

ON THE ORIGINS OF THE IDEA OF A CONCEPTUAL SCHEME

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Abstract: In 1974 Donald Davidson published *On the Very Idea of a Conceptual Scheme*, an article in which he tried to draw attention to the unintelligibility of such an idea and to the dangerous consequences of its acceptance. However, despite the influence of his criticism at the time, Davidson was never clear enough about his target. The purpose of this article is to outline a possible response to what the American philosopher has in mind when criticising the idea of a conceptual scheme.

Key-words: conceptual scheme, conceptual relativism, linguistic turn, historical turn, Kant, Davidson.

The context of the discussion

In a well-known article published in 1974, entitled *On the Very Idea of a Conceptual Scheme*, Donald Davidson articulates perhaps the fiercest criticism of the idea of a conceptual scheme. Briefly, through this critique he addresses two issues: a) on the one hand he discusses the conceptual relativism, the most pernicious implication of the idea of conceptual scheme; b) on the other hand he discusses the degree of intelligibility of the idea itself (Davidson, 1991, 183-198). According to the American philosopher, the conceptual relativism – the philosophical doctrine which states that the members of two human communities can describe the world differently, or that the members of two scientific research traditions can explain natural phenomena in ways that are incommensurable – is unsustainable. This idea does not make sense whatever the context. It is not possible to talk about conceptual

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relativism in the case of a total untranslatability, because translatability is the defining feature of a language. It is not possible to talk about conceptual relativism in the case of a partial untranslatability, because there is the method of radical interpretation². Also, in Davidson's view, the idea of a conceptual scheme – the idea that there is a conceptual component and an empirical one between which there is either an organizing relation or a fitting one – is unintelligible. In the case of the "organizing" metaphor it is not clear how a conceptual scheme can organize the world and everything it contains. In the case of the "fitting" metaphor it is not obvious what is fitted to the conceptual scheme – the experience, the data of the senses, the world itself? His main conclusion is that the idea of conceptual scheme is, in fact, a dogma – the third dogma of empiricism and we should reject it in favour of an unmediated relation between the mind and the world.

Despite the fact that throughout his career Davidson insists on rejecting this idea, discussing it in other articles such as *The Myth of the Subjective* and *A Coherence Theory of Truth and Knowledge*, he is never explicit about what he is criticising. On the one hand, he talks about a third dogma of empiricism. On the other hand, he associates this idea mainly with authors such as Feyerabend and Kuhn, two well-known opponents of empiricism. Starting from this ambiguity, in the following sections I propose to make a brief history of the idea of a conceptual scheme, in order to show that through his critique Davidson is actually considering a Kantian idea that influenced philosophers of various orientations.

The idea of a conceptual scheme from Kant to Kuhn

From a historical point of view, I think that the idea of a conceptual scheme has its origins in the distinction that Immanuel Kant makes between the form of knowledge and the content of knowledge for the purpose of investigating how synthetic *a priori* judgments are possible

² For further information see *Radical Interpretation* by Donald Davidson (Davidson, 1991, 125-139).

(Kant, 1998, 146-149). From this transcendental dichotomy two constitutive levels of knowledge result: the level of the intuitions of the senses – the one that gives the content of knowledge – and the level of the concepts of the intellect – the one that gives shape to knowledge. So any knowledge starts with the empirical data and continues with the intellect processing them through concepts. It is possible to talk about knowledge only in the case of cooperation between receptivity and spontaneity or in the case of a correlation between intuitions and concepts. They are inextricably intertwined and they cannot be dissociated. The path of knowledge starts from the senses and ends with the intellect. In this sense, the following passages are suggestive:

“There is no doubt whatever that all our cognition begins with experience; for how else should the cognitive faculty be awakened into exercise if not through objects that stimulate our senses and in part themselves produce representations, in part bring the activity of our understanding into motion to compare these, to connect or separate them, and thus to work up the raw material of sensible impressions into a cognition of objects that is called experience?... But although all our cognition commences with experience, yet it does not on that account all arise from experience. For it could well be that even our experiential cognition is a composite of that which we receive through impressions and that which our own cognitive faculty (merely prompted by sensible impressions) provides out of itself, which addition we cannot distinguish from that fundamental material until long practice has made us attentive to it and skilled in separating it out.” (Kant, 1998, 136)

The concepts of the intellect are the conditions of possibility of any knowledge by experience. They are *a priori*, they can never be derived from the intuitions of the senses and they have objective validity given their capacity to structure the intuitions. The central idea is that any knowledge about reality is limited to how the experience is shaped by the formal structures of the subject. In this regard, I think the next fragment is highly relevant:

"The concept of a dog signifies a rule in accordance with which my imagination can specify the shape of a four-footed animal in general, without being restricted to any single particular shape that experience offers me or any possible image that I can exhibit *in concreto*." (Kant, 1998, 273)

According to Kant, the form of knowledge – the conceptual scheme – is immutable. The conditions of possibility of knowledge are unchanged, applicable for any field and time.

However, in the light of the evolution of the scientific knowledge, many authors considered that a reappraisal is needed in this regard. Ludwig Wittgenstein, Rudolf Carnap, Stephen Toulmin, Paul Feyerabend and Thomas Kuhn were among those who pointed out that it was more likely to talk about different and changing forms of knowledge – conceptual schemes. The main common point of these thinkers was that these forms of knowledge were invented and selected based on pragmatic criteria. For them, knowledge meant nothing but the processing of some particular experiences through conceptual schemes created by the human mind.

Ludwig Wittgenstein was one of the first philosophers of the early XXth century who incorporated in his work the Kantian idea that every scientific research takes place in a form of knowledge which provides us the conditions of possibility of experience. In the early period of its work, he distinguishes between meaningful and meaningless sentences. In the late period of its work he distinguishes between empirical propositions and grammatical propositions. The idea that a logical framework is what draws the boundaries of meaningful discourse and shows us what can be said and what cannot be said occupies a central place in both stages of his philosophy.

In *Tractatus Logico-Philosophicus* the Austrian philosopher tries to draw the boundaries of language and implicitly the boundaries of thought. Also he wants to show that all the problems of philosophy are in fact pseudo-problems that arise as a result of the violation of the logical form of language (Wittgenstein, 23-24). In order to reach this aim, Wittgenstein appeals to Frege's conceptual writing and to Russell's theory of definite descriptions and draws the distinction between

meaningful and meaningless sentences³. According to him, meaningful sentences are sentences of natural sciences, the only ones that tell us something about the world and can provide us knowledge. They are all that can be said about the world. The purpose of the language is to describe facts and to represent portions of reality. Meaningless sentences belong *par excellence* to logic and mathematics. They lack empirical content, thus they tell us nothing about reality. However, taking into consideration that their role is to describe the structures of the world and language, they have the task of drawing the boundaries of meaningful discourse. Their truth values are independent of how things are in the world. They are either necessarily true and admit any state of affairs – tautologies – or necessarily false and reject any state of affairs – contradictions. Meaningless sentences are the conditions of possibility of meaningful sentences. Early Wittgenstein thought in a very Kantian manner. He considered that any empirical research was shaped by a form of knowledge – by a conceptual scheme – that was independent of any experience.

Starting with *The Blue and Brown Books* (Wittgenstein, 1958a, 17-20, 77-81) and continuing with *Philosophical Investigations* (Wittgenstein, 1958b, 2-13), Wittgenstein reorients himself on the problems of common language, on the societal practices that accompany the speech and on the contexts in which the words are used. He detaches from the logical analysis of language and focuses on the description of the forms of life and language games. The spotlight is transferred towards the behavioural practices of the use of language expressions that are tacitly adopted by the members of a community. In this context, a special significance is acquired by the distinction between empirical propositions and grammatical propositions (Ambrose, 2001, 43-73). The acquaintances, the hypotheses about correlations between facts belong to the first ones. The conventions, norms and rules of language use are related with the second ones. The empirical propositions are subject to the control of experience. In this sense they can be qualified as true or false. The grammatical ones evade empirical testing. They are chosen,

³ For further information see Bertrand Russell's *Introduction to Tractatus Logico-Philosophicus* (Wittgenstein, 1922, pp. 7-19).

maintained and revised according to how well they guide human activities, including scientific research. What belongs to the grammar bears the attribute of necessity and what belongs to the facts bears the one of contingency. The existence of a framework of rules of language use that circumvents the direct control of experience supports once again the Kantian idea that any empirical research is shaped by a form of knowledge – by a conceptual scheme that has a conventional character and not an empirical one. However, contrary to Kant's claims that the form of knowledge is invariable, the grammatical rules are in some respects mutable, they may differ from one human community to another or from one scientific research tradition to another. The language games can change over time and with them the concepts can change as well. "The riverbed" of thoughts can move entailing a change of the conditions of possibility of knowledge and implicitly ruptures of communication between communities or between scientific research traditions (Wittgenstein, 1969, 15).

One of the well-known reformulations of the Kantian distinction between the form of knowledge and the content of knowledge – a reformulation that influenced many authors along the XXth century – is the one made by Rudolf Carnap in its approach to the status of abstract entities. At the beginning of the twentieth century ontology was in the midst of a bitter dispute regarding the existence and nature of such entities, between some empiricist authors. In the spotlight were questions such as: Are there numbers, properties or propositions? Are they real or abstract entities? Is it legitimate to ask what status they have? To answer such questions the German philosopher develops an original approach. He claims that in order to be able to talk about the system of numbers, the system of properties or about the system of propositions, it is necessary to construct a linguistic framework. The construction of a linguistic framework for the mathematical entities is done as follows:

"First, the introduction of a general term, a predicate of higher level, for the new kind of entities, permitting us to say for any particular entity that it belongs to this kind (e.g., "Red is a *property*," "Five is a *number*"). Second the introduction of variables of the new type." (Carnap, 1999, 90-91)

However, before constructing such a framework, it is highly important to distinguish between internal questions – those that arise inside a linguistic framework – and external questions – those concerning the linguistic framework itself (Carnap, 1999, 86). The internal questions are either logical or empirical, while the external questions are either pseudo-questions or pragmatic questions. In this context the importance of the pragmatic ones must be emphasized because they are about the choice of a linguistic framework depending on its practical consequences.

Regarding the selection of the linguistic frameworks, Carnap adopts a conventionalist position. The acceptance or the rejection of such a framework is a convention that can be assessed in terms of its effectiveness as a working tool, taking into account its success or its failure in practical use. According to him, there is nothing dogmatic or pernicious in maintaining a linguistic framework by virtue of its fruitfulness, without considering it true or false. On the contrary, the tolerance towards the free construction of linguistic frameworks and the critical examination of their practical consequences could free scientific research from prejudices that have hindered its progress throughout history.

By stipulating two distinct elements in approaching the problem of the status of abstract entities – a linguistic one and an ontological one – Carnap was obviously influenced by the Kantian distinction between the form of knowledge and the content of knowledge. By taking into consideration the possibility of inventing a linguistic framework – here with the sense of a conceptual scheme – depending on the aim of the research, he took a step forward, distancing from the Kantian perspective.

The idea that any empirical research is shaped by a form of knowledge – by a conceptual scheme that provides us the conditions of possibility of knowledge – that is constructed to achieve certain goals turned out to be of interest not only for analytic philosophers. Philosophers interested in the history of science, as well as historians of science with philosophical interests such as Stephen Toulmin, Paul Feyerabend or Thomas Kuhn pointed out that throughout history science has progressed through changes in the form of knowledge that have led to new scientific discoveries. Some of these authors argued that these changes were so profound that it is possible even to talk about

incommensurability between the conceptual schemes characteristic to the scientific research traditions.

A remarkable illustration of how the content of knowledge is shaped by a form of knowledge that is specific to a certain research tradition can be found in Stephen Toulmin's book *Foresight and Understanding*, where he deals with the evolution of the way the laws of motion were understood from Aristotle to Galileo Galilei (Toulmin, 1961, 44-83). The author argues that at the foundation of Aristotelian natural philosophy lies the unshakable belief that the rest is the natural state of bodies while the motion is the result of the action of a force on a body. To understand the Aristotelian conception of motion – and implicitly his ideal of natural order – consider the following situation. A carriage is at rest as long as the horses do not pull it, that is, as long as no force acts on it. It moves only when the horses apply a traction force, its displacement tending to be slow down by the resistance forces it encounters along the way, such as the force of friction between the carriage and the road. From this perspective, only the motion needs an explanation, the rest doesn't need it. Although later it turned out to be wrong – in the sense that the motion of a body doesn't require a force – thanks to the fact that it managed to explain and predict a diversity of aspects related to motion, the Aristotelian conception inaugurated a real research tradition. Within certain limits, Aristotle's conception managed to describe and to successfully explain many phenomena that occur in everyday life. However its decline began with John Philoponus' attempts to explain the motion of projectiles. As long as the continuous motion of bodies proved to be too much of a challenge, the Aristotelian tradition went into decline and began to be questioned. It all culminated in the XVIIth century with the outline of a new conception of motion by Galileo Galilei. Starting from a single mental experiment he shaped mathematically – a ship at sea which encounters on its path only a negligible force of resistance, tends to maintain its rectilinear and uniform motion until it encounters an obstacle –, the Italian scientist foreshadowed the law of inertia and took an important step towards the mathematical science of nature. Nevertheless the completion of the new research tradition was made by Newton's statement of the first principle of motion – the law of inertia – that describes the ideal case in which a

body maintain the state of rectilinear and uniform motion as long as no type of forces is acting on it or the sum of these forces is zero.

In the completion of the mathematical science of nature, Toulmin sees the establishment of a new ideal of a natural order, of a new standard of rationality and intelligibility. What couldn't be explained by the grid of the Aristotelian natural philosophy and was considered to be an anomaly it became central element of the mathematical science of nature and was successfully explained by its grid. Changing both the goals of knowledge and the concepts needed to explain new natural phenomena represents a deep transformation in the structure of thought but a necessary one for the scientific progress. Through this example it can be seen that in Toulmin's view every scientific research is determined by the conceptual scheme in which it occurs. Accordingly, his perspective is deeply influenced by the Kantian distinction between the form of knowledge and the content of knowledge. However, regarding the fact that for British philosopher when anomalies are encountered it is necessary to make some conceptual changes in order to overcome them, his perspective moves away from Kant towards Wittgenstein and Carnap.

The year 1962 looked like *annus mirabilis* for the history and philosophy of science. The publication of Paul Feyerabend's article "Explanation, Reduction and Empiricism" and of Thomas Kuhn's book *The Structure of Scientific Revolutions* put in a whole new light the way in which the scientific knowledge has developed throughout history. Both works remain a landmark due to the idea that the conceptual schemes shared by different scientific research traditions are incommensurable.

As for Feyerabend, his main purpose is to show that between the scientific research traditions outlined throughout history there are conceptual differences so profound that they are insurmountable. As in the case of Toulmin, in one of his examples, he focuses on how the transition from the Aristotelian conception of motion to the Newtonian one was done (Feyerabend, 52-62). In his view, for Aristotle the natural state of things was the rest while the motion was the continuous action of a "motor" on what is moving. The fact that a block of stone could be moved from one place to another by pushing or by pulling suggested to the Greek philosopher that the force is the cause of the motion. For

philosophers of nature from the beginning of the second millennium, the motion was caused by an impulse given to a body that was supposed to preserve itself until it encounters a resistance force. Finally for physicists of the XVIth and XVIIth centuries the force ceased to be seen as the cause of motion. The continuing motion of an arrow propelled by a bow or a stone thrown by a catapult, even after the force ceased to be exerted on them, could only be offered in a conceptual scheme that presupposed the inertial motion as a state and not as an effect of the action of a force.

According to Feyerabend, in order to provide good answers to the challenges appeared on the scientific research horizon, it is necessary to make conceptual adjustments whenever needed: "All these examples show that the postulate of meaning invariance is incompatible with actual scientific practice." (Feyerabend, 1962, 81) In the case discussed before, the conceptual changes were so profound that although the term "force" appears in both theories, it receives fundamentally different meanings. In Aristotle's works the force is the cause of motion. In Newton's works the force is the cause of acceleration. The development of scientific knowledge occurred through radical changes made in the conceptual schemes that shaped our research and led us to new discoveries. Through the claim that scientific research is guided by conceptual schemes, the Kantian distinction between the form of knowledge and the content of knowledge is once again in the centre of the discussion. And again, through the claim that these conceptual schemes may differ so radically, depending on the goals to be achieved, there is a distancing from Kant's perspective, towards one in the manner of Wittgenstein and Carnap.

Perhaps the well-known perspective of how the form of knowledge – the conceptual scheme – can shape the course of an empirical research is that offered by Thomas Kuhn when he talks about scientific revolutions as changes of the worldview. In *The Structure of Scientific Revolutions* the American historian of science starts from the following findings: a) after periods of normal science – science seen as puzzle solving – the emergence of some anomalies may generate periods of crisis within a certain research tradition; b) the overcome of such crisis may occur by establishing a new paradigm (Kuhn, 1970, 35-43, 52-77). The transition from the Ptolemaic system to the Copernican system, the

one from the Aristotelian physics to the Newtonian physics, the one from the phlogiston chemistry to the oxygen chemistry, and the one from classical mechanics to the relativistic mechanics are only a few cases of paradigm shifts that Kuhn approached in a very special way. However, the most striking consequence of these transitions is that the old paradigm and the new one prove to be incommensurable – partially untranslatable – in some respects (Kuhn, 1970, 144-160). The emergence of a new paradigm can produce a rupture of communication between researchers who succeed to master it and those who still follow the old paradigm. What for some is an anomaly, for others may pass as a normal thing, explicable in terms of the tradition to which they belong.

An edifying example in this respect is that provided by Kuhn in the *Preface* of *The essential tension* regarding the experience that determined the course of his research (Kuhn, 1977, xi-xii). In his attempts to understand the origins of mechanics, the Aristotelian conception of motion turned out to be the biggest challenge because of the absurdities it entailed. The fact that for Aristotle the state of a body was a quality and the motion was a change of that state seemed to him to be a blatant error. How was it possible for such a fine and penetrating researcher in the fields such as biology and politics, to make one of the most basic mistakes in describing and explaining a phenomenon such as motion? For Kuhn, the answer to this question became obvious as soon as he realized that there are several keys for reading scientific texts and that only one is the right one. The *sine qua non* condition to understand the conception of a researcher of nature from another age consists in adopting as much as possible the system of concepts that led him in describing and explaining what he observed. In the case of the Greek philosopher it becomes obvious why the motion was considered a change of the state of a body, only when his works are read starting from the assumption that for him the primary components of the universe were qualities and not material bodies. Therefore, the level at which the rupture between scientific research traditions occur is that of the language in which the questions and answers about nature are formulated. To a modern scientist, the problems formulated within the Aristotelian research tradition might seem difficult to understand because they do not use mathematical models. Similarly, to an

Aristotelian, the problems of mathematical science of nature might seem to be impenetrable because they are formulated in mathematical language.

This example highlights that Kuhn's idea that every scientific research is shaped by a conceptual scheme specific to a paradigm is obviously influenced by Kantian distinction between the form of knowledge and the content of knowledge. At the same time, it emphasizes that by the claim that when a scientific crisis is faced it is necessary to make new assumptions and change our concepts, Kuhn distances from Kant's perspective towards one inspired by Wittgenstein and Carnap.

Concluding remarks

Throughout this article I tried to show that despite Davidson's labelling of the idea of conceptual scheme as the third dogma of empiricism, what he actually targets by his critique is an idea of Kantian origin. Of course, the idea of a conceptual scheme is one of the defining features of the modern empiricism, but if its history is examined, it can be seen that it also influenced historical turn – that philosophical orientation to which belong authors such as Feyerabend and Kuhn, directly mentioned by the American philosopher in his papers – and that its origins are found in Kant's philosophy. The leitmotif of the authors whose works I have briefly analysed is the distinction between the form of knowledge and the content of knowledge. All of them, from Kant to Kuhn argue that any knowledge is shaped by the knowing subject. Also, for all of them the form of knowledge bears the mark of necessity and the content of knowledge bears the one of contingency. The former always gives direction to the latter. The only difference is that while for Kant the form of knowledge is immutable, unchanging, given once and for all, starting with Wittgenstein's late philosophy and with Carnap's approach to abstract entities it can be seen that it is mutable, it can vary depending on the ideals of a human community or on a particular purpose of the research. According to them, as well as to Toulmin, Feyerabend and Kuhn, the form of knowledge – no matter what name it takes or how it is

labelled: linguistic framework, conceptual scheme etc – is a human invention. Every scientific discovery occurs in a conceptual framework that is invented in order to overcome the challenges that are sometimes encountered in research. As Feyerabend says:

“We may even say that what is regarded as ‘nature’ at a particular time is our own product in the sense that all the features ascribed to it have first been invented by us and then used for bringing order into our surroundings.” (Feyerabend, 1962, 29)

The flexibility of this framework is the very condition for the possibility of scientific progress. Without it, when a recalcitrant experience that eludes existing conceptual schemes would be encountered, the scientific research could be stuck forever.

In conclusion, when Davidson criticises the idea of a conceptual scheme, he considers the claim that it is possible to have alternative conceptual schemes through which the world can be described and explained in fundamentally different ways. However, the fact that we could live in different worlds implies a clear distinction between the form of knowledge and the content of knowledge. As this dichotomy is a landmark of Kant’s philosophy, when the ambiguities of Davidson’s critique are removed, it can be seen that he is targeting an idea of Kantian origin.

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