

Karl Popper, critical rationalism, and the Positivist Dispute

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Abstract

This article comments on the Positivist Dispute from the point of view of Critical Rationalism. It shows that the basic arguments of the Frankfurt School against the position of Popper and his followers are based on misunderstandings or fail due to logical or epistemological errors. It confirms the positions of Critical Rationalism about the fallibility of reasoning and the requirements for a desirable social order.

Keywords

Apel, Critical Rationalism, epistemology, Habermas, philosophy of science, philosophy of the social sciences, Popper, Positivist Dispute

Karl Popper is renowned for being the philosopher who first established Critical Rationalism. At a workshop held by the German Sociological Association, which took place in Tübingen in 1961 following prompting by Ralf Dahrendorf, Popper delivered a lecture on the logic of the social sciences. On that occasion, Theodor W. Adorno acted as his discussant.

This event represents the beginning of the Positivist Dispute within German Sociology, an international controversy in which, as it happens, none of the participants actually represented a positivist point of view (Adorno et al., 1969). As Volker Gadenne (2012) quite correctly states, ‘Popper’s oeuvre includes numerous aspects which are fraught with problems. To a significant extent, texts upon which he built his theory of falsifiability and, later, that of Critical Rationalism were’, according to Gadenne, ‘the result of discussions and controversies that date back almost a century’ (p. 29). He goes on to suggest that Popper would presumably have written many things differently several decades later, pointing out that he had, in fact, revised a number of his own articles.

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And yet, as Gadener believes, because new ideas were continuously occurring to Popper, and because he pursued many different fields of interest, he did not always manage to subsequently integrate and systemise what had previously been said. Even the basic principles of Critical Rationalism were not subjected to an attempt at systemisation.

Furthermore, as Gadener continues to elaborate, Popper was rather reluctant to admit that insights gained at a later stage might require the revision of earlier assertions. He did do this in several instances, but not in others. As a result, his assertions, which formed the foundation of Critical Rationalism, partly only exist in the form of scattered remarks. Some of these are embedded in deliberations which must be regarded, when viewed from a present-day perspective, as concessions to the zeitgeist of that time. It is clear, therefore, that an oeuvre such as this requires systemisation and revision.

Karl Popper quite rightly, as I believe, saw himself as being part of the Enlightenment movement, and tended to invoke Kant in this context. However, unlike me, he did not join in the criticism of religion, which played a significant role in the context of the Enlightenment.

Core assumptions of Critical Rationalism

Critical Rationalism, the philosophical concept developed by Karl Popper, includes three main assertions on which all those philosophers who ascribe to this particular philosophical school of thought agree. These are, first, consistent fallibilism, the assumption that all humans are fallible, not only in their cognitive practice but also in all their attempts at problem solution; second, critical realism, the assumption that we are able, in principle, to recognise real connections that are independent from us, that is, to arrive at true statements about these; and third, methodological revisionism, the assumption that all of our assertions may require revision following critical examination.

In addition, there is also the correspondence theory of truth, the assumption that classical logic applies, which facilitates deductive reasoning, the rejection of induction and the rejection of the dogmatisation of problem solutions. Furthermore, Critical Rationalism emphasises the significance of tradition, both in the context of gaining scientific insights and for culture, as well as the relevance of institutions for knowledge and society. Incidentally, many different versions of Critical Rationalism exist today, exhibiting a range of distinctions.

Classical and Critical Rationalism

The problem of justification is generally regarded as a central issue in the theory of knowledge. In striving for knowledge, we hope to find the truth about the nature of certain real connections. In doing so, it seems quite natural to seek certainty with regard to this truth. However, this only appears to be possible when we are able to justify our knowledge in such a way that it is placed beyond any doubt. Essentially, we are trying to establish the foundations for our insights.

Thus, we arrive at a principle which can be regarded as a general postulate of the methodology of rational thought: one must always seek sufficient reason for all of one's assertions. The solution for this justification problem is Classical Rationalism, which is distinct from Critical Rationalism.

The classical proposal for solving the justification problem fails for reasons of logic, so to say. This is because it leads to a dead-end situation, which I have named ‘the Münchhausen Trilemma’. In effect, one is only left with the choice between three alternatives, and none of these is acceptable. These are, namely, infinite regress, which is practically impossible and therefore does not provide a solid foundation; circular logic, which also fails to lead to a sound basis; and a termination of the procedure, which would require the arbitrary suspension of the principle of sufficient reason (Albert, 1986: 13–18).

Clearly, Classical Rationalism runs aground with its proposal for the solution to the justification problem. However, on acceptance of Karl Popper’s Critical Rationalism, it is possible to achieve an acceptable problem solution (Albert, 1986: 34–65).

The problem of the empirical basis

As far as the problem of the empirical basis for scientific knowledge is concerned, like many other exponents of modern empiricism, Karl Popper viewed this as a problem of a certain type of assertion, the so-called basic statements, in order to establish a clear separation from psychological issues. In other words, he wanted to keep epistemology clear from considerations of an empirical nature.

A problem solution of this kind, however, is highly questionable. Without reference to facts that are analysed in the course of psychological research, such as the interrelations in the realm of perception, for example, it is not even possible to adequately characterise statements of this kind. The problem of the empirical basis, which is of such significance to empiricism, vanishes entirely.

Paul Feyerabend (1960: 55) has shown that insights gained from research into perception can be used in order to critically examine basic statements, and thus to question their validity. He was able to establish the existence of certain statements which are absolutely reliable in a specific observational situation (or at least as reliable as the sentence ‘I feel pain at the moment’, when pain is actually occurring), and which also contain a contradiction – this, as he rightfully states, surely provides a very solid reason for doubting their truth.

Along with Karl Bühler (1965), we can comprehend perception as a process of interpreting symbols which leads to the construction of a world of objects. This process involves the continuous development of interpretation hypotheses, which are controlled through the use of sensory signals.

Even at the stage of pre-linguistic perception, it appears that interpretations are already being produced that rely on the assumption of the presence of objects endowed with certain properties. Evidently, a ‘transcendence’ of what is given – of the sensory data – already confronts us in the sphere of perception.

As a realistic philosophy, Critical Rationalism doesn’t encounter any problems in utilising these research results for its own purposes. Its interpretation of scientific insight can draw on the interpretation of perceptions contained within. The symbolic character of sensory data is also relevant for its interpretation.

Critical Rationalism can conceive of the construction and evaluation of scientific theories in terms of a continuation of the efforts accomplished in the process of

perception, partially using other means and applying complex systems of symbols such as language.

It is possible to overcome naive realism, particularly through the use of those means which can assist in gaining a corrective explanation of the performance of our sensory organs, an explanation which interprets these as – more or less – adequate approximations.

The problem of methods and heuristics

Volker Gadenne (2012: 7) drew attention to the fact that Karl Popper maintained a sharp distinction between the development and the verification of theories. On the other hand, as I have already argued in my ‘Treatise on Critical Reason’, I have determined that – having abandoned the notion of justification – one cannot simply dismiss the issue of heuristics from the methodology (Albert, [1968] 1991: 44–50).

Classical Rationalism attributes a central role to logic, as a tool of reasoning (Albert, 1989: 81ff.). However, we now have to consider what role logic can be said to play in the context of a conception of rationality that has abandoned the classical notion of justification. In order to produce an assessment, I believe it is advisable to articulate the possible achievements of logical reasoning, as well as some associated relevant links.

The following elaborations show seven theses which characterise the main facts essential to providing an answer to my question:

1. A valid deductive argument does not deliver new information.
2. A valid deductive argument is truth conserving. It merely guarantees
 - a. the transfer of the positive truth value (of truth) from the set of premises to the conclusion, and consequently also;
 - b. the return transfer of the negative truth value (of non-truth) from the conclusion to the set of premises.
3. It is always possible to conclude true statements from false statements, but the reverse is never possible.
4. A set of premises that contains premises that are logically incompatible with each other can lead to any desired conclusion.
5. Every statement has an infinite number of possible subsequent conclusions.
6. Every conclusion can be inferred from an infinite number of alternative premises, which may be partially incompatible with each other.
7. The more substantial the content of a set of statements is, the more comprehensive the number of possible conclusions, and the less substantial the set, the less comprehensive the resulting conclusions. In a borderline case, we are faced with a tautological set of statements with no content and total scope on the one hand, and a contradictory set of statements with total content and no scope on the other hand.

As (5) clearly indicates, the possible consequences of a set of statements exceed comprehension, which means that every statement has as yet undiscovered (true or false) consequences. If false consequences are discovered, (2b) reveals that the statement itself must be false. If true consequences are discovered, then (3) shows that the statement itself does not necessarily have to be true. Among other things, (6) highlights the fact that the

number of possible sets of premises associated with a statement cannot be counted, which means that for every statement, there are undiscovered possible (true or false) premises. According to (5), every theory has an infinite number of counter-examples. Consequently, it is always possible that a previously undiscovered counter-example to a theory is still to be revealed. Finally, (6) implies that every statement of facts can be explained by an infinite number of possible theories. This leads to the methodological conclusion that there is, in principle, no end to the search for alternatives or to the search for anomalies.

Combined, these interrelations lead us to the significance of contradictions for cognitive practice. Those who do not search for justifications but for good explanations and for opportunities to test and assess these explanations have every reason to pay heed to contradictions, and thus to give serious consideration to possible alternatives and anomalies.

This also reveals the significance of imagination for cognitive practice. The development of alternative explanatory approaches and the discovery of counter-examples is, above all, a matter of methodologically disciplined imagination. As the search for good explanations is, in principle, without end, no system of rules can exist that allows final decisions. Within the scope of consistent fallibilism, only revisable decisions are possible.

In my view, the methodology itself provides an example of 'rational heuristics' (cf. Albert, 1989: 84–91), which can serve the control of cognitive processes. It is my belief that there is no such thing as a sacrosanct and non-revisable 'logic of scientific discovery' which can be applied in practical research in order to achieve cognitive progress. In my opinion, research must permanently deal with substantive and methodological assumptions, the validity of which can never be established with certainty. It can be regarded as an art, as a technological discipline viewed against the background of relevant epistemological conceptions, which is oriented along certain objectives of human cognitive practice.

On the character of epistemology

As far as epistemology is concerned, Karl Popper held an opinion which, quite rightly in some respects, could be described as logistic. He attempted to resolve the issues of epistemology using the means provided by logic. This led him, for example, to a conventionalist solution to the problem of the empirical basis, this being the problem of the observational statements required for the application and assessment of theories.

He might have been expected to avail himself of human perception but, instead, he believed that perceptions belong to psychology, and should consequently have no role to play in epistemology. In order to avoid psychologism and thus relativism, he therefore accepted a conventionalist solution for the problem of the empirical basis. And yet, it is a matter of fact that the consideration of perceptions in epistemology does not lead to relativism.

The Positivist Dispute and the views of the Frankfurt School

As it became clear at a later stage, the controversy between Popper and Adorno at the workshop in Tübingen was partly due to mutual misunderstandings (cf. Dahms, 1994). And the fact that the two of them did not have a genuine discussion at the conference

itself is surely due to those misunderstandings. In the article which he contributed to Adorno's *Festschrift*, which was published 2 years later, Jürgen Habermas (1969) attacked Popper's views as being a version of Positivism, thus instigating the charge of Positivism which was then adopted by Adorno and others. Representatives of the left-wing German student movement and official ideologists in the German Democratic Republic (GDR)¹ also embraced this standpoint, which made it easier for them to offer their preferred versions of Marxism as alternatives.

As I myself had revised my earlier positivist position under the influence of Popperian thought, I felt compelled to pen a reply to Habermas' criticism of Popper in order to clarify the misunderstandings his article included. And as Habermas responded to my critique in a manner which appeared to me to be totally inadequate, I replied in a further essay.²

In the meantime, in 1964, a conference had been organised by the German Sociological Association focussing on the current status of Max Weber's sociology, which was attended by Herbert Marcuse, a member of the 'Frankfurt School' who lived in the United States and who was a prophet for the emerging student movement worldwide. At this conference, Marcuse was highly critical of Weber's methodology and the principle of value freedom associated with it which had also been questioned by Adorno and Habermas.³ The fact that Weber and Popper could be criticised in one breath was understandable to the extent that both authors held similar opinions, not only in their criticism of Marx but also in their methodologies.

One year later, and following on from Karl-Otto Apel, Habermas, in his inaugural lecture in Frankfurt, expounded his ideas on the theory of knowledge in which he claimed to expose the 'objectivist illusion' which was said to be characteristic of the classical concept of pure theory in the sciences. At the same time, it should reveal a transcendental knowledge-constitutive interest which he considered to be decisive for the three categories of processes of inquiry he had identified (cf. Habermas, 1965: 1145). Like Apel before him, he distinguished between the technical cognitive interest for the empirical-analytic sciences, the practical one for the historical-hermeneutic sciences and the emancipatory cognitive interest for the critically oriented sciences. In doing so, he sketched out a concept which he would later amend and augment.

This theory, which represents a transformation of Max Scheler's ontologically augmented sociology of knowledge into a transcendental epistemology, is interesting for three reasons. First, it includes a form of antirealism which is incompatible with the classical idea of truth; in it, truth is reduced to the consensus held by a communication community in which certain ideal conditions pertain. This then entails a reduction of knowledge to practical interests, a pragmatic version of the classical concept of justification. And finally, in perfect keeping with that, it rejects a consequent fallibilism.

An acceptable answer to my criticism of this philosophy at that time is still lacking.⁴ The transcendental demands inherent in this manner of thinking can be principally traced back to the influence of Martin Heidegger, who associated such a demand with his analysis of Being (existence).⁵ And Gadamer, who, like Heidegger, aimed at overcoming the ideal of objectivity, revived this demand in his concept.⁶ Only comparatively recently did Apel distance himself from the relativist consequences of Heidegger's philosophy (cf. Apel, 1991: 29–53).

As far as the instrumentalist interpretation of the natural sciences is concerned, which gave Apel and Habermas reason to assign a constitutive significance to the technical interest, such an interpretation was also to be found in Heidegger before them. The fact that scientific knowledge can be technically exploited can, however, be explained more easily with recourse to a realistic interpretation along conventional lines.

There are similar objections to the constitutive significance of the so-called practical cognitive interest aimed at understanding (*Verstehen*) for the historical-hermeneutic sciences. Moreover, a discipline with such a goal would obviously be technological in character, like classical hermeneutics, a consequence that both Habermas and Apel must have overlooked. The same is true for Gadamer, whose universal hermeneutics both philosophers drew on. Gadamer explicitly opposed such an art (cf. Albert, 1994: Chapter II).

Neither did Apel and Habermas provide adequate argumentation for the transcendental role of the emancipatory cognitive interest. The fact that Freud and Marx had such an interest and that their cognitive practice was motivated by that may be plausible, but both of them were right not to claim that this interest was constitutive for the meaning or validity of their assertions. As a result, their assertions were always treated in scientific discourse from points of view which were usual in evaluating theoretical and historical statements.

Without a doubt, both Apel's and Habermas' philosophies, which matched very closely at the time in their most essential points, differed from those of the older Frankfurt School to the extent that they worked in ideas from philosophers – like Heidegger, Scheler, Gadamer, Wittgenstein and Peirce, for example – who were insignificant for Horkheimer's and Adorno's thinking. It is largely true to say that the conception which the two of them developed at the time can be called a pragmatically oriented transcendental hermeneutics; in other words, it was a new version of transcendental idealism in a hermeneutic disguise. Seen from that perspective, it is understandable that Critical Rationalism was confronted with the assertion that Karl Popper had prematurely abandoned transcendental reflection and that was why he had misconstrued the instrumentalist meaning and validity of empirical theories (cf. Wellmer, 1967: 213–237). Albrecht Wellmer, who formulated this assertion, wanted to show in his writing that 'this critic of positivism had remained a positivist himself' (cf. Wellmer, 1967: 17).

While Apel essentially retained the original version of transcendental hermeneutics, Habermas modified his gradually, giving up many aspects in the process, something which he had accused his critics of in the Positivist Dispute. He distanced himself from Apel's idea of the ultimate foundation, for example, which I reduced to absurdity in my analysis of Apel's philosophy, and modified Apel's proposal of a transcendental-pragmatic foundation of ethics to such an extent that the claim to an ultimate foundation associated with it could be surrendered unscathed.⁷ He developed his discourse ethics still further, complementing it with a discourse theory of law, which is subject to international debate, just like his discourse ethics and the other components of his philosophy, and in the process of which, I would say, the untenability of his argumentation has become apparent.⁸ The same is true for Apel's conception, as I have already mentioned, from which Habermas has since distanced himself still further.⁹

Should Habermas have brought himself closer in line with Critical Rationalism, he has done so in such a subtle way that it has hardly been taken note of so far in international

discourse.¹⁰ Despite his endeavours to improve his conception by abandoning earlier assertions,¹¹ so far he has failed to come up with what can be construed as a fairly clear and coherent philosophical concept. Every new version which he has delivered to date includes inconsistencies which make it unacceptable.¹² His sparring partners in the English-speaking world tend to be ignorant of any criticism of his views expressed in German.¹³ As far as I can see, despite the criticism that exists, he, like Apel, has so far failed to abandon the idea of consensus which is central to both his and Apel's conceptions.¹⁴ In contrast to Apel, he has only tried to make his conception immune to criticism by making use of unclear formulations.

From the Positivist Dispute to an analysis of social order

As is well known, Popper (1945) had already developed a conception of social philosophy which was closely connected with his theory of knowledge, in which he grappled with totalitarian regimes and ideologies from a critical perspective. He countered these with the idea of an open society whose constitution allowed a critical discussion of political problems and enabled political reforms without his feeling compelled to postulate an ideal communication community and to invest it with transcendental aspirations.

I fundamentally ascribed to this position. From the perspective of criticism, I believe, one should also treat institutional regulations of any nature as problem solutions which can, in principle, be criticised and which are, therefore, in certain circumstances, subject to revision. I then endeavoured to respond to the regulative ideas which tend to be associated with such reforms and analysed the role of law and legislation in the process.¹⁵ I rejected, in contrast, efforts to draw conclusions from some postulated sense of history – such as within the framework of a 'pragmatic philosophy of history' – conclusions which would serve as the legitimisation of social orders or political recommendations, such as are characteristic for neo-Marxist philosophies, as being untenable.

It is common knowledge that the Frankfurt School principally influenced socio-philosophical and political discussions, initially developing theories that involved a restatement of Marxist criticism of liberalism. The idea of an open society developed by Karl Popper can, in contrast, be conceived of as a reformulation of the liberal tradition which is closely connected with the epistemological concept sketched out above. I have attempted to develop this conception still further in a process of debate with other philosophies and to show what role the two approaches to practice orientation, which Critical Rationalism would be a possibility for, can play in the process, namely, enlightenment and control.

Contrary to a point of criticism which is frequently mentioned, Critical Rationalism is certainly compatible with a positive vision of social and political order which has recourse to liberal beliefs as regulative ideas. It can even demonstrate that a close relationship exists between such a vision and consistent fallibilism, Critical Realism and methodological revisionism, which is characteristic of its philosophy.

Only in an open society is it possible, namely, to exploit epistemological progress in the sciences, not only from a technological perspective to improve the living conditions of its population but above and beyond that to implement enlightenment. In order to

appreciate the significance of this fact, it is only necessary to point out the political dangers due to religious fundamentalism which arose after the collapse of socialist systems in many parts of the world.

Notes

1. Cf., for example, Wessel (1971) and Buhr and Schreiter (1979).
2. Cf. the relevant articles in Adorno et al. (1969).
3. Cf. Marcuse (1965). Cf. also my critique in Albert (1970), as well as Albert (2000: 189–219).
4. Cf. Albert (2003), in which earlier articles on the subject were reprinted. Cf. also the appendix to the 5th edition of Albert ([1968] 1991).
5. Heidegger's works were celebrated by Apel as the crowning glory in the development of hermeneutic thought, cf. Apel (1955: 189ff. and 199) and Apel (1973: 7).
6. Cf. Gadamer ([1960] 1965: XV f.). For a criticism of Heidegger's and Gadamer's philosophies, cf. Albert (1994: Chapters I–II).
7. Cf. Habermas (1983: 88 passim). For more on this and his strange dealings with texts, cf. Albert (2003: 176–182).
8. Cf. Steinhoff (2001) and Engländer (2002) as well as Engländer (2008). Cf. also Hilgendorf (1991: 158–185) as well as his criticism of transcendental pragmatics in the same volume (pp. 131–157).
9. For criticism of Apel and Habermas cf. also Nilsson (2000: 21–47), one of the few works in English which has responded to my argumentation.
10. This characteristic of his strategy already caught my eye at an earlier stage, cf. Baum (1997: 88ff).
11. Cf. the contribution by Herbert Keuth in this issue.
12. Cf. Gröbl-Steinbach (2008). In one of his last works, Ernst Topitsch (2003: 130) expressed his surprise that 'a thought structure which is afflicted with such easily identifiable flaws can enjoy such a considerable success in the media'. It would only be fair to point out that the flaws in question are not always that easy to discern in the dark clouds of prose that is Habermas'. The philosopher's style of writing ensured that it was harder for his critics to grasp his points of view in essential passages.
13. As Arpad A. Sölter (1996: 2, Note 2) pointed out in his book *Moderne und Kulturkritik: Jürgen Habermas und das Erbe der kritischen Theorie*, Thomas McCarthy (1980) completely ignored my critique of the Habermas-Apel theory of cognitive interests in his book *Kritik der Verständigungsverhältnisse: Zur Theorie von Jürgen Habermas*. The same is true for my essay *Hermeneutik und Realwissenschaft: Die Sinnproblematik und die Frage der theoretischen Erkenntnis* (Albert, [1971] 2003), which Habermas brushed aside as being a straggler in what he considered to be a closed discussion without reacting to the arguments it contained; cf. also Jürgen Habermas (2011: 160). For more information on this, cf. chapter VIII in Hans Albert (1994: 230–265).
14. For criticism of this idea, cf. also Rescher (1993), a book in which, unfortunately, my article 'Transzendente Träumereien' was mistakenly attributed to Apel, and Popper's contribution to the problems was ignored.
15. Cf. Albert (1986) and subsequent works, for example, chapter VI in Albert (1994).

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