

# ISSA Proceedings 2014 - Karl Popper's Influence On Contemporary Argumentation Theory

*Abstract:* Karl Popper's influence, from the nineteen sixties to the nineteen eighties, over the dialectical schools of contemporary argumentation theory (namely pragma-dialectics and formal dialectic) is often evoked by some of these schools (as is the case of the first one). It appears suggested, at least at first sight, through a comparison between Poppers's critical rationalism and the relevant normativist conceptions. The author analyses and explores in detail all of these historical and philosophical connections.

*Keywords:* argumentation, critical rationalism, descriptivism, formal dialectic, normativism, Popper, pragma-dialectics.

## *1. Introduction: popper's influence and its limits*

Karl Popper is one of the most brilliant philosophers of the 20th century. His influence on philosophy in general, and science in particular, is well-known. Compared to others such as Toulmin or Perelman (see Ribeiro, 2009), however, Popper's influence (and of his disciple, Hans Albert) on rhetoric and argumentation theory during that period has yet to be studied and analysed. It is occasionally pointed out by some schools, like pragma-dialectics (van Eemeren & Grootendorst, 2004, pp. 16-17, 51). I say "occasionally" because - as far as I know - it has never been truly assessed in the detail and depth that would be expected, which is what we will attempt to do in this paper.

The absence of the studies and research I have alluded to is presumably due to the following: we know that Popper wrote profusely about argumentation, that this was even one of the main facets of what this philosopher called "critical rationalism" (see Musgrave, 2007; and Bouveresse, 1981, pp. 143-163), but the fact is that he never developed an actual argumentation theory as a (more or less) *specialised field of research*, and least of all an argument theory, i.e. a theory about what constitutes an argument, its "form" and/or "structure", and the way

its elements relate to each other (on the distinction between “argumentation theory” and “argument theory”, see van Eemeren, Grootendorts, Henkemans et al., 1996, p. 12ff.; and Johnson, 2000, pp. 30-31). Which is why his influence on contemporary argumentation theory – however significant it may be – has possibly little to do with this, i.e., *a technical view of argumentation and arguments in particular*. Therefore, while addressing such influence I do not have in mind a direct impact of Popper’s philosophy, even if such impact actually existed – and today we have every reason to believe that it did somehow exist, since the fact has been acknowledged, namely in the case of pragma-dialectics (see van Eemeren & Grootendorst, 2004, pp. 16-17). In other words, and methodologically speaking: it is not a question here – in this paper – of the main schools of argumentation theory (the dialectic schools, like pragma-dialectics and formal dialectic, and the others, such as the so-called school of “informal logic”) expressly *adapting* or *applying* Popper’s theories to their own individual scopes. Instead, the aforementioned schools regarded these theories as brilliant philosophical confirmations of their conceptions of argumentation, and even, to some extent, as their overall framework. It is from this perspective, in my view, that pragma-dialectics appears – in the text quoted above – as “an extended version of the Popperian critical perspective.” (van Eemeren & Grootendorst, 2004, p. 17) Based on this fundamental presupposition, we can establish a parallel, or even a rather essential connection, between Popper’s philosophy and the conceptions alluded to, in particular the ones of the dialectical schools. Both have a timeframe, they are products of one and the same era, historically and philosophically speaking, as is the case of the second half of the 20th century; in fact, to not be able to establish that parallel or connection is what would be most surprising. My paper is organised in the following manner:

1. first, I will analyse the model submitted by Popper for science in Popper (1959/1974), and in other works immediately after (Popper, 1945, 1963/1991, 1972), and suggest the implication thereof for contemporary argumentation theory;
2. then I will seek to analyse and discuss in detail each such implication, under what we could call, albeit with some hesitation and doubts, “Popper’s argumentation theory”;
3. to conclude, I will highlight the original features and, particularly, the limitations and shortcomings of that theory, in the present and more general context of the originality, limitations and shortcomings of contemporary

argumentation theory itself.

## 2. *Popper's argumentative model of science*

Popper's conception of argumentation is addressed through his philosophy of science in Popper (1959/1974) – a book first published in German in 1934 and translated into English in 1959. (This was his third book in English language, after Popper (1945), and Popper (1957).) The essence of the link between science and argumentation in this book involves rejecting the criterion of demarcation between science and metaphysics introduced by logical positivism during its time, in other words, the idea that, in contrast with philosophical and/or metaphysical theories (or hypotheses), the theories of science (i.e. physical-natural sciences, maths included) can be empirically verified and/or entirely corroborated (Popper, 1959/1974, pp. 34-39). On the contrary, Popper finds that such criterion is legitimised on the following grounds: theories or hypothesis are *metaphysical* if they cannot be conclusively refuted or falsified; they are, otherwise, *scientific* if this can be done successfully (Popper, 1959/1974, pp. 40-48). This new criterion resulted in a discussion and controversy, in philosophical terms, which is not called for here. Its relationship with argumentation and critical thought, from a dialectical standpoint, is obvious: when we argue, what actually happens is that we seek to falsify or deny a claim that has been submitted to discussion. This is, I repeat, what dialectical schools of argumentation theory (such as pragma-dialectics and formal dialectics) upheld in the late nineteen-eighties. From this perspective, Popper's basic logical model of critical rationalism in Popper (1959/1974) is the *modus tollens*, not *the modus ponens* of logical positivism and science philosophy: it involves denying, refuting the implications or the consequences of any theory and/or hypothesis (the consequent thereof), in order to deny/refute its presuppositions (its antecedent). As I will show ahead, Popper does not address that model in social, cultural and political terms in Popper (1959/1974), although he broadly suggests that this may and must be done. Such conception does not appear until Popper (1945). In this book, he defines his "critical rationalism" in the following terms:

(...) In order therefore to be a little more precise, it may be better to explain rationalism in terms of practical attitudes of behaviour. We could then say that rationalism is an attitude of readiness to listen to critical arguments and to learn from experience. It is fundamentally an attitude of admitting that '*I may be wrong and you may be right, and by an effort, we may get near to the truth*'. It is an

attitude which does not lightly give up hope that by such means as argument and careful argumentation, people may reach some kind of agreement on most problems of importance. In short, the rationalist attitude, or, as I may perhaps label it, the 'attitude of reasonableness', is very similar to the scientific attitude, to the belief that in the search for truth we need co-operation, and that, with the help of argument, we can attain something like objectivity. (Popper, 1945, vol. II, pp. 212-213)

Now, the consequences of the new criteria for the demarcation between science and metaphysics, in *The logic of scientific discovery*, were deep and revolutionary: Popper - assuming that in the past scientists had always pursued in their research, more or less consciously, his principle of falsification (which is far from being clear or evident) - proposed that the science of his time (in this case, classical mechanics, thermodynamics, quantum mechanics, and the theory of relativity) be completely reconstructed, from bottom to top according to that principle; in other words, as he retrospectively acknowledges in his intellectual autobiography (Popper, 1976, p. 87ff.) the theory and practice of that science required complete recasting. In *The logic of scientific discovery* he states: "what is to be called 'science' and who is to be called 'scientist' must always remain a matter of convention or decision." (Popper, 1959/1974, p. 52) This has to do with Popper's conventionalism and normative outlook on science. Popper finds that the true scientific method is composed of a set of conventions or basic rules to be adopted by the scientific community or communities in the light of the principle of falsification, i.e. of fundamentally negative conventions or rules (cf. Popper, 1959/1974, pp. 53-56). These are not logical conventions, as in positivism in Popper's time, but rather epistemological conventions which are enormously significant from that perspective, because ultimately and in the light of that principle, in his view, science is a social, cultural and political phenomenon. On the other hand, while these conventions are agreed freely among scientists - as has been mentioned - they underpin (and have always underpinned) current scientific theory and practice in an essential and substantial way. The originality of Popper's epistemology, seen from the dialectical perspective of argumentation, resides in the following:

1. Science (just as everyday language) is a social phenomenon.
2. It is more relevant, as a methodology of scientific research, to deny and/or to refute ("It is not true that..."), than to seek to verify or to corroborate, because, as

Popper puts it, one can never verify nor corroborate completely a given theory or hypothesis (Popper, 1959/1974, p. 40ff.) The same applies to the role of refutation in argumentative discourse overall.

3. It is by violating the aforementioned rules that we may ultimately distinguish between a “normal” - or “correct” - scientific practice and another allegedly “abnormal”, fallacious or metaphysical one (Popper 1959/1974, p. 53ff.). The same is true of the rules governing argumentative discourse in general, or the rules of what van Eemeren & Grootendorst (2004, pp. 21-22), call “the ideal model of critical discussion”.

4. As already said, these rules are not logical conventions, i.e. conventions based on the requirements of formal logic, but rather epistemological (cf. Popper, 1972, pp. 30-31); they entail the intersubject agreement between stakeholders, i.e., scientists (as is the case in argumentative discourse of the rules governing a discussion of a claim at stake between parties).

5. It is necessary to reread or reconstruct all current scientific discourse and practice in the light of rules like these (or, if you prefer, it is necessary to reread or reconstruct argumentative discourse in each one of its institutional contexts in the light of rules like these, whatever they may be).

There is no question that, from these five viewpoints, one can trace a tight link between critical rationalism and the dialectical schools, namely, the normativist conceptions of argumentation developed by Barth and Krabbe (1982), Walton (1989), Walton & Krabbe (1995), and van Eemeren & Grootendorst’s (2004). In Walton (1989, pp. 17-18), for example, the rules of “persuasion dialogue” (i.e., argumentative discourse) are explicitly presented as negative, following a Popperian view on science, society and politics; fallacies (in Popper’s demarcation criterion: metaphysics, or the “bad science”) result from their violation; and in order to understand argumentation in daily life (and the specific dialogues in which it occurs), as for understanding science in Popper, we must reconstruct it precisely according to this kind of rules.

In pragma-dialectics, Popper’s legacy (and that of his disciple, Hans Albert), and in particular the contribution of the aforementioned aspects to argumentation theory, involves - as we started off by saying in the introduction - identifying that theory with the philosopher’s “critical rationalism”; furthermore, such legacy is expressly acknowledged and interpreted - in a way which we cannot analyse nor discuss here - in the light of Toulmin’s (1976) pioneering distinction between

three essential types of approaches to that theory (the geometrical or logical, the anthropological and the critical). Having in mind what was summarised above in (3), (4) and (5) about the status of the rules for critical discussion, van Eemeren and Grootendorts state:

The critical perspective of reasonableness combines certain insights from the geometrical and anthropological perspectives with insights advanced by critical-rationalists such as Karl Popper (...) and Hans Albert (1967/1975). By proposing a discussion procedure in the form of an orderly arrangement of independent rules for rational discussants who want to act reasonably, the aim of formalization is reminiscent of the geometrical approach to reasonableness. This formal procedure in the critical sense, however, is aimed at facilitating a discussion intended to resolve a difference of opinion. The proposed procedural rules are valid as far as they really enable the discussants to resolve their difference of opinion (van Eemeren & Grootendorst, 2004, p. 16).

Further down they substantiate:

In order to have a suitable medium for discussion, or at least a suitable frame of reference (or 'ideal model') for discussing the quality of argumentation, we must detach ourselves from various problematic peculiarities of ordinary language use and introduce new conventions. In our terminology, this is called the *critical-rationalistic* view on reasonableness, which is in fact an extended version of the Popperian critical perspective. (van Eemeren and Grootendorst, 2004, p. 17).

### 3. A sketch of popper's argumentation theory

Let us call the scientific model summarised above an "argumentative model" of science. Popper had the honour of introducing it for the first time in the history of Western philosophical thought. (An argumentation model, in general, is said to have been conceived in Toulmin (1958); yet the philosopher never really addressed the topic of argumentation in science. One could say the same about Perelman & Olbrechts-Tyteca (2008); but Perelman's outlook is essentially that of rhetoric, not of argumentation theory itself.) Unfortunately, Popper is seldom quoted by historiography specialised in these matters, unlike Toulmin and Perelman. In Popper (1945), Popper (1957) and Popper (1963/1991), he applies the alluded outlook on culture, society and politics, under the broader scope of a reconstructed history of Western philosophical thought from ancient Greece (pre-Socratic philosophers, Socrates, Plato and Aristotle) up to nowadays. Popper

(1972) is a development of Popper' views on the theory of knowledge. It is in Popper (1945) that the expression "critical rationalism" came up for the first time to refer to Popper's own conceptions (cf. vol. II, pp. 217, 224). The core idea regarding argumentation theory is essentially the same in all of the mentioned books, although there are some details one must address and analyse.

1. Human reason is mostly argumentative and conjectural: it consists of trying to challenge and finally refuting, under any of its scopes, a given theory or hypothesis, that is, any claim submitted to us, while keeping oneself intellectually and ethically available to take the challenge or refutation through to the end; this is what "arguing" means to Popper (cf. Popper 1945, vol. II, p. 212ff.; 1963/1991, p. 33ff.; 1972, p. 1 ff.) Popper does not look into the detail of how that, i.e. the challenge and refutation, may and should be done *outside the scientific field*; which suggests, as I will explain ahead, that he is not interested in an argumentation theory by itself, or even less in a theory of argument.

2. As it is argumentative and conjectural, it is not a dogmatic and authoritarian reason, but rather an essentially open one, sceptical yet humble, and optimistic as regards the possibility for deciding, finally, in face of opposing and apparently indisputable arguments.

3. Which means that it is not a speculative reason, in the traditional sense of the concept - of Plato and Aristotle, Hegel and Marx. It is not a "superior" and "legislative" faculty, with which one could intellectually build social, cultural and political institutions, or on which to impose rather ideal models and foresee the history of societies (historicism).

4. Nor is it a "collectivist" reason, like that of the aforementioned philosophers, but a different one, mostly individual, open and tolerant, in ethical and/or moral terms.

5. History, as the philosopher will tell using a brilliant and revolutionary formula, "has no meaning" (Popper, 1945, vol. II, p. 246ff; cf. Popper, 1957, p. 105ff.).

From the perspective of this last fundamental thesis, Popper is lead to reject and deconstruct, philosophically speaking, all political ideologies, which include supporting the models I have alluded to. He places major emphasis on that thesis, which is understandable, after assimilating adequately the idea (developed in Popper, 1945) that what we call "reason" in philosophy, since the Greek

philosophers, is/was also a social, cultural and political reason, and that this very reason lead to the apparent meltdown of Western civilisation as a whole, as the last two World Wars of the 20th century suggest. Hereunder, as under other topics, an analogy could be traced between Popper, who as we know was Austrian and received Viennese education, and Toulmin or, rather, the way Toulmin read the Austro-Hungarian society in the last quarter of the 19th century and the early 20th century, in books like Toulmin & Janik (1974).

#### 4. *Conclusions: on the contribution of philosophy to argumentation theory*

I have suggested that only with some reservations or limitations can one talk about an argumentation theory in Popper's philosophy. We are not dealing here exactly with argumentation - i.e., *a more or less specialised field of research that can be studied separately* -, but rather with rationality (or with exercising human reason) generally speaking. This explains why the philosopher never devised an argumentation model *per se*, unlike what happened in the 20th century with others, like Toulmin (1958) and, to some extent, Perelman & Olbrechts-Tyteca (2008); and, consequently, why we do not find in him a theory of argument, in other words a theory about the way arguments, in general, may be analysed, assessed and represented. The only explanation I find for this situation is that Popper assumed that philosophy could not be reduced, nor likened overall to "rhetoric" (as it was called in their time, based on the different outlooks of each of them, Perelman on one side and Toulmin on the other) and/or to an argumentation theory. (I have supported in Ribeiro (2012), controversially, that reducing and/or likening it to rhetoric is one of the main outcomes of the author's inputs, which I have mentioned, to that which we call today "argumentation theory".) He always believed, from Popper (1959/1974) onwards, and specially after the collapse of Western philosophy overall announced and celebrated in Wittgenstein, Kuhn and Quine's main works in the sixties and seventies (Wittgenstein, 1953/2001; Kuhn, 1962; Quine, 1969), that it was possible to work in philosophy following the classical patterns of what in the past (until the late 20th century) we called, for example, "philosophy of science" (see Popper, 1994, pp. 33-64). Regarding this issue, he does not agree with the Toulmin we know, particularly with Toulmin (2001).

Anyhow, the impact of Popper's "critical rationalism" from the second half of the 20th century to the present was enormous, although - as I have suggested - it was essentially diffuse. Such impact could have been deeper and more decisive



had Popper, during the second half of the 20th century, not been the outspoken enemy of what we still call nowadays “analytical philosophy”, and had not been completely ostracised by it (as actually happened to Toulmin). The biggest contribution of that critical rationalism to contemporary argumentation theory and to what, generally speaking, we call today “critical thinking” was that it showed emphatically that human reason is mostly dialogical and argumentative, that it is something that is (always) under construction, and is not a finished and definitive essence. Therefore, it largely destroyed, practically for the first time in the history of Western philosophy, the myth according to which both science and society are “essences”, whose nature we should describe and analyse. From this perspective, Popper’s falsificationism and conventionalism, regarding philosophy of science, is clearly compatible with the dialectical schools of contemporary argumentation theory; specially, in the case of pragma-dialectics, because it is/was not a topic of logic or of any kind of science philosophy subordinated to it, as was the case of logical positivism in his time. And this philosopher’s conception of society (sceptical, but in the end essentially optimistic), as an ever open place for arguing, discussing and criticising, is clearly in line with today’s general conceptions, in particular with those that feed into the schools mentioned above.

Anyhow, Popper’s legacy draws our attention to what I have called provocatively, elsewhere and in another time, the “divorce between philosophy and argumentation theory” (Ribeiro, 2012a). Karl Popper, like Jürgen Habermas for example (see Habermas, 1984, 1987), is strongly convinced of the fundamental importance of argumentation for contemporary philosophy; this conception – as he shows in the forties already in Popper (1945) – is broad, because it involves a more general conception of human reason and its role in the evolution of European and Western societies from the classical Greeks to the present day. However, he clearly does not have, in fact as Habermas himself did not have, a *theory of the argument itself*. All of which explains why both philosophers are hardly ever mentioned and appreciated as they deserve to be in 20th century historiographies of rhetoric and argumentation. In contrast, however, the main contemporary argumentation schools strongly and convincingly uphold conceptions about argumentation theory without these being based upon philosophical and, particularly, metaphysical presuppositions, like those which are disputed by these philosophers. The study of these presuppositions is absolutely essential if we intend to safeguard in the future – on sound ground – the so-called “interdisciplinarity” of argumentation theory. To ensure the desired success of

such interdisciplinarity, it must be built on a founding matrix; and, the way I see it, *only philosophy could deliver it* – but certainly in very different terms from those of the past (see Ribeiro, 2013). To conclude my paper, I would say that this is perhaps the most important lesson that we may draw today of Popper's views on argumentation.

## References

- Albert, H. (1967/1975). *Traktat über kritische Vernunft*. 3rd ed. Tübingen: Mohr.
- Barth, E. M., & Krabbe, E. C. W. (1982). *From axiom to dialogue. A philosophical study of logics and argumentation*. Berlin/New York: Walter de Gruyter.
- Bouveresse, R. (1981). *Karl Popper ou le rationalisme critique*. Paris: Librairie Philosophique J. Vrin.
- van Eemeren, F. H., & Grootendorst, R. (2004). *A systematic theory of argumentation: The pragma-dialectical approach*. Cambridge: Cambridge University Press.
- van Eemeren, F. H., Grootendorst, R., Henkemanns, F. S. et al. (1996). *Fundamentals of argumentation theory: A handbook of historical backgrounds and contemporary developments*, New Jersey: Lawrence Erlbaum Associates, Publishers.
- Habermas, J. (1984). *The theory of communicative action. Vol. 1: Reason and the rationalization of society*. Cambridge, UK: Polity Press.
- Habermas, J. (1987). *The theory of communicative action. Vol. 2: The critique of functionalist reason*. Cambridge, UK: Polity Press.
- Johnson, R. (2000). *Manifest rationality: A pragmatic theory of argument*. New Jersey: Lawrence Erlbaum Associates, Publishers.
- Kuhn, T. (1962). *The structure of scientific revolutions*. Chicago: Chicago University Press.
- Musgrave, A. (2007). Critical rationalism. In E. Suárez-Iñiguez (Ed.), *The Power of Argumentation* (pp. 171-211). Amsterdam/New York: Rodopi.
- Perelman, Ch., & Olbrechts-Tyteca, L. (2008). *The new rhetoric: A treatise on argumentation*. J. Wilkinson & P. Weaver transl. Notre Dame/London: University of Notre Dame Press. French edition: *Traité de l'argumentation: La nouvelle rhétorique*, Paris: Presses Universitaire de France, 1958.
- Popper, K. R. (1945). *The open society and its enemies. Vol. I: The spell of Plato. Vol. II: High tide of prophecy: Hegel, Marx, and the aftermath*. London: George Routledge & Sons, Ltd.
- Popper, K. R. (1957). *The poverty of historicism*. London: Routledge & Kegan

Paul.

Popper, K. R. (1959/1974). *The logic of scientific discovery. 7th impression.* London: Hutchinson of London. This book first published in German in 1934.

Popper, K. R. (1963/1991). *Conjectures and refutations: The growth of scientific knowledge.* 5th ed. (revised). London: Routledge & Kegan Paul.

Popper, K. R. (1972). *Objective knowledge: An evolutionary approach.* Oxford: At the Clarendon Press.

Popper, K. R. (1976). *Unended quest: An intellectual autobiography.* La Salle (IL): Open Court Publishing.

Popper, K. R. (1994). *The myth of the framework: In defence of science and rationality.* M. A. Notturmo ed. London/New York: Routledge.

Quine, W. V. O. (1969). *Ontological relativity and other essays.* New York: Columbia University Press.

Ribeiro, H. J. (2009). Perelman and Toulmin as philosophers: On the inalienable connection between philosophy, rhetoric and argumentation. In H. J. Ribeiro (Ed.), *Rhetoric and Argumentation in the Beginning of the XXIst Century* (pp. 33-53). Coimbra, Coimbra University Press.

Ribeiro, H. J. (2012). Editor's Introduction: A quiet revolution: The birth of argumentation theory in the 20th century. In H. J. Ribeiro (Ed), *Inside arguments: Logic and the study of argumentation* (pp. 1-20). Newcastle upon Tyne (UK): Cambridge Scholars Publishing.

Ribeiro, H. J. (2012a). On the divorce between philosophy and argumentation theory. *Revista Filosófica de Coimbra*, 42, 472-498.

Ribeiro, H. J. (2013). What argumentation can do for philosophy in the 21st century. In D. Mohammed & M. Lewinski (Eds.), *Virtues of Argumentation. Proceedings of the 10th International Conference of the Ontario Society for the Study of Argumentation (OSSA), 22-26 May 2013* (pp. 1-8). Windsor, ON: OSSA.

Toulmin, S. (1958). *The uses of argument.* Cambridge: Cambridge University Press.

Toulmin, S. (1976). *Knowing and acting: An invitation to philosophy.* New York/London: Macmillan Publishing Co., Inc./Collier Macmillan Publishers.

Toulmin, S. (2001). *Return to reason.* Cambridge-Massachusetts/London: Harvard University Press.

Toulmin, S., & Janik, A. (1974). *Wittgenstein Vienna.* New York: Simon and Schuster.

Walton, D. N. (1989). *Informal logic: A handbook for critical argumentation.* Cambridge: Cambridge University Press.

Walton, D. N., & Krabbe, E. C. W. (1995). *Commitment and dialogue: Basic concepts of interpersonal reasoning*. Albany, NY: SUNY Press.

Wittgenstein, L. (1953/2001). *Philosophical investigations*. G. E. Ascombe transl. Oxford: Blackwell Publishers.