ARTÍCULOS
DE INVESTIGACIÓN

Kuhnian practical politics: Why it's (epistemically) virtuous to be (evaluatively) attached to a paradigm

Lydia Patton
Virginia Tech, USA.
E-mail: critique@vt.edu

Received: 18/03/2024 | Approved: 16/05/2024

DOI: https://doi.org/10.17533/udea.ef.356660

Abstract. Is it epistemically vicious to be attached to a specific scientific paradigm? Such attachment clearly violates a norm of *impartiality* that is associated with the value-free ideal of science. I will argue that what Samuel Scheffler (2022) calls 'evaluative attachment' is not always epistemically vicious. In section 1, I will present Kuhn's account of paradigms as embodying not just theoretical positions but also a 'constellation of group commitments', that Kuhn came to call a 'disciplinary matrix' (2012/1962, postscript). Section 2 evaluates Popper's and Davidson's criticisms of Kuhn, drawing on the work of Pablo Melogno (2020). Section 3 evaluates the claim that impartiality is a significant source of the value we accord to science. Section 4 appeals to Samuel Scheffler's (2022) concept of evaluative attachment to argue that partiality to a specific framework or paradigm is not an epistemic vice. I conclude with brief observations, to be elaborated in future work, on how this argument applies to science in particular.

Keywords: Thomas Kuhn, evaluative attachment, Samuel Scheffer, paradigms, disciplinary matrix, impartiality, value-free ideal of science

How to cite this paper:

Patton, L. (2025). Kuhnian Practical Politics: Why It's (Epistemically) Virtuous to be (Evaluatively) Attached to a Paradigm. *Estudios de Filosofía,* 72, 149-163. https://doi.org/10.17533/udea.ef.356660

ARTÍCULOS
DE INVESTIGACIÓN

Política práctica kuhniana: Por qué es (epistémicamente) virtuoso estar (evaluativamente) apegado a un paradigma

Resumen. ¿Es epistémicamente vicioso estar apegado a un paradigma científico específico? Tal apego viola claramente una norma de imparcialidad asociada con el ideal de la ciencia libre de valores. Sostendré que lo que Samuel Scheffler (2022) llama "apego evaluativo" no siempre es epistémicamente vicioso. En la sección 1, presentaré la explicación de Kuhn de los paradigmas como si encarnaran no sólo posiciones teóricas sino también una "constelación de compromisos grupales" que Kuhn llegó a llamar una "matriz disciplinaria" (2012/1962, Posdata). La sección 2 evalúa las críticas de Popper y Davidson a Kuhn, basándose en el trabajo de Pablo Melogno (2020). La sección 3 evalúa la afirmación de que la imparcialidad es una fuente importante del valor que otorgamos a la ciencia. La sección 4 apela al concepto de apego evaluativo de Samuel Scheffler (2022) para argumentar que la parcialidad hacia un marco o paradigma específico no es un vicio epistémico. Concluyo con breves observaciones, que se desarrollarán en trabajos futuros, sobre cómo este argumento se aplica a la ciencia en particular.

Palabras clave. Thomas Kuhn, apego evaluativo, Samuel Scheffer, paradigmas, matriz disciplinar, imparcialidad, ideal de ciencia libre de valores

Lydia Patton is a Professor of Philosophy at Virginia Tech and an affiliate in the Department of Science, Technology, and Society. She earned her PhD in Philosophy from McGill University in 2004 and her BA in Philosophy from the University of Kentucky in 1996. Much of her recent work and work in progress centers on philosophical analysis of science and the history of science, especially on the development of experimental and formal methods, hypotheses, frameworks, and scientific communities. Her work focuses on finding links between that development and the process of theory building and testing. Recent work focuses on the development of gravitational wave astronomy. One of her most notable contributions to the profession is her editing work, especially at the journal HOPOS. She edited *Philosophy, Science, and History* (Routledge, 2014), and co-edited, with Walter Ott, the collection *Laws of Nature* (Oxford University Press, 2018).

ORCID: 0000-0003-2751-1196

In honor of Pablo Melogno following his tragic death in 2023

Introduction

Thomas Kuhn's account of scientific revolutions has been criticized on the grounds that it undermines the rationality and objectivity of science. Kuhn depicts members of scientific communities as invested in those communities and in the norms and commitments the group holds, embodied in scientific paradigms and disciplinary matrices. That investment is typified by the reactions of partisans of an existing paradigm when a new, innovative paradigm is proposed: the old guard must be persuaded or even must literally pass away[1] for the new paradigm to find its footing.

Kuhn's image of science has been criticized for its political dimensions, which are often regarded as introducing epistemic vice into science. After all, it is a part of our ideal image of science that scientists should be impartial judges of evidence who welcome innovation and change. But some Kuhnian scientists not only don't welcome new paradigms, they find them confusing: partisans of the existing paradigm may not understand at first what those working in the new paradigm are saying or doing, a phenomenon Kuhn called 'incommensurability'.

Karl Popper and Donald Davidson criticized the idea that reasoning takes place within a specific 'framework' or 'conceptual scheme' that makes translation between frameworks difficult. Kuhnian paradigm incommensurability is a special case of this phenomenon. Kuhn, Popper, and Davidson debated the question intensely, joined later by Hilary Putnam, among others (Melogno, 2020; Seidel, 2008).

Popper and Davidson object that Kuhn undermines the rationality and objectivity of science. The 'value-free ideal' of science has it that "value judgments internal to science, involving the evaluation and acceptance of scientific results at the heart of the research process, are to be as free as humanly possible of all social and ethical values" (Douglas, 2009, p.45). Heather Douglas's *Science and the Value-Free Ideal* (2009) and Matthew Brown's *Science and Moral Imagination* are leading interventions in a long-standing debate over the value-free ideal of science.[2] Brown and Douglas challenge the value-free ideal, arguing that values enter into scientific decision-making under risk. Brown emphasizes that science influences our values and vice versa.

1 Kuhn famously quotes Max Planck on this score: "a new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it" (Planck, 1949, pp. 33-4; cited Kuhn, 2012/1962, ch. 12).

2 Often traced back to Max Weber's classic papers from the early 1900s, collected in Weber 1949. Helen Longino (1983) is among those who revived the debate in contemporary philosophy of science, while debates have been ongoing in sociology since Weber.

My paper will focus on a specific question: is it epistemically vicious to be attached to a specific scientific paradigm? Such attachment clearly violates a norm of *impartiality* that is associated with the value-free ideal. I will argue that attachment to a paradigm, even attachment that comes along with emotional bonds or group commitments, need not be epistemically vicious and may even be virtuous.

In section 1, I will present Kuhn's account of paradigms as embodying not just theoretical positions but also a 'constellation of group commitments' that Kuhn came to call a 'disciplinary matrix' (Kuhn, 2012/1962, postscript). Section 2 evaluates Popper's and Davidson's criticisms of Kuhn, drawing on the work of Pablo Melogno (2020). Those criticisms hinge on the idea that commitment to a framework or conceptual scheme hinders the project of critical inquiry and encourages a parochialism that undermines civil society. Section 3 evaluates the related claim that *impartiality* is a significant source of the value we accord to science. We might conclude from sections 2 and 3 that in order to serve as a cornerstone of liberal civil society, science must be impartial, and scientists cannot be committed to particular paradigms. Section 4 appeals to Samuel Scheffler's (2022) concept of evaluative attachment to argue that partiality to a specific conceptual framework or paradigm is not an epistemic vice, and can even be virtuous. I conclude with brief observations, to be elaborated in future work, on how this argument applies to science in particular.

1. Revolutions and 'Group Commitments'

A Kuhnian paradigm is not just a theory.[3] It is a 'constellation of group commitments' of a scientific community.[4] Paradigms embody a set of practices, values, beliefs, and methods.[5] These practices, over time, are accepted as norms of scientific behavior in a research community.[6]

The fact that paradigms serve as action-guiding norms generates much of the conflict that arises when a new paradigm emerges (Kuhn, 2012/1962, chs. 10-12). One of Kuhn's most controversial claims was that scientists are committed to much

3 In the Postscript to *The Structure of Scientific Revolutions*, Thomas Kuhn writes that "If this book were being rewritten, it would… open with a discussion of the community structure of science" (Kuhn, 2012/1962, p. 175).

4 As the title of the second section of the Postscript to *Structure* has it.

5 "Scientists themselves would say they share a theory or set of theories, and I shall be glad if the term can ultimately be recaptured for this use. As currently used in philosophy of science, however, 'theory' connotes a structure far more limited in nature and scope than the one required here. Until the term can be freed from its current implications, it will avoid confusion to adopt another. For present purposes I suggest 'disciplinary matrix': 'disciplinary' because it refers to the common possession of the practitioners of a particular discipline; 'matrix' because it is composed of ordered elements of various sorts, each requiring further specification" (Kuhn, 2012/1962, p.181).

6 Rouse (2013) is a classic text emphasizing the practical elements of Kuhn's account in *Structure*.

more than ensembles of scientific claims or beliefs. Kuhn argues that, as members of research communities, scientists are committed to disciplinary matrices, which also involve methods, practices, values, attitudes, and investments that go well beyond theory. A Kuhnian scientific revolution doesn't only involve a shift in the propositions scientists hold to be true. It is a revolution in practice and sometimes even in what counts as a scientific method.

In chapters 10-12 of *The Structure of Scientific Revolutions*, Kuhn lays out one of the thorniest problems associated with paradigm changes. The norms of scientific practice can change quickly, so that scientists can find it difficult to understand each others' behavior. Normally, a scientist observing another scientist understands exactly why she is doing what she is doing. But if the scientists are working in different paradigms, and the observer is unfamiliar with the new paradigm, then the observer might not understand why the researcher is doing what she's doing, or why it will result in a solution to a scientific problem. This is a practical restatement of the familiar Kuhnian problem of methodological incommensurability.[7]

Kuhn's notion that scientists are committed to disciplinary matrices as well as to ensembles of scientific claims has been sharply criticized. His analysis of paradigms as involving 'group commitments' has been read as *political*. The word 'political' can mean many things, but Kuhn's critics reproach him in particular for undermining the objectivity and universality of science.

To Kuhn, scientific reasoning requires a prior set of commitments that collectively constitute an approach to the phenomena that a scientific community judges to be effective for solving problems. These commitments are not limited to claims made within a theory. Far from it: they are necessary conditions for making claims using a theory, but these conditions are not universal.[8] We can understand a scientist's claims made within a paradigm only within the context of that paradigm, which has given rise to the "charge" of relativism.[9] How can science be objective, critics argue, if it is not accessible equally from every perspective? Worse, Kuhn contends that accepting a new paradigm involves *persuasion*. That persuasion may involve appeal to values, philosophical commitments, methodological preferences, or other factors that may seem external to value-free ideals of scientific reasoning.

Kuhn always insisted that persuading a new generation to accept a new paradigm ultimately rests on epistemic, not political, grounds.[10] But *The Structure of Scientific*

7 For a definition of methodological incommensurability, see Hoyningen-Huene and Sankey (2001).

8 Richardson (2002) evaluates Kuhn's use of a relativized a priori. Kuhn recalled in an interview, "I go round explaining my own position saying I am a Kantian with moveable categories. It's got what is no longer quite a Kantian a priori . . . I do talk about the synthetic a priori" (Baltas, Gavroglu, & Kindi, 2000, p. 264).

9 Please read Kusch (2021) for an explanation of why scientific relativism is not necessarily epistemically vicious.

10 In *The Essential Tension*, Kuhn argued that there is a consensus among scientists on the values associated with a good scientific theory: "accuracy, consistency, scope, simplicity, and fruitfulness" (Kuhn, 1977, p. 322).

Revolutions was written in a provocative way, using the French Revolution as a template for scientific revolutions, arguing that proponents of a new scientific paradigm often had to replace the institutions, journals, and figures of the former paradigm and install their own, just as the new regime replaced the old in France.[11]

Moreover, there is a straightforward reading of *Structure* that sees Kuhnian scientific revolutions as political. Paradigms involve 'group commitments', as Kuhn explicitly says. A paradigm shift - a scientific revolution - is at least partly a change to group commitments. Those commitments don't just involve the beliefs scientists hold, they also involve norms of group behavior, practices, and preferences the group holds in common. So it does seem that Kuhn's account of scientific revolutions is political. Changes are made not just by evaluating the evidence but in response to group dynamics.

The claim that Kuhn's science is 'political' is often made as a criticism. Kuhn's scientists are seen as unacceptably *partial* to a group, rather than as *impartial* judges of the evidence. In the closing sections of this paper, I will investigate whether partiality is really a vice. But first, we will assess the criticisms of Kuhn's account.

2. Popper and Davidson Against Paradigms

Classic criticisms of Kuhn's account arose in the 1970s. On the surface, these criticisms hinge on the concept of incommensurability between paradigms. But as Pablo Melogno (2020) has argued, and as briefly sketched above, Kuhnian incommensurability is linked with his analysis of scientists' positions as members of specific research communities.

Donald Davidson took up the question of interpretation between frameworks, arguing for 'radical interpretation' and against 'conceptual relativism'. His address "On the Very Idea of a Conceptual Scheme" was given at the APA in December 1973.[12] A conceptual scheme requires a scheme-content distinction similar to a form-content distinction. The idea is that conceptual schemes organize empirical content, which may be interpreted as sense data or as basic experiences.[13]

11 It was a compelling analogy, but some readers took seriously the implication that the guillotine awaited defenders of the luminiferous ether.

12 It was given about two decades after W.v.O. Quine's "Two Dogmas of Empiricism". Davidson called the idea of a conceptual scheme that organizes empirical content the "third dogma of empiricism" (Davidson, 1974, p.11).

13 Read Seidel (2008) for Davidson's account of conceptual schemes and relativism. "Conceptual schemes, we are told, are ways of organizing experience; they are systems of categories that give form to the data of sensation; they are points of view from which individuals, cultures, or periods survey the passing scene. There may be no translating from one scheme to another, in which case the beliefs, desires, hopes and bits of knowledge that characterize one person have no true counterparts for the subscriber to another scheme. Reality itself is relative to a scheme: what counts as real in one system may not in another" (Davidson, 1974, p.5).

Most of Davidson's points are mustered against the idea that there can be no translation between one conceptual scheme and another. Davidson criticizes the notion that truth or belief should be based on adherence to a framework or scheme. To explain what makes someone believe something is true, we shouldn't need to refer to a framework. Davidson argues, "following Quine", that "we may without circularity or unwarranted assumptions accept certain very general attitudes towards sentences as the basic evidence for a theory of radical interpretation" (Davidson, 1974, p.18). The interpretation is not based on taking the same data and interpreting it in terms of distinct conceptual schemes. Rather, it is based on translating what it means to accept something as true from one perspective to another.[14]

In "The Myth of the Framework", Karl Popper criticized what he saw as a pernicious relativism linked to 'frameworks' in science and culture. Popper argues that "impossibility of mutual understanding" between different frameworks is a consequence of 'relativism' defined as the doctrine that truth is relative to a framework.[15] If truth is relative to a framework (or paradigm), he argues, this will lead to conflict and even violence. The following is a paraphrase of the reasoning that, according to Popper, leads to disaster:

1. Truth as defined within one's own framework is viewed as the unique defensible truth.
2. There are no framework-independent standards of rationality.
3. One should defend the truth.
4. One cannot translate a truth in one framework into a truth in another (by premise 2).

Therefore, we are imprisoned by our frameworks and required to defend only the truths accessible within those frameworks. This leads to violence when frameworks conflict.

Popper describes this process in detail. For instance, he charges Marxists and the followers of Adlerian psychology with dogmatically defending their frameworks.

14 "For the sake of the present discussion at least we may depend on the attitude of accepting as true, directed at sentences, as the crucial notion. (A more full-blooded theory would look to other attitudes towards sentences as well, such as wishing true, wondering whether true, intending to make true, and so on). Attitudes are indeed involved here, but the fact that the main issue is not begged can be seen from this: if we merely know that someone holds a certain sentence to be true, we know neither what he means by the sentence nor what belief his holding it true represents. His holding the sentence true is thus the vector of two forces: the problem of interpretation is to abstract from the evidence a workable theory of meaning and an acceptable theory of belief" (Davidson, 1974, p.18).

15 "In my view, one of the main components of modern irrationalism is [A] relativism (the doctrine that truth is relative to our intellectual background or framework: that it may change from one framework to another), and, in particular, [B] the doctrine of the impossibility of mutual understanding between different cultures, generations, or historical periods" (Popper, 1976, p. 35, A and B added).

Whenever anyone challenges the beliefs they've developed within their own perspectives, a Marxist or Adlerian (according to Popper) will find a defense for the belief within his own framework. Extra-framework considerations simply aren't taken seriously.

Davidson and Popper both see a problem with the notion that a belief can be understood only with reference to a background set of linked commitments: a conceptual scheme or framework. Popper argues that civil society requires the ability not only to confront and understand others' beliefs, but to compare their beliefs with our own (Popper, 1976, pp. 51-52). If we are imprisoned within dogmatic frameworks, Popper argues, comparison is blocked – and thus so is civil discourse and, ultimately, agreement and peace. Similarly, Davidson argues that mutual understanding can come about only through radical interpretation.[16] But understanding communities, including scientific communities, by using the idea of a particular conceptual scheme moves in the wrong direction.

3. Impartiality and the Value of Science

It is explicit in Popper's criticism of 'frameworks' and Davidson's criticism of 'conceptual schemes' that membership in a group should not affect a person's belief-formation or participation in critical inquiry. Davidson and Popper defend an ideal of *impartiality*: Rational agency should be free of influence from antecedently adopted frameworks or conceptual schemes. Otherwise, we risk dogmatism (Popper) and lack of mutual understanding (Davidson). It is supposed to be part of the value of science that it is an impartial search for truth. Popper, especially, took himself to be defending science itself against Kuhn.

Enduring objections to Kuhn's account of paradigms are based on the claim that when scientists are invested in specific paradigms, those investments violate rational norms of objectivity or impartiality. Criticisms of Kuhn's political account don't necessarily disagree with Kuhn's description of scientists adopting and defending paradigms preferentially. But Kuhn's critics argue that, in order to live up to ideals of rationality, scientists should strive to work as independently of such attachments as possible.

16 "Such examples emphasize the interpretation of anomalous details against a background of common beliefs and a going method of translation. But the principles involved must be the same in less trivial cases. What matters is this: if all we know is what sentences a speaker holds true, and we cannot assume that his language is our own, then we cannot take even a first step towards interpretation without knowing or assuming a great deal about the speaker's beliefs. Since knowledge of beliefs comes only with the ability to interpret words, the only possibility at the start is to assume general agreement on beliefs. We get a first approximation to a finished theory by assigning to sentences of a speaker conditions of truth that actually obtain (in our own opinion) just when the speaker holds those sentences true" (Davidson, 1974, pp. 18-19).

I will emphasize an important distinction to be made between three types of value. Kuhn did not make this distinction explicitly. My aim is to show that if we use this distinction as a tool for analyzing Kuhn's work, it clears up the question of why it need not be epistemically vicious to be attached to a paradigm. First, there are *epistemic values* that scientists use to evaluate theories comparatively. Secondly, there is the value that scientists place on science in general: *valuing science as a project*. And thirdly, there is the value that scientists place on specific paradigms as approaches to problems of interest. This we might call *preferential valuing of paradigms*.

Much of the criticism of Kuhn can be understood as criticism of the preferential value given to specific paradigms, because such preferential value is seen as a kind of partiality. Most people understand the use of epistemic values to assess scientific theories. And even Kuhn's most persistent critics support valuing science as a project. The sticking point comes when Kuhn argues that scientists preferentially value certain paradigms over others, invest in them, and use them to justify claims and methods. Davidson and Popper are just two of a much larger group of critics who object that forming *preferential attachments* to paradigms undermines norms of scientific rationality.

These objections rest on the (usually implicit) claim that preferential attachment to a particular paradigm is epistemically vicious. As made clear in section 1 above, Kuhn did consider a 'disciplinary matrix' or paradigm to embody a 'constellation of group commitments'.[17] A paradigm can be understood as a Davidsonian conceptual scheme, a Lakatosian research programme, or a Fleckian thought collective. Sociological accounts of 'paradigms' acknowledge that to be trained in a paradigm involves becoming part of a group: one becomes a relativist, or a molecular biologist, or an organic chemist. Investing in a paradigm thus involves attachment to a particular group, which can be seen as involving a loss of objectivity or impartiality.

One could try to rescue Kuhn from the objections that he makes science 'political' or scientists 'partial' by appealing to Hans Reichenbach's distinction between the contexts of discovery and justification. After all, one might argue, scientists work within group norms, but those norms are not the standards for epistemic justification of scientific results. This solution, however, is not available to Kuhn since he rejected the discovery-justification distinction for most of his career. As Pablo Melogno argues (2019), Kuhn opposed the static, foundationalist approach "in which science is defined through its products [...] and the validity of scientific theories is independent of the processes that make their construction possible" (p. 155). Kuhn is committed to the idea that the context of discovery, including membership in research communities and the associated group dynamics, is crucial

17 See Kindi (2012) for the distinct definitions of 'paradigm' for Kuhn.

to the explanation of scientific research.

There are existing attempts to rescue Kuhn on this score, based on a correct observation: Kuhn insists that scientists are convinced of new results because of epistemic, not political, persuasion.[18] But these rescues do not fully succeed. Even if Kuhn says scientists are ultimately persuaded by reasons, he still argues that they are invested in specific paradigms. On Popper's and Davidson's grounds, then, Kuhnian scientists are still not impartial. And therefore, we might conclude, they are irrational and epistemically vicious.

My strategy is to block that *last* inference. In the next section, I will follow Samuel Scheffler (2022) in arguing that partiality is not irrational and can even be an epistemic virtue.

4. Evaluative Attachment can be Epistemically Virtuous

Samuel Scheffler (2022) provides an analysis of our attachment[19] to group membership and to important projects, which leads to what he calls "partiality". Partiality is a fraught concept, Scheffler notes: preferential attachments to an individual, group, or practice seem to undermine rational ideals of objectivity and distributive justice. Within Scheffler's account, we can then ask: to live up to norms of rationality, should scientists only value science in general, or is it acceptable to value a paradigm preferentially?

Scheffler's analysis of valuing in general can help here by explaining why attachments that lead to partiality are not epistemically vicious.[20] Valuing includes an epistemic evaluative component: the "belief that the thing one values is indeed valuable" (Scheffler, 2022, p. 320). But it also includes "emotional vulnerability": when something one values is at risk, one is anxious, for instance. And finally, it includes a disposition to act in certain ways when the valued project or group is threatened. Thus, Scheffler argues that we can form what he calls *evaluative attachments* that support preferential behavior.

18 While Kuhn admits that other, non-epistemic values may influence scientific practice, he argues that theory choice ultimately rests on an assessment of epistemic values (Bird, 2022, §6; Wray 2011, p. 68).

19 "In speaking of our *attachments*, I mean to include not only our relationships with particular individuals but also our wider social relations and our membership in groups and organizations, as well as our engagement in extended purposeful activities of the kind that philosophers, following Bernard Williams, have come to call 'projects'" (Scheffler, 2022, p.320).

20 "In general, valuing as I understand it involves a complex syndrome of attitudes and dispositions. This syndrome includes a belief that the thing one values is indeed valuable. It also includes a liability to experience a wide range of context-dependent emotions depending on what happens to the thing or how it fares. One may be distraught if it is harmed or damaged, delighted if it flourishes, anxious if it is in danger, and so on. Emotional vulnerability is one of the constituents of valuing. Finally, the syndrome includes a disposition to see considerations pertaining to the valued item as providing one with reasons for action in relevant deliberative contexts" (Scheffler 2022, pp. 320-321).

> To value something, then, is not merely to regard it as valuable or to believe that it has value. Valuing something also involves a kind of attachment or engagement or investment. [...] It comprises a form of emotional vulnerability and a certain practical orientation: a disposition to treat considerations pertaining to the thing that one values as providing one with distinctive reasons for action. Because it is mediated by a conviction that the object of one's attachment is valuable, we may speak of this kind of attachment as evaluative attachment (Scheffler, 2022, p. 321).

We can extend Scheffler's account to science in particular. Scientists become evaluatively attached to a specific paradigm because they can use it to solve target problems, because they are trained in the paradigm and have invested in it, but also —and mostly— because they have respect for the paradigm itself. Evaluative attachment to a paradigm involves not only deciding to defend the paradigm for political or social reasons, but also because one values the paradigm intrinsically and respects it as a strategy in the search for knowledge.

Scientists value paradigms *because* they value science itself. As Scheffler notes (2022, p. 333, note), Iris Murdoch "uses a strikingly similar example to make a related point":

> If I am learning, say, Russian, I am confronted by an authoritative structure which commands my respect. The task is difficult and the goal is distant and perhaps never entirely attainable. My work is a progressive revelation of something which exists independently of me. Attention is rewarded by a knowledge of reality (Murdoch, 1970/2001, p. 87).

Extending these remarks to the case of science, what is the "authoritative structure which commands my respect"? Is it science itself, or an imposing paradigm like relativity or thermodynamics? Of course it is both. The dynamic of investment that Murdoch describes above is especially poignant in science. Investing one's career in relativity or thermodynamics drives home over time the fact that pursing knowledge through science is a "distant and perhaps never entirely attainable" goal. Investment is rewarded with increasing knowledge.

Even those who see partiality as a vice understand why scientists would choose to invest in one research program over another. Karl Popper was one of the most scathing critics of what he saw as worthless or unscientific approaches. As Scheffler observes, "To form an evaluative attachment is to make a selection: to invest something with differential significance in one's life and psychic economy" (Scheffler, 2022, p. 322). But a scientist who makes *no* investment in a particular approach will not be rewarded with increasing knowledge. Engaging in scientific investigation requires making some choice of methods and training.

Scheffler parses this fact more generally. Pursuing projects involves engaging with the world on its own terms, which involves sensitivity to facts about the phenomena under investigation: "I must respect the objects of my attachment, or else my project

will fail" (Scheffler,2022, p. 337).[21] But pursuing a massive project like science *also* involves deference to the norms of relevant groups: "If one values one's membership in a group, one will see the norms of that group as giving one reasons for action in a way that the norms of other groups do not. In this respect, one will be partial toward the group and its members" (Scheffler,2022, p. 329). This partiality, however, is not epistemically vicious, nor does it violate norms of distributive justice:

> In general, the personal relationships and social groups we most value are joint human creations in which people shape and share one another's reasons and, to one degree or another, their lives. They are not simply distributional arrangements in which each person takes up a distributive position with respect to the other; nor is the aim of the participants to implement a mutually advantageous distribution of benefit. [...] To value one's relationship with another person or one's membership in a group is to inhabit and try to sustain a shared practical and emotional environment which gives one's life part of its shape. One's aim in doing this is not to confer benefits on some while withholding them from others, still less to implement a biased distribution of relationship-independent goods (Scheffler, 2022, pp. 329-340).

Investing in the aims of science involves making a choice about how to invest one's life and time, including choices about group membership, which involve choices about which approaches and methods one will pursue. Those choices can be seen as transactional and biased, or they can be seen as virtuously partial, stemming from evaluative attachment. If one values the search for knowledge through science, and a particular approach and group have been particularly successful in that search, then it is rational to throw in one's lot with them. That does mean that one is –of necessity– ignoring or downplaying other approaches. But pursuing knowledge means making *some* choices of this sort: science requires choosing which attachments to form, but those choices are based on epistemic evaluation.[22]

---

21 "If my project is to plant a garden or to learn to speak Italian, I must be sensitive to the constraints imposed on my activities by the things I hope to achieve. I must be alert to the need of the plants for the right kind of soil, for nutrients, for shade, for sunlight, for water. I must be sensitive to the grammar and vocabulary of the Italian language. In these ways, I must respect the objects of my attachment, or else my project will fail. Indeed, it will scarcely count as a project at all. It follows that the outward-looking orientation [...] has its source, as I have said, in our desire for engagement with the world. And part of what such engagement requires is that we meet the world on its terms" (Scheffler, 2022, p. 337).

22 As Scheffler concludes, "The partiality we display, in so far as we form and sustain personal attachments, is not normatively fundamental. It is a by-product of the deference and responsiveness that are essential to our engagement with the world. We cannot form and sustain valuable personal relationships without seeing ourselves as answerable to the other participants in those relationships. And we cannot develop and sustain valuable projects without responding to the constraints imposed on our activities by the nature and requirements of those projects themselves. More generally, we cannot engage with the world without responding differentially—or displaying partiality—with respect to the objects of our engagement. Partiality is thus a by-product of engagement. We cannot engage with the world at all without exhibiting forms of partiality" (Scheffler, 2022, p. 338).

Concluding Remark: Partiality is Not a Scientific Vice

According to Kuhn, we cannot engage with science at all without choosing an approach to the phenomena. Extending Scheffler's account to Kuhnian science, that is a form of partiality, but it is not an epistemically vicious one, nor does it restrict our rational agency in unacceptable ways. On the contrary, choosing a scientific approach in which to invest —toward which to be partial— *opens up* new methods and conceptualizations, leading to new results and new knowledge. Epistemic partiality leads to epistemic progress.

Applying Scheffler's account of evaluative attachment to science shows that the form of partiality that results is not epistemically vicious. From this perspective, the criticisms of Kuhn examined above are misplaced. Simply approaching the phenomena from a specific perspective does not undermine rational agency or introduce vicious forms of dogmatism.

While, of course, Kuhn did not engage with Scheffler's account himself, I think the conclusion arrived at just above —that epistemic partiality can lead to epistemic progress— is very much in keeping with Kuhn's own approach. Kuhn's analysis in terms of paradigms showed not only that paradigms restrict scientists' approach to the phenomena, but that they *open up* new possibilities. That is the reason scientists choose a new paradigm when anomalies pile up consistently. The key point at issue between Davidson, Popper, and Kuhn is whether choosing a framework is an unacceptable or biased limitation on one's epistemic position, or whether it is a necessary condition for engaging with the world at all.[23] When extended into an account of what we value about science, Scheffler's work on evaluative attachment shows that the latter is a very plausible position.

Acknowledgements

My gratitude is due to the editors of this issue for their invitation to contribute a paper, and to anonymous referees for helpful comments. Thanks are due to Markus Seidel for sending his paper on Davidson, and for comments on this score. I am grateful to Rosalind Chaplin for mentioning Samuel Scheffler's new work in a talk.

References

Baltas, A., Gavroglu, K., & Kindi, V. (2000). A discussion with Thomas S. Kuhn. In *The Road since Structure* (pp. 253-323). University of Chicago Press.

23 This reading is thus very much in tune with Giere's reading of Kuhn as a perspectival realist (Giere, 2013).

Bird, A. (2022). Thomas Kuhn. *The Stanford Encyclopedia of Philosophy*, ed. E. Zalta. Retrieved from https://plato.stanford.edu/archives/spr2022/entries/thomas-kuhn/.

Brown, M. (2020). *Science and moral imagination: A new ideal for values in science*. University of Pittsburgh Press. https://doi.org/10.2307/j.ctv18b5d19

Davidson, D. (1974). On the very idea of a conceptual scheme. *Proceedings and Addresses of the American Philosophical Association,* 47, 5-20. https://doi.org/10.2307/3129898

Douglas, H. E. (2009). *Science, policy, and the value-free ideal*. University of Pittsburgh Press. https://doi.org/10.2307/j.ctt6wrc78

Giere, R. N. (2013). Kuhn as perspectival realist. *Topoi, 32*(1), 53-57. https://doi.org/10.1007/s11245-012-9142-y

Hoyningen-Huene, P., & Sankey, H. (2001). *Introduction to incommensurability and related matters*. Kluwer. https://doi.org/10.1007/978-94-015-9680-0

Kindi, V. (2012). Kuhn's paradigms. In V. Kindi & T. Arabatzis (Eds.), *Kuhn's the Structure of Scientific Revolutions Revisited* (pp. 91-111). Routledge. https://doi.org/10.4324/9780203103159

Kuhn, T. (2012/1962). *The structure of scientific revolutions*. University of Chicago Press. https://doi.org/10.7208/chicago/9780226458144.001.0001

Kuhn, T. (1977). *The essential tension*. University of Chicago Press. https://doi.org/10.7208/chicago/9780226217239.001.0001

Kusch, M. (2021). *Relativism in the philosophy of science*. Cambridge University Press. https://doi.org/10.1017/9781108979504

Longino, H. (1983). Beyond 'bad science': Skeptical reflections on the value-freedom of scientific inquiry. *Science, Technology, & Human Values, 8*(1), 7-17. https://doi.org/10.1177/016224398300800103

Melogno, P. (2019). "The discovery-justification distinction and the new historiography of science: On Thomas Kuhn's Thalheimer Lectures." *HOPOS. The Journal of the International Society for the History of Philosophy of Science 9*(1), 152–178. https://doi.org/10.1086/702308

Melogno, P. (2020). Interpretación, traducción y comunicación, variedades de la inconmensurabilidad. *SCIO. Revista de Filosofía,* 18, 87-111. https://doi.org/10.46583/scio_2020.18.697

Murdoch, I. (2001). *The sovereignty of good*. Routledge. (Original published in 1970).

Planck, M. (1949). *Scientific autobiography and other papers* (F. Gaynor, Trans.). Philosophical Library.

Popper, K. (1994). *The myth of the framework: In defence of science and rationality* (M. A. Notturno, Ed.). Routledge.

Richardson, A. W. (2002). Narrating the history of reason itself: Friedman, Kuhn, and a constitutive a priori for the Twenty-First Century. *Perspectives on Science: Historical, Philosophical, Social, 10*(3), 253–274. https://doi.org/10.1162/106361402321899050

Rouse, J. (2013). Recovering Thomas Kuhn. *Topoi: An International Review of Philosophy, 32*(1), 59-64. https://doi.org/10.1007/s11245-012-9143-x

Scheffler, S. (2022). XIV—Partiality, deference, and engagement. *Proceedings of the Aristotelian Society, 122*(3), 319-341. https://doi.org/10.1093/arisoc/aoac012

Seidel, Markus. (2008). Von Wahrheit über Bedeutung zum Anti-Begriffsrelativismus? Davidsons Argumentation gegen den Begriffsrelativismus. *Facta Philosophica, 10*(1), 39-66. https://doi.org/10.3726/93528_39

Weber, M. 1949. *The methodology of the social sciences*. The Free Press.

Wray, K. B. (2011). *Kuhn's evolutionary social epistemology*. Cambridge University Press. https://doi.org/10.1017/cbo9780511997990