations."

Note that Apostel's materialist objection arose in the first place because Piaget maintained that in logico-mathematical experience, the subject begins by "conferring on objects characteristics they did not have" (see #9 - Piaget). When confronted with Apostel's objection Piaget momentarily flirts with the materialist view what a true theory attributes to the object is actually present there.

Apostel is trying to show that Piaget's version of causality undermines the whole project of explaining the development of the child's intelligence. Apostel's point could be rephrased as follows:

- a. *The project of genetic epistemology is to find the causes of intellectual development in the child*
- b. *Piaget's account of causality attributes the operations of the investigator to the object studied, although those operations are not actually in the object studied.*

c. When Piaget's definition of cause (in b) is applied to the project of genetic epistemology (in a) the result is that the project of genetic epistemology is to attribute to the child the operations taking place in the investigator ("projection"), and not actually taking place in the child

d. It follows that the project of genetic epistemology is to attribute to the child mental operations that he does not perform, which sounds like a perfect definition of a false theory of child psychology.

Piaget's response straddles the fence. He says that the subject projects his own operations onto the object, but that there are some limits on this, and the object would resist some operations that the subject might try to impose on it. He also says here that the object known must contain "something analogous" to the operations projected onto it by the subject. But if the processes really occur in the object, this directly contradicts his earlier claim that mathematical or spatial relationships cannot be learned from the objective world, since those properties are not really present in the material world, but are "introduced by action in the subject" (see #10). Faced with contradiction, he splits the difference. He says that the operations we attribute to the physical object don't occur there, but something analogous does. If that "something analogous" were enough for us to learn our causal ideas from the actual process in the object, then we would have a materialist theory of how the knowledge of causes arises, but the whole point of Piaget's theory of "logico-mathematical experience" is to deny this.

Hommage a Jean Piaget: Epistemologie genetique et equilibration [Hommage to Jean Piaget: Genetic Epistemology and Equilibration], edited by B. Inhelder, R. Gracia, J. Voneche, Neuchatel, Paris, Montreal: Delachaus et Niestle, 1976, pp. 61 - 4.

For Further Reading:

K. F. Riegel, "Toward a Dialectical Theory of Development," *Human Development*, vol. 18, 1975.

Sophie Haroutunian-Gordon, *Equilibrium in the balance : a study of psychological explanation*, New York: Springer-Verlag, 1983.

F. Vidal, *Piaget Before Piaget*, Harvard University Press, 1994.

T. Kesselring, *Entwicklung und Widerspruch: Ein Vergleich zwischen Piagets genetischer Erkenntnistheorie und Hegels Dialektik*, Frankfurt am Main: Suhrkamp, 1981.