
Friedrich Engels: Builder of Closed Systems?

Author(s): Gert Schäfer

Source: *Science & Society*, Spring, 1998, Vol. 62, No. 1, Friedrich Engels: A Critical Centenary Appreciation (Spring, 1998), pp. 35-47

Published by: Guilford Press

Stable URL: <https://www.jstor.org/stable/40403685>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



is collaborating with JSTOR to digitize, preserve and extend access to *Science & Society*

JSTOR



Friedrich Engels: Builder of Closed Systems?

GERT SCHÄFER

It goes without saying that people in possession of an ultimate truth and the only true science must despise the erroneous and unscientific rest of mankind.

Engels on Eugen Dühring, 1894, 29

FRIEDRICH ENGELS, AN EXCEPTIONAL MAN and thinker, in many respects admirable, unconventional, overcoming the customary standards of his time and milieu (although not completely immune to their influence, as Marx and he himself emphasized) — precisely he of all people, more than Marx, unfortunately became chief witness to the pretended “closed ideology” of “Marxism–Leninism.” On one side he was glorified, on the other condemned as the pioneer of “Diamat”; both views, however, degrade this openminded, experimental, heretical thinker. He is said to be a builder or fabricator of a closed system, and classical author of canonical works. This happened to him, although he was full of contempt for and made sport of such constructions. His ideas of dialectical laws of development in nature and history were transformed exactly into what he had warned against in advance: “A collection of dogmatic doctrines, to learn by rote and to repeat just like a conjuration or a catholic prayer” (Engels, 1891, 101).

Ideological Transubstantiation

This is not the appropriate place to discuss the development, structure and function of “Dialectical Materialism,” the “ideology” or

“Weltanschauung” of the “Marxist–Leninist Party.” The cementation into a system of iron truths and laws of Cosmos, Nature and History (all with capitals) was the fiction of an absolute knowledge and “*formamentis* of a bureaucratically organized societal formation” (Fleischer, 1970, 181). Hardly anything could be more alien to Engels (or Marx alike). As to the transformation of Marxism into an Orthodoxy, he mocked at this already during his lifetime (Engels, 1893, 546). With regard to Marx, he wrote, *e.g.*, to Isaak Adolfovitch Gurwitch in Chicago:

As you may know yourself, there are passages taken out of the writings and the correspondence of Marx, and interpreted in extremely contradictory ways, just as if these were texts from classic authors or from the New Testament. Whatever I could say on the topic you mentioned [the peasants and Russian revolutionary movement] is likely to suffer the same fate. (Engels, 1893b, 75.)

Neither he nor Marx imagined that their “scientific socialism” would ever be transmuted into the dogma of “unity of thinking and acting,” hence “nothing other than Orthodoxy and blind obedience. *Perinde ac cadaver*” (ME, 1874, 346).

Engels admonished the “Marxians” or “Marxists” (so he said eventually in adopting the self-designation of the French faction) again and again not to handle the “materialist conception of history,” or “theory of history” — “historical materialism,” in the formulation of his introduction to *Socialism, Utopian and Scientific* (Engels, 1892a, 527, 532) — like “a windy phrase,” as “during the last twenty years in the works of the younger partisans,” rather than to understand after all what this conception “really was: a leading idea [*ein Leitfaden*] in studying history” (Engels, 1892b, 308). In the famous preface to the *Critique of Political Economy*, in the summary on the course of his intellectual development, Marx used a similar formulation: “*ein Leitfaden* of my research works” (Marx, 1859, 8). However, just as Engels had deplored in regard to the young Paul Lafargue: their studies were reversed “into the dogmatism of a scientific oracle” (Engels, 1882, 409).

This transmutation and glorification built especially on Engels’ ideas on materialism and dialectics, as set forth in his *Anti-Dühring* (*Herrn Eugen Dühring’s Revolution in Science*), including *Socialism, Utopian and Scientific*, the notes and fragments on *Dialectics of Nature*, as

well as *Ludwig Feuerbach and the End of Classical German Philosophy*. Ever since Eduard Bernstein (Engels esteemed him) in *Evolutionary Socialism* (1899) considered and deplored the “traps of the Hegelian–Marxian dialectical method,” obviously neither Marx nor Engels could ever free themselves completely from Hegel’s “dialectics of contradiction” (Bernstein, 1973, 47–49). The conflict over the dialectic at the same time fused with the struggle between “revisionism” and revolutionary “orthodox Marxism,” and later (in a somewhat simplified sense) with the contest between “Soviet Marxism” and “Western Marxism” on the topics of “dialectics of theory and practice,” “subject and object,” “nature and history,” etc. The “debate on Engels” (MM, 1973) intermingles with all of these.

Helmut Fleischer stated, with regard to “Diamat”:

Their universal notion of philosophy derives the architecture of this system out of Engels’ definition of materialistic dialectic: the science of the general laws of motion and development of nature, human society, and thought. . . . From this explication of a fundamental dialectic–materialist notion of the universe follows the “application” of the resulting universal categories of essence to the special region of human society and history — “historical materialism” (in this comprehension of the general applicability of the dialectical laws). . . . If the theoretical and practical essence of this philosophical conception of Marx and Marxism could be denoted by one highest principle, “objectivism” is the proper notion. The decisive points are theoretical statements on the essence of being and existence. At the beginning there is the recognition of an “objective” order of the world, especially an order of process, articulated in general as well as specific laws of motion and development of the totality of being. These laws are presuppositions for the subject of consciousness and practice, demanding subordination. When practice finally becomes the theme, then this is likewise primarily in the form of an objective process and — the result of given, dominating objective laws — essentially as a matter of executing these laws. (Fleischer, 1970, 147–178, 180.)

Engels’ conception of dialectical laws of development thus was transformed into the highest principle of explanation and simultaneously into a basic ideological formula to legitimate policies, that is to cover and to vindicate political decisions with the great mantle of realizing objective laws of history and nature. As Herbert Marcuse wrote:

The Soviet Marxist hypostatization of dialectic into a universal scientific world outlook entails the division of Marxian theory into dialectical and historical materialism, the latter being the “extension” and “application” of the former to the “study of society and its history” (Stalin). . . . In Soviet Marxism, historical materialism becomes one particular branch of the general scientific and philosophical system of Marxism which, codified into an ideology and interpreted by the officials of the Party, justifies policy and practice. History, which in Marxian theory is the determining and validating dimension of dialectic, is in Soviet Marxism a special field in which historical as well as suprahistorical laws assert themselves. The latter, arranged into a system of propositions, are presented as the ultimately determining forces in history as well as nature. The dialectical process thus interpreted is no longer in a strict sense a historical process — it is rather that history is reified into a second nature. Soviet developments thereby obtain the dignity of the objective natural laws by which they are allegedly governed and which, if correctly understood and taken into consciousness, will eventually right all wrongs and lead to final victory over the opposing forces.

But while the objective, determinist character of dialectical laws is thus strengthened, Soviet Marxism in reality appears as defying determinism and practicing voluntarism. . . . In terms of Hegel’s and Marx’s dialectic, they are neither true nor false — they are empty shells. (Marcuse, 1961, 128–130.)

Helmut Fleischer, like Alfred Schmidt, emphasized a difference between Marx and Engels:

Marx is a thinker on the horizon of the human, social and historical action; to him the extrahuman nature, though not in her existence yet as a relevant object of cognition, constitutes solely the bottom pillar and the correlate — so to say a partner in interrelation [*Stoffwechselfartner*] to human activity. Engels instead has a cosmological conception of nature, and the existence of humanity appears as a moment in the life of nature, subordinated to her universal structure. That is the categorical difference between practical and cosmological materialism. . . . Marx with his philosophical notion of reality, programmatically outlined in the *Theses on Feuerbach*, stands in the tradition of transcendental philosophy from Kant to Hegel, consequently the dimension of a dialectic of subject and object. The conceptual frames of Engels, on the other hand, bear the signs of “objectivism.” Engels’ philosophy is a combination of cosmological materialism and dialectic, the latter comprehended as a code of general natural laws of development in all being. Thereby philosophy evolves in essence into a science of objective laws of the world. Engels codified some main laws in this sense, making use of Hegel’s categories. The difference in the approaches of Marx and Engels need not

necessarily result in practical consequences (thus being a conceptual reflection of different modi of practice), if the “objectivistic” conceptualization of world and history remains a subordinated proceeding, restricted to specific situations of recognition and thereby canceled out again (*wieder aufgehoben*). Sometimes Marx himself explained social relations and processes by means of objective–logical categories, whereas Engels, the man of practice, knew just as well how to cancel the objectivist conceptions in a dialectic of subject and object. Nevertheless he created a theoretical approach smoothing the way to a “totalization,” just the thing to come to the fore. So Engels became the ancestor of the Soviet Marxist conception of dialectical-materialist ideology and philosophy. (Fleischer, 1970, 175–176.)¹

Engels and Hegel

But this fine outcome was possible only as the result of a distortion. Engels’ attempts and efforts to discover general dialectical laws of motion and development had nothing to do with a search for closed or open systems, let alone some sort of absolute knowledge or control, with theoretical or practical “mastering” of the world (*Weltbeherrschung*) in a totalizing manner.

It is true that, like many of his contemporaries, he searched for a progressive form of development in the material world, in the history of nature and mankind, to demonstrate “a progress from the lower to the higher, throughout all zigzag courses and passing retrogressions,” as he wrote in *Ludwig Feuerbach*, both with and against Hegel (Engels, 1888, 292). Moreover, the “dialectical laws of development” were something like a bridge for him to obtain — both in the spirit of his time and against it — a materialist as well as a dialectical conception of evolution. In negating idealism (and Hegel’s absolute knowledge) as well as the dominating “vulgar materialism” of his time, and above all in resistance to Dühring’s “system of philosophy,” Engels was still driven, by attack and the expectations of partisans and opponents alike, to supply building stones for a totalizing doctrinal ideology — in spite of his recurrent critique of system building.

How much this transubstantiation was in full contradiction to the open, free, revolutionary mind of Engels follows from his numerous

1 Cf. Schmidt, 1971, 45–48. Cf. also the remarkable debate in front of 6,000 young people in Paris, December 1961: “Existentialismus und Marxismus. Eine Kontroverse zwischen Sartre, Garaudy, Hypolite, Vigier und Orcel. Mit einem Beitrag von Alfred Schmidt” (Garaudy, 1965).

statements and mockeries against all “system builders” — these horrible simplicateurs, as it were. In defense of Hegel he once ironically remarked against crowds of critics: some people believed

that they could dispose of him, if only they could spot here and there some of the false jumps by means of which Hegel, like every other system builder, had to rig up his construction. . . . Well, if only these people were able to read, Marx used to exclaim in the face of such critics (Engels, 1891b, 129.)

Engels too deserves to be defended against both his despisers and the doctrinarianism of the simplifiers appealing to him. Leszek Kolakowski was a sharp critic of his efforts to connect a non-mechanistic materialist dialectics of developmental processes with an instrumentalist criterion of truth: judging the effectiveness and success of our actions according to the model of experimental and industrial practice, or rather technology (see Engels, 1888, 276). Even Kolakowski, however, was fair enough to state: “All detailed historical and political analyses, both of Marx and Engels, demonstrated clearly that they themselves were mostly not the slaves of their own ‘reductionist’ formulations” (Kolakowski, 1988, 414).

Engels judged schematic generalizations to be a dreadful affair. To Karl Kautsky, *e.g.*, he wrote: “On the whole you generalized a great deal, therefore you became frequently ‘absolute,’ whereas the utmost ‘relativity’ is required. . . . (Once again an Ism!)” (Engels, 1889, 155). Yet when Dühring had set up his task and pretension and Engels himself felt challenged, he fell victim to his own endeavors to conceive a science of the general laws of motion and development — to demonstrate, in Hegelian manner, “dialectic as the highest form of thought,” “reflection” of an “inmost lawfulness” of nature and history, the universal validity of these dialectical structures of thought and the objective world, etc. (Engels, 1894, 19, 23). In his *Dialectics of Nature* he mentioned three or four main laws: “The sudden change and transformation of quantity into quality — the interrelated unity and reciprocity of polar contradictions merging into each other — development through contradiction or negation of negation — spiral line of evolution” (*ibid.*, 307).

Sven-Eric Liedman examined the origins and history of these “laws of dialectics” (Liedman, 1996, 221–240). At this place it must suffice to remember that Engels’ general approach of a non-reductive mate-

rialism, because of his combination of a Hegelian effort to connect the “forms of thought” with the “forms of being,” of the “objective reality,” the “theory of cognition and its laws, formal logic and dialectics,” on the one hand, with a “positive science of nature and history,” on the other (Engels, 1894, 24, 33) could only succeed — or rather fail — as a “materialistic” or “naturalistic” version of Hegel’s dialectical “notion,” the inner logic of philosophy or the process of thinking as well as the process of reality itself. Considered in this way Engels remained unwillingly, in spite of all verbal reservations, himself caught “in the cage of the Hegelian schematism of categories.”² Regarding Hegel’s “equation of true knowledge, thinking and real object” Ernst Bloch observed:

Thereby concomitantly the panlogism is included; that is to say, Hegel’s equation. . . . of the conceptual development of thinking and the comprehended motion of the world. The world consists of the same substance as the knowing mind in human beings; hence, due to this metaphysical unity of subject and object, there is nothing like a hiatus, and the knowable is also free from any substantial resistance to the knowing mind. (Bloch, 1977, 195.)

Bloch’s judgement regarding the equation of Hegel is also accurate *mutatis mutandis* for this side of Engels, provided that the reference to the natural sciences and the “real unity of the world in her materiality” (Engels, 1894, 41) take the place of panlogism. Though Engels again and again vehemently attacked the absurd fabrication of “artificial dialectical transitions” (*Übergänge*) in the Hegelian manner, to “construe dialectical laws into nature, instead of actually discovering and exposing them” (Preface to *Anti-Dühring*, Engels, 1894, 12; *Dialectics of Nature*, Engels, 1925, 515; etc.), the dialectic became in fact under the colors of materialism a sort of spiritual ontology of matter, indeed a “general cosmology,” a so-called “universal law of being” (Haug, 1995, 667–668).

Engels objected to Hegel’s “idealism”: “The dialectical development coming to the light in nature and history was only a poor copy of an eternally spontaneous motion of the ‘notion,’ nobody knows where, but at all events independent of any thinking human brain” (Engels, 1989, 292). This is the recurrent principal statement: “The

2 Engels on Dühring’s “logical properties of being,” a “translation” of “Hegel’s teaching of essence (‘antagonism of forces,’ opposites)” (Engels, 1894, 43).

wrongness and absurdity of Hegel's dialectic is based on the supposition that there is a 'self-development of the notion,' and therefore the dialectic of factual reality only the feeble copy, whereas dialectic in our brains indeed is nothing else than the reflection of a factual development in nature and human history ruled by dialectical forms" (Engels, 1891c, 204). Engels defended his theory of cognition on the grounds that thinking and consciousness are "productions of the human brain, and human beings themselves are products of nature, evolving in and with their environment; in doing so, it is self-evident that the productions of the human brain, in the last resort products of nature too, stand not in contradiction to the other connected conditions of nature, but in accordance with them" (Engels, 1894, 33). This comes near to an anticipation of the "evolutionary epistemology" of the present (Engels, 1989). With regard to this, "history is different from nature only as a developing process of self-conscious organisms" (Engels, 1894, 504).

"Certainly we shall one day 'reduce' in experiment the process of reasoning to molecular and chemical motions in the brain; but is the nature of reasoning with that explained?" — this is Engels' proper question (*ibid.*, 513). Any reasonable answer transcends naturalistic conceptions, including the idea of reflection (*Widerspiegelung*), since the "counterfactual abilities" of human thinking and doing, the theoretical and practical "projects of alternative possibilities of action and cognition," the "free reference to reality" — in spite of all conditions of action and thought—are distinguishing marks of these "self-conscious organisms" (Engels, 1989, 164–168).

Engels sides with Hegel above all, because he detected a "great basic principle":

The world is not to be comprehended as a complex of ready-made things, but as a complex of processes, wherein the seemingly most stable things no less than their reflections in our mind succumb to a continual alternation of development and disappearance, whereas for all apparent contingency and against all temporary retrogressions a progressive development prevails — this great basic principle, especially since Hegel, proceeded to the common consciousness so strongly, that in this generality there is now scarcely any objection to it.

But to appreciate this principle as a phrase and to implement it in reality in particular spheres of investigation are two different things. Once accepted as a starting-point of investigation, the call for ultimate solutions

and eternal truth must vanish once and for all; we are continually aware of the necessary limitations of all attainable knowledge, conditioned by the circumstances of obtaining it. (Engels, 1988, 293.)

Hegel did not draw this conclusion, “because he was forced on to make a system, and a system of philosophy, following the delivered claims, had to conclude with some sort of an absolute truth” — in contradiction to Hegel’s “dialectical method, undermining all dogmatism,” his “revolutionary side” (*ibid.*, 268).

Systems After Hegel: Impossible

Look at Engels’ ironical description in the introduction to *Socialism, Utopian and Scientific* (Engels, 1892c, 287–288):

People know probably that we Germans command an alarming weighty thoroughness, a fundamental profoundness or a profound fundamentality, as you like to call them. As soon as some one of us presents something he regards as a new teaching, he first of all has to elaborate it into an all-out system. He has to demonstrate that the first principles of logic as well as the fundamentals of the universe in all eternity solely existed for the purpose of leading, in the last resort, to this newly discovered theory, the crown and culmination of all and sundry. In this respect Dr. Dühring totally was the national standard. At least a complete “system of philosophy,” philosophy of mind, morals, history and nature, a complete “system of political economy and of socialism,” in the end a “critical history of political economy” — three thick octavo volumes, cumbersome on the outside and the inside, three army corps of argument, advanced against all preceding philosophers and economists in general and against Marx in particular — indeed an attempt at a total “revolution in science” — that it is I should aim at. I had to discuss all imaginable objects; from the categories of time and space up to bimetallism; from eternal materiality up to the transient nature of moral ideas; from Darwin’s natural selection up to the education of youth in a future society. Still, the systematic vast extent of my opponent provided an opportunity, in opposition to him and in a more coherent form than previously, to demonstrate the points of view held by Marx and myself with regard to this big diversity of objects.

In his preparatory notebook for *Anti-Dühring*, Engels had observed:

Systems (*Systematik*) after Hegel — impossible. Obviously the world represents a united system, *i.e.*, a connected totality, but the cognition of this sys-

tem presupposes the cognition of the whole of nature and of history, for human beings never to realize. Whoever then makes systems must fill the numerous gaps with his own fabrications, *i.e.*, must irrationally indulge in fancies and ideologies.

The Institute of Marxism–Leninism here took to flight in a footnote: “Systems (*Systematik*) here in the sense of an absolute, finished system” (Engels, 1925, 574). In the preface to *Marx–Engels–Werke*, Vol. 20, the Institute collected almost all of the pompous, stupid phrases concerning the “theoretical content of *Anti-Dühring* and *Dialectics of Nature*,” killing the critical intellectuality of Engels in the name of “the immortal ideas of these works of genius” (*ibid.*, V–VII, IX, XV, XXII–XXV). Engels’ peal of laughter must certainly be spirited away in vain. Whatever a relative and unfinished system may be, Engels presupposed a “systemic connection” of a totality of natural processes, driving science on the grounds of this “insight” to demonstrate “this systemic connection everywhere, in particulars as well as on the whole. Nevertheless, an appropriate, complete, scientific demonstration of these connections for us as well as for all times remains a thing of impossibility,” indeed an “absurdity, a pure nonsense.” Since this would mean that “the realm of human cognition is closed” and every “future historical development is thrown away,” an impossibility. In fact, however, “each reflection of the world-system remains a limited one, objectively by reason of the historical situation and subjectively because of the material and intellectual constitution of the author.” A main objection of Engels therefore ran simply as follows: Dühring pretended to be “omnipresent” and “omniscient” from first to last, by reason of his way of thinking “to exclude in advance every tendency to a subjectively limited idea and knowledge of the world” (*ibid.*, 34–35).

Of course this signifies not merely an individual peculiarity, but the problem of historical and societal conditions and limitations of cognition, knowledge and action. “We are only able to know according to the conditions of our epoch and as far as these extend” (*ibid.*, 508). Engels believed in the chances and potentiality of societal and scientific progress, “in the — at least for us — virtually endless succession of mankind.” Nevertheless, he emphasized, for us it would be rather a “banality” and “sterility” to suppose that some day in the

future, “provided that mankind lasted long enough and there are no barriers of our organs of cognition,” human thinking would evolve to a “sovereign” cognition and knowledge of the world. “The most valuable result” of our reflections instead “probably is: to distrust our present knowledge to the utmost, since we stand in all probability rather at the beginning of human history; the following generations will correct us, and they presumably will be more numerous than those whose knowledge — frequently with considerable disdain — we are able to correct.” And: “if ever mankind proceeded to that place, when she is still operating with eternal truths, results of thought claiming ‘sovereign’ validity and imperative truth, then she would reach a point, when the infinity of the intellectual world in reality and potentiality will be exhausted, hence the very famous miracle of an infinite number counted in full” (*ibid.*, 80–81).

Friedrich Engels couldn’t have said it better. How far away he was from all the dogmatism, the “points of view of God” proclaiming “the one true theory”!³

*Institut für Politische Wissenschaft
Universität Hannover
Germany*

3 Cf. Hilary Putnam, *Reason, Truth and History* (Putnam, 1981). The first chapter of the German edition of Putnam’s studies on realism, originally “Meaning and Reference” (1973), starts with reflections on Engels’ discussion of the relationship between conceptions and reality (Putnam, 1993, 27–28). Cf. Engels’ letter to Conrad Schmidt, March 12, 1895 (Engels, 1895, 430–433). Perhaps it is appropriate here to mention in addition the studies of Carl Friedrich von Weizsäcker (Weizsäcker, 1974). The last sentences of the concluding study, “Parmenides und die Quantentheorie,” are as follows: “Plato’s two principles, delivered through Aristotle, technically formulated unity and variety [*Einheit und Vielheit*]. Unity by itself is not a principle at all; while it exists there is variety, but at a cost of contradiction. So much on Plato and the quantum theory” (*ibid.*, 491). In the words of Engels: The old one, Hegel, would have been pleased, and Engels too. Compare, e.g.: “Materiality as such is merely a fiction of thought [*eine reine Gedankenschöpfung*], an abstraction. We refrain from qualitative differences of things. . . . Materiality as such, in contrast to the specific materialities in existence, therefore does not have a material existence [*ist nichts Sinnlich-Existierendes*]” (*Dialectics of Nature*, Engels, 1925, 519). However, these are categories of thought, or conceptions, or ideas, or intellectual constructs, just like the dialectical main principle (or the “original text”) of “identity of identity and non-identity” in Hegel (and Marx alike). Engels applied these conceptions and assertions directly to phenomena of nature. Cf., e.g., “Identität-abstrakte” (*ibid.*, 483–484).

REFERENCES

- Bernstein, Eduard. 1973. *Die Voraussetzungen des Sozialismus und die Aufgaben der Sozialdemokratie*. Reinbek bei Hamburg: Rowohlt.
- Bloch, Ernst. 1977. *Subjekt-Objekt. Erläuterungen zu Hegel*. Frankfurt a.M.: Suhrkamp.
- Engels, Friedrich. 1882. Letter to Laura Lafargue, December 15. MEW, Vol. 35. Berlin: Dietz.
- . 1888. *Ludwig Feuerbach und der Ausgang der klassischen deutschen Philosophie*. MEW, Vol. 21. Berlin: Dietz.
- . 1889. Letter to Kautsky, February 20. MEW, Vol. 37. Berlin: Dietz.
- . 1891a. Letter to Laura Lafargue, May 4. MEW, Vol. 38. Berlin: Dietz.
- . 1891b. Letter to Conrad Schmidt, July 1. MEW, Vol. 38. Berlin: Dietz.
- . 1891c. Letter to Conrad Schmidt, November 1. MEW, Vol. 38. Berlin: Dietz.
- . 1892a. MEW, Vol. 19. Berlin: Dietz.
- . 1892b. Letter to August Bebel, March 16. MEW, Vol. 38. Berlin: Dietz.
- . 1892c. Introduction to *Socialism, Utopian and Scientific*. MEW, Vol. 22. Berlin: Dietz.
- . 1893a. Interview, June 1893. MEW, Vol. 22. Berlin: Dietz.
- . 1893b. May 27. MEW, Vol. 39. Berlin: Dietz.
- . 1894. *Herrn Eugen Dührings Umwälzung der Wissenschaft*. In *Marx-Engels-Werke* (MEW), Vol. 20. Berlin: Dietz.
- . 1895. Letter to Conrad Schmidt, March 12. MEW, Vol. 39. Berlin: Dietz.
- . 1925 (1873–1883). *Dialektik der Natur*. MEW, Vol. 20. Berlin: Dietz.
- Engels, Eve-Marie. 1989. *Erkenntnis als Anpassung? Eine Studie zur evolutionären Erkenntnistheorie*. Frankfurt a.M.: Suhrkamp.
- Fleischer, Helmut. 1970. *Marx und Engels. Die Philosophischen Grundlinien ihres Denkens*. München: Alber.
- Garaudy, Roger. 1965. *Existentialismus und Marxismus. Eine Kontroverse zwischen Sartre, Garaudy, Hypolite, Vigier und Orcel. Mit einem Beitrag von Alfred Schmidt*. Frankfurt a.M.: Suhrkamp.
- Haug, Wolfgang Fritz. 1995. "Dialektik." In *Historisch-Kritisches Wörterbuch des Marxismus*, Vol. 2. Berlin–Hamburg: Argument.
- Kolakowski, Leszek. 1988 (1976). *Die Hauptströmungen des Marxismus: Entstehung, Entwicklung, Zerfall*. München/Zürich: Piper.
- Liedman, Sven Eric. 1996. "Die Gesetze der Dialektik." In Theodor Bergmann, Mario Kessler, Joost Kircz, and Gert Schäfer, eds., *Zwischen Utopie und Kritik. Friedrich Engels—ein "Klassiker" nach 100 Jahren*. Hamburg: VSA.
- Marcuse, Herbert. 1961 (1958). *Soviet Marxism: A Critical Analysis*. New York: Vintage Books.
- Marx, Karl. 1859. MEW, Vol. 13. Berlin: Dietz.
- ME. 1874. Marx, Karl and Friedrich Engels. *Ein Komplott gegen die Internationale Arbeiter-Assoziation*. MEW, Vol. 18. Berlin: Dietz.
- MM. 1973. Mehringer, Hartmut and Gottfried Mergner, eds. *Debatte um Engels*, Vols. 1 and 2. Reinbek bei Hamburg: Rowohlt.
- Putnam, Hilary. 1981. *Reason, Truth and History*. Cambridge, England: Cambridge University Press.

- . 1993. *Von einem realistischen Standpunkt. Schriften zu Sprache und Wirklichkeit*. Reinbek bei Hamburg: Rowohlt.
- Schmidt, Alfred. 1971 (1962). *Der Begriff der Natur in der Lehre von Marx. Überarbeitete, ergänzte und mit einem Postscriptum versehene Neuauflage*. Frankfurt a.M.: Europäische Verlagsanstalt.
- Weizsaecker, Carl Friedrich von. 1974. *Die Einheit der Natur*. München: DTV.