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Cavell and Kuhn

EDITORIAL COMMENT

The tenth issue of *Conversations* takes as its starting point the mutually expressed importance of the intellectual relationship and friendship between Stanley Cavell and the historian of science Thomas Kuhn. Their dialogue is all the more striking given that both thinkers were as concerned with difficulties of communication as with its achievement. Yet there is no hint of a struggle with incommensurability in Kuhn's claim that Cavell was "the only person with whom I have been able to explore my ideas in incomplete sentences."¹ Cavell likewise explained, in *The Claim of Reason*, that the work owed much to having been "at times almost in possession of the something you might call an intellectual community" while working with Kuhn at Berkeley.² This issue springs from these conversations between Cavell and Kuhn, exploring and extending their encounters through readings which cross Cavell with Kuhn and Kuhn with Cavell, and in so doing extending our understanding of each, while also illustrating the ways in which their work can still provide inspiration for grappling with science, art, and philosophy.

There are compelling reasons that make this virtual reunion timely. New scholarship on Kuhn, and the publication of recent posthumous works by Kuhn, has cast his work in a fresh light, helping to redress an earlier phase of its reception – identified by Cavell as a time when the "fame" of *The Structure of Scientific Revolutions* "overshadowed its teaching (so that it is cited as in support of relativism and even irrationality)."³ What becomes clear is that Kuhn, or at least the late Kuhn, particularly when read with Cavell, was a New Realist *avant la lettre*, making his philosophy of

1. Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago: Chicago University Press, 1997), xiii.

2. Cavell, *The Claim of Reason: Wittgenstein, Skepticism, Morality, and Tragedy* (Oxford: Oxford University Press, 1979), xix.

3. Cavell, "Who Disappoints Whom?," *Critical Inquiry* 15 (1989): 608. For an excellent overview of new scholarship on Kuhn, see K. Brad Wray, ed., *Interpreting Kuhn* (Cambridge: Cambridge University Press, 2021). See also Kuhn, *The Last Writings of Thomas S. Kuhn: Incommensurability in Science* (Chicago, IL: The Chicago University Press, 2022).

science, as well as, though somewhat differently, Cavell's work on language, literature, and the arts more generally, an inspiration for thinkers aiming to develop alternative approaches to the strongly anti-realist "theory" which has dominated many humanistic and historical disciplines. One example of such path-breaking scholarship is the work of Toril Moi, one of the contributors to this collection, whose Wittgenstein-inspired critique of poststructuralist literary theory's failure to confront the contexts and conditions of ordinary language has done so much to make available Cavell's teachings to scholars of literature.⁴ Here, her focus is on Kuhn's uptake of Wittgenstein's investigations into aspect-seeing, an exploration that at once helps us to mark ever more clearly Kuhn's difference from the advocates of the strong program whose project he is often read as endorsing or even underwriting. This work helps issue in a richer understanding of parts of Cavell most clearly owing a debt to his conversations with Kuhn, for example his account of modernism, but also, and perhaps more importantly, his distinctive reading of Wittgenstein.

That said, the essays collected here in no way hew to a party line, and one can find divergences within their readings of our two protagonists. Arya Mohan, for example, offers up a much more post-structuralist picture of Kuhn in a stimulating essay which considers the prominent role that the concepts of convention and novelty play in philosophical discussions of the arts and sciences over the second half of the twentieth century. Reading both authors through a lens that could be qualified as Nietzschean, Mohan finds an ironic if also tragic sensibility at work in Kuhn's account of changes of convention within scientific development, a disciplined relinquishment of self in paradigms lost or given up, which she contrasts with a comic sensibility in Cavell, for whom changes in artistic convention are experienced as a form of continuity — a humanised epistemology of tradition and subjectivity preserved through change. In bringing out these commonalities and differences, Mohan argues that Cavell and Kuhn's work can contribute to overcoming the "two cultures" divide.

Similarly dwelling on the relationship between the arts and the sciences, Timur Uçan offers an intricate reading of Kuhn's signature concept, the "paradigm," which stresses the ways in it proposes an innovative solution to the problem of recon-

4. Toril Moi, *Revolution of the Ordinary: Literary Studies after Wittgenstein, Austin, and Cavell* (Chicago: Chicago University Press, 2017).

cing freedom with determinism, and so also reconciles moral philosophy and aesthetics with natural science. As Kuhn noted, the fact that “science and art are both products of human behaviour is a truism, but not therefore inconsequential.”⁵ Uçan’s essay begins by considering Cavell and Kuhn’s efforts to inherit Wittgenstein, a philosopher whose attention to human practices is mindful of what Kuhn referred to as “the numerous prices we pay for ignoring the obvious.”⁶ Resemblances regarding the places of paradigms in the arts and sciences are then affirmed, in the essay’s first part, through their analysis in terms of contingency, freedom, and community. The essay’s second part then focuses upon autonomies, asymmetries, and diversities in order to consider the limits of these resemblances. Throughout, the essay underscores the communal, Wittgensteinian role of paradigms in mediating what Uçan terms “the unrestrictive circle of the ordinary.”

Paul Jenner’s essay also explores Kuhn’s account of the role of paradigms within science. Drawing Kuhn towards Cavell, he shows how related notions of normal science, progress, and crisis, played a structuring and thematic role in Cavell’s philosophical writing. As he makes clear, while many scientific disciplines congeal around novel normative paradigms, philosophy, at least on Cavell’s Emersonian but also Wittgensteinian reading, is paradigmatically aversive, its norm is revolution and conservation, in the sense that every philosophy finds its paradigmatic belonging precisely because it provides an aversion, an alternate but also kindred version of what was previously counted as philosophical. Kuhn’s account of normal science and its progress through an apparent ability to postpone fundamental debates over scientific methods and goals — until such debates become salient in extraordinary, revolutionary moments of disciplinary crisis — becomes transformed in Cavell’s philosophical writing. This writing dramatizes how philosophy, in holding paradigms in abeyance, takes upon itself metaphilosophical questions that the possession of a paradigm would resolve as it were automatically and in advance, performatively echoing and resisting becoming what we would normally call a paradigm. Responsiveness to crisis thus becomes thematised as a normal part of Cavell’s voicing of philosophical progress.

5. Kuhn, *The Essential Tension: Selected Studies in Scientific Tradition and Change* (Chicago, IL: The Chicago University Press, 1977), 351.

6. *Ibid.*

Not all the essays in the collection are in the strict sense readings of Cavell and Kuhn, and this is in an exemplary fashion the case in the contribution by Ruochen Bo, which teases out from Kuhn and Cavell novel understandings of automatism and autonomy, which she then employs in a moving reading of Robert Bresson's film, *Au Hasard Balthazar* (1966). Bo argues that Kuhn's theories of scientific development and Cavell's reflections on the ontology of cinema can help us to see that these two notions are not straightforwardly opposed, with automatism giving birth to a certain type of autonomy, and autonomy, in turn, requiring a certain degree of automatism. Thus the apparent heteronomy of "normal" science is the condition of possibility for the autonomy of "revolutionary" science, whilst the automatism of the scientific object becomes fundamental to paradigm change. Bo isolates comparable proximities between automatism and autonomy in *The World Viewed*, noting how Cavell's "impulse" to understand an artistic medium as an automatism helps to articulate "the experience of the work of art as 'happening of itself.'"⁷ Turning this entanglement of automatism and autonomy in an ethical direction, Bo shows how the radical non-anthropomorphism of Robert Bresson's *Au Hasard Balthazar*, helps us to acknowledge, via the automatism of film, the autonomy of non-human creatures that — at least since Descartes — have often been imagined automata, with this term being understood not in the sense proposed by Bo, but rather, and precisely, as beings deprived of any capacity for autonomy and so also of any right to moral acknowledgment.

Brad Tabas's essay is likewise a creative inheritance from Cavell and Kuhn, an attempt to develop certain themes from their work in novel directions while simultaneously reading back through this work for guidance and inspiration. It takes as its theme the exploration of the openness of ordinary language to the future, what Tabas calls the "extraordinary ordinary" situation. Taking as its starting point the fact that earthlings can now view objects on the surface of Mars televisually, this situation becomes paradigmatic for thinking about the problem of meaning what we say when we have near consensus regarding the fact that we do not know, apriori, what we are talking about. Tabas develops what he calls a critique of planetary reason, a critical awareness of how our ordinary language and imaginable forms of life, even what we call

7. Cavell, *The World Viewed: Reflections on the Ontology of Film*, enlarged ed. (Cambridge, MA: Harvard University Press, 1979), 107.

reasoning itself, are planetary, caught up with the forms of life that prevailed as we Earthlings learned to speak. Developing an expressive ethics for encountering alien objects on screen, he suggests that our encounter with a Martian world viewed calls for a reconvening of our criteria, and so offers an occasion not only for education (or philosophy) but also for an education of philosophy, a new way of thinking about practicing ordinary language thinking.

Jostling for attention amidst the close readings of Cavell and of Kuhn found in these essays, readers will find mentions of as manifold a collection of figures as H. P. Lovecraft, Arthur Danto, Robert Bresson, Walt Whitman, Andy Weir, Clement Greenberg, and David Foster Wallace. The editors hope that one of the accomplishments of this collection is to bring out not just the vitality of Kuhn and Cavell, but also the profound variance among existing interpretations of their work, and even the fecundity of their texts for thinking about the place of the humanities within an age in which scientific discoveries about the planetary system are having radical effects on our understanding of everyday life. Cavell, in a 1992 essay recently republished in his posthumous collection *Here and There*, entitled “In the Meantime,” observed of his own work that it contains an obsessive repetition of “certain textual fragments,” aligning these with past conversations, and describing these unforgotten phrases as akin to an undead coven “rebuking me for not being able to master them,” before finally suggesting that “the reasons for this persistence of conversational fragments evidently go beyond their manifest content, as though they contain some orientation for me that I cannot quite follow.”⁸ In the same way, it seems that we can say, the fragments of those conversations between Cavell and Kuhn haunt us in these essays, returning with an uncanny persistence. Cavell’s tone, which borrows certain tropes from psychoanalysis, may make it seem as if this haunting by philosophy is but a form of mourning or even of madness, though it is doubtful that any of the contributors to this volume find his obsessive interrogations expressions of delusions but rather what we call philosophy. But can the same be said of us in turn? And finally, “What’s the difference?” (as Cavell once commented, quoting none other than Archie Bunker).⁹

8. Cavell, *Here and There: Sites of Philosophy*, ed. Nancy Bauer, Alice Crary, and Sandra Laugier (Cambridge, MA: Harvard University Press, 2022), 207.

9. Cavell, *Themes Out of School: Effects and Causes* (Chicago, IL: The University of Chicago Press, 1984), 42.

Cavell gives a characteristically aversive response in the closing of that essay, a reflection on the split within philosophy, on the relationship between philosophy and authority, and ultimately also on what it means to inherit philosophy: “what we have to say to one another must be said in the meantime.”¹⁰ We thus submit this collection of essays about conversations to the world, hoping that our return to Kuhn’s and Cavell’s encounters offers orientation beyond nostalgia.

BRAD TABAS AND PAUL JENNER

10. Cavell, *Here and There*, 209.

1. The Question of the New: Wittgenstein, Kuhn, Cavell

TORIL MOI

Introduction

The editors of this special issue of the *Journal of Cavellian Studies* invited contributors to write on Stanley Cavell and Thomas Kuhn. Unfortunately, this paper will end with Kuhn. The reason is simple: I found that I couldn't begin writing anything on Cavell and the new before I had set up the literary and historical framework for the project, and before I had discussed Ludwig Wittgenstein's work on aspect-seeing and Kuhn's *The Structure of Scientific Revolutions* (1962).¹ These are the parts of my work in progress that I'll share here.

This paper is an excerpt from my work in progress on the question of the new in literary history, a subject that has interested me ever since I first began to think seriously about Henrik Ibsen's revolution of modern theater.² Literary history is built on claims about change, emergence, breaks, even revolutions. But such terms require the concept of the new. How does the new arise? What do we mean when we claim that something is new?

In my current project I first discuss the new as a problem for literary critics and historians by briefly looking at what Fredric Jameson and Michael North has to say about the matter. Then I turn to Wittgenstein, Kuhn, and Cavell to work out a better philosophy of the new. Finally, I investigate two concrete cases of the new, to see how far the new philosophical framework helps to understand literary historical change. The first case is the emergence of modernism in the 19th century. Examples include Ibsen, of

1. Thomas S. Kuhn, *The Structure of Scientific Revolutions*. 50th Anniversary ed. (Chicago, IL: The University of Chicago Press, 2012). Further references will be abbreviated to SSR.

2. See Toril Moi, *Henrik Ibsen and the Birth of Modernism: Art, Theater, Philosophy* (Oxford and New York: Oxford University Press, 2006).

course, but also Charles Baudelaire, Gustave Flaubert, Oscar Wilde, and Maurice Maeterlinck, just to mention a few. Then, in the final chapter, I ask whether the recent emergence of autofiction marks the beginning of something new in literary history. Here my major example will be Karl Ove Knausgaard's *My Struggle*, but I will also consider writers such as Serge Doubrovsky, G. W. Sebald, and Annie Ernaux.

The question of the new is profoundly interdisciplinary, for it is relevant to every historical and historicizing discipline. The subject of the new is situated at the intersection of history, philosophy and literary criticism. To ask about the new in literary history is also to ask about the new in the humanities. I am not, however, trying to work out an overarching theory of the new. Rather, my examples and analyses stand as an invitation to readers to look and see, to consider to what extent my analysis may be useful to their own efforts to think about change in history.

About Wittgenstein, Kuhn, Cavell, and the New

Although Cavell never wrote an essay entitled "The New" or "On Change," he did write about the (modernist) revolution in philosophy introduced by Wittgenstein and Austin, and about the advent of modernism in the arts, particularly in music. As Ingeborg Löfgren has shown, Cavell's signature concern in his discussion of modernism in the arts is the question of fraudulence.³ By "fraudulence" Cavell means the way modernist art forces the reader or beholder to use her own judgment as to whether the work before her is art, as opposed to some kind of gimmick. In the history of literary modernism, a version of this question does in fact regularly arise, often in the negative, as when a critic declares that a new work is so awful that it doesn't deserve to be called art at all. (This was, for example, a common response to Ibsen's *Ghosts* when it first opened in 1881.)⁴

The theme of the new also emerges in Cavell's elucidations of Wittgenstein's vision of language. He writes beautifully, in many different texts, about the way in

3. See Ingeborg Löfgren, *Interpretive Skepticism: Stanley Cavell, New Criticism, and Literary Interpretation* (Uppsala: Litteraturvetenskapliga Institutionen, 2015.)

4. Cavell examines the question of fraudulence most extensively in Cavell, "Music Discomposed," in *Must We Mean What We Say?: A Book of Essays* (Cambridge: Cambridge University Press, 2002), 180-212.

which we learn words in quite specific contexts, and then, miraculously, find ourselves able to go on to use them — project them — in completely different contexts. Sometimes our projections surprise and delight us with their power to show us something new, something we didn't know until we put it in just that new way. Whoever first said "I have to feed the meter," or "He's gaslighting you" may have felt that thrill. (This is why Cavell resists attempts to reduce Wittgenstein's vision of language to a narrow understanding of "rule-following.") It is also why a study of the emergence of the new needs to spend some time asking about the role of metaphors.)⁵

To understand Cavell's thinking about the new, it helps to have a clear view of Kuhn's thinking about the subject. Conversely, it helps to know Cavell and Wittgenstein if one is to see what Kuhn is doing. There are biographical reasons for this. Cavell and Kuhn forged a deep intellectual companionship when they both worked at Berkeley in the late 1950s and early 1960s, the period in which Kuhn was working on *The Structure of Scientific Revolutions*, and Cavell on his foundational essays "Must We Mean What We Say?" (1959) and "On the Availability of Wittgenstein's Later Philosophy" (1962).⁶ Given that Wittgenstein's *Philosophical Investigations* (PI) wasn't published until 1953, the two men were reading it at a time when philosophers were still just beginning to work out what Wittgenstein was actually doing in the book.⁷ No wonder their conversations felt like a passionate discovery of a new way of thinking about philosophy and the world.⁸

As the example of Jean-Paul Sartre and Simone de Beauvoir shows, attempts to reduce regular and ongoing conversations between two brilliant thinkers to a one-directional influence running from a dominant to a receptive partner are rarely convincing. I take Cavell's and Kuhn's intellectual relationship to have been one of mutual illumination and inspiration. It doesn't follow that their understanding of

5. For more on projection of words, see ch. 7 in Cavell, *The Claim of Reason: Wittgenstein, Skepticism, Morality, and Tragedy* (Oxford and New York: Oxford University Press, 1999).

6. Cavell, "Must We Mean What We Say?" and "The Availability of Wittgenstein's Later Philosophy," in *Must We Mean What We Say?*, 1-40 and 41-67.

7. My references are to Ludwig Wittgenstein, *Philosophical Investigations: The German Text, with an English Translation*, 4th ed., trans. G. E. M. Anscombe, P. M. S. Hacker, and Joachim Schulte (Malden, MA and Oxford: Wiley-Blackwell, 2009), abbreviated to PI.

8. Anyone interested in a more detailed account should read Vasso Kindi's careful elucidation of their relationship, "Novelty and Revolution in Art and Science: The Connection between Kuhn and Cavell," *Perspectives on Science* 18, no. 3 (2010): 284-310.

Wittgenstein was identical in all respects.⁹ Nevertheless, both Kuhn and Cavell's work on the new only really becomes comprehensible when read in the light of Wittgenstein.¹⁰ While Kuhn leans more heavily than Cavell on the section on aspect-seeing in *Philosophy of Psychology - A Fragment* (PPF, previously known as "Part II" of *Philosophical Investigations*), both men are profoundly inspired by Wittgenstein's vision of language and his critique of the traditional notion of concepts.

Cavell and Kuhn both emphasize the mutuality of their intellectual exchanges. In his introduction to *Structure*, Kuhn expresses wonder at their intellectual compatibility: "That Cavell, a philosopher mainly concerned with ethics and aesthetics, should have reached conclusions quite so congruent to my own has been a constant source of stimulation and encouragement to me. He is, furthermore, the only person with whom I have ever been able to explore my ideas in incomplete sentences."¹¹ Cavell reciprocates by stressing how much he learned from conversations with Kuhn "about the nature of history and, in particular, about the relations between the histories of science and of philosophy."¹² Cavell was the first to tell Kuhn that many of the questions he was trying to think about had been illuminated by J. L. Austin and Wittgenstein. He also made Kuhn think hard about the question of "what causes conviction."¹³ At the same time, Cavell stressed how much he learned from Kuhn in those early days: "It was my clear impression that I was learning more from our exchanges, gathering more food for thought, than Tom was, more material about how language is open to the world, or the future, how concepts change, why the openness of concepts to projection into strange contexts is what makes language possible [...]."¹⁴ Anyone

9. At least one passage in *Structure* reads like a parallel version of a passage in Cavell's 1962 essay. A closer examination of the differences and similarities might be quite illuminating for their different views. I briefly refer to these passages below.

10. K. Brad Wray argues that Kuhn owes more to V. O. Quine than to Wittgenstein. See Wray, *Kuhn's Intellectual Path: Charting The Structure of Scientific Revolutions* (Cambridge: Cambridge University Press, 2021). I think there is a good case for modifying that argument in the light of Sandra Laugier's excellent account of what the later Wittgenstein and Quine have in common. See Laugier, *Why We Need Ordinary Language Philosophy*, trans. Daniela Ginsburg (Chicago, IL: The University of Chicago Press, 2013).

11. SSR, xlv.

12. Cavell, *Must We Mean What We Say?: A Book of Essays*, xiv.

13. Cavell, *Little Did I Know: Excerpts From Memory* (Palo Alto, CA: Stanford University Press, 2010), 355.

14. *Ibid.*

familiar with Cavell's philosophy will recognize that he is here expressing some of the cornerstones of his own mature thought.¹⁵

Why Care About the New? Jameson and North

Why should we care about the new? For historians, the reason is obvious: without some kind of concept of newness, we can't really historicize anything. The concept of the new is grammatically connected (in Wittgenstein's sense of "grammar") not just to the old, but to a whole network of other terms: beginnings, endings, before, after, change, break, transition, transformation, and revolution. Without the concept of the new, it becomes impossible to periodize. But to periodize can be an uncomfortable activity. What was intended as a subtle analysis of a complex network of phenomena quickly gets reduced to a story about sharp boundaries and gives rise to talk about "breaks." Yet when we immerse ourselves in the historical evidence, actual breaks can be extremely difficult to find.¹⁶ The messy details of the historical record quickly make most boundary-drawing seem arbitrary. Yet, as Fredric Jameson puts it: if we are to think about history, "We cannot not periodize."¹⁷

There is no need to be a historian to realize why we need a workable understanding of what we do when we talk about the new. Existentially and politically the idea of the new is grammatically connected to hope. If we genuinely believed that nothing is ever new under the sun, what would sustain us in the struggle to change the world? The belief that modernity brought on the climate crisis, for example, relies heavily on the concept of the new. It posits a before and conjures up a vision of an af-

15. A final introductory note: Both Kuhn's "paradigm" and Cavell's "tradition" have been accused of being "conservative," usually in the sense that such critics believe that their models of newness can't in fact conceptualize change at all, and therefore only return the new to the old. To my mind, such claims tend to be based on a wrong-headed idea of what Kuhn means by "paradigm," which is then projected on to Cavell's "tradition." Although I think my section on Kuhn below begins to show why I think so, in my work-in-progress I only discuss such claims in relation to Cavell's "tradition," which means that this is yet another question I won't get to in this paper.

16. Kuhn's account of the discovery of oxygen in the late 18th century is an excellent illustration. See SSR, 53-57.

17. Fredric Jameson, *A Singular Modernity: Essay on the Ontology of the Present* (London and New York: Verso, 2002), 29.

ter. Without the idea of the new, words like transformation or revolution become meaningless.

All this may seem self-evident. Yet, strangely, claims about newness are often met with doubt and rejection. Literary historians know only too well how to debunk claims about change, transition, innovation, and revolution. Every time someone claims that a literary or cultural phenomenon begins with a particular work, author, or historical event, someone else will always point out that whatever case we put forward is far from the first, that someone somewhere did something very similar long before our exemplar turned up. Yet such counterexamples rarely settle the discussion. When did free indirect speech first turn up in literature? An expert on modernism might point to Flaubert. A Romanticist might retort that there are cases in Jane Austen too. And then the Medievalist trumps them both by proudly pointing to an example in Chaucer. Yet, in spite of all that, the Modernist usually still feels that *something* new is going on in Flaubert's use of the form. Is she wrong? How do we need to think about the new for her intuition to make sense?

In *A Singular Modernity* Fredric Jameson turns to the example of modernity itself. This immensely rich book should ideally be read in the light of Jameson's work on postmodernism, which, among other things, is an effort to historicize the present. Jameson's thinking about the new could easily be the subject of a separate essay. Here, however, I just want to set out a few brief remarks on how he frames the question of historical change in the book that has inspired my own understanding of literary modernism. When did modernity begin? Jameson points out that there are at least fourteen different answers to that question. For example, while the Enlightenment and the French Revolution still get the most votes, German historians think that the Protestant Reformation marks the watershed. Philosophers will mention Descartes; historians of science go with Galileo. If economists think that modernity begins with the emergence of capitalism, postcolonial theorists point to the conquest of the Americas, and Hegelians believe that modernity only emerged with historical consciousness itself.¹⁸

For Jameson, this multiplicity of stories is as good as it gets, for there will never be one, overarching, ultimate account of modernity. All we have, and will ever

18. *Ibid.*, 31-32.

have, are “narrative options and alternate storytelling possibilities.”¹⁹ Moreover, all such theories are, and can only be, the product of hindsight. If we were to try to historicize our own present moment, for example, Jameson writes, we will discover that “the present cannot feel itself to be a historical period in its own right without this gaze from the future.”²⁰

For Jameson, there are only two ways at looking at the new: it’s either “cyclical” or “typological,” either recurrence — a coming round again of the old — or a fulfilment or completion of a moment in the past.²¹ But, as Jameson is the first to acknowledge, the two models quickly become difficult to keep apart. In *Novelty*, Michael North also argues that Western culture has only ever had two basic models of newness, namely “recurrence” (or “cycles”) and “recombination.” In the first model, which seems to me to combine both of Jameson’s categories, the new is an effect of a “cyclical revival,” in which the new is considered a restoration to a truer self or state of affairs: a return of the old, but in a better, truer, more perfect state.²² In the second, the new consists of a new blend of familiar ingredients. Both models, North explains, respond to the fundamental philosophical problem of the new, namely the fact that the universe already contains all the elements (all the energy, all the matter) we’ll ever have. On this view, the new can only arise through a remix, a new combination of old elements. This explains why so many theorists like to exemplify the emergence of the new by pointing to the power of language to create ever new meanings from a limited number of elements, whether those elements are taken to be words, the letters of the alphabet, or Saussure’s signifiers or phonemes.²³ More recently, the recombinatory power of the building blocks of DNA have been invoked to make the same point. North’s history culminates in his account of Darwin’s theory of evolution as a kind of synthesis of the two views, in which “all novelty [...] is the hybrid offspring of recurrence and recombination.”²⁴

19. *Ibid.*, 32.

20. *Ibid.*, 26.

21. Jameson invokes Robert Jauss. See *ibid.*, 20.

22. See Michael North, *Novelty: A History of the New* (Chicago, IL: The University of Chicago Press, 2013, Kindle ed.), ch. 2: “Two Traditions of the New: Cycles and Combinations.”

23. Ordinary language philosophers will immediately note that such arguments assume that language is a finite structure, with boundaries. As such they stand in sharp contrast to Wittgenstein’s and Cavell’s vision of use as infinitely open-ended. I discuss these questions in the first four chapters of *Revolution of the Ordinary*.

24. North, *Novelty*, 74.

Jameson, who tends to exemplify newness by speaking of modernity (and by extension, of modernism), stresses that the search for the one, synthesizing, theoretical and historical account of modernity will always be futile. Although no thinker could be less Wittgensteinian than Jameson, this argument comes close to Wittgenstein's idea that most concepts don't have rigid boundaries, that to understand them, all we can do is to examine examples, and that the search for one overarching definition, or the one intrinsic essence of the concept at stake will always be futile. Like so many other concepts in history and the humanities, Jameson's "modernity" is a classic case of a "family resemblance" concept.²⁵ This is why I think that Jameson's conclusion, namely that "Modernity is [...] a narrative category" fails to get it right.²⁶ Jameson's formulation invokes concepts like "storytelling" or "narrative" as if they explained something. But all such concepts do is to restate the original claim: since we seem not to be able to agree on one general definition of modernity, we'll just call the different accounts "stories." This view opens up a kind of subjectivism — the new is in the eyes of the beholder — that runs counter to Jameson's Hegelian outlook on history. (In my view, however, Jameson himself does not take the step into subjectivism and relativism.) Jameson takes for granted that when a phenomenon — in this case: modernity — can't be brought under a concept with rigid boundaries, then it must reduce to a set of different "stories." This is why his account of the new is vulnerable to accusations of subjectivism.²⁷

North's history of Western theories of the new is a treasure-trove of information. Nevertheless, his fundamental account of the new is less convincing than Jameson's. Right at the outset, North dismisses "relative novelty" — the idea that "everything is new to someone somewhere" — as completely uninteresting.²⁸ The trouble with "relative novelty," according to North, is that it "makes novelty a routine fact of existence," and thus entirely fails to account for the grand drama of the new, for a "genuine novelty, in the sciences at any rate, is a major disturbance in the universe, a development like consciousness or life itself."²⁹ In this way, North turns "the new"

25. See PI, §67.

26. Jameson, *A Singular Modernity*, 40.

27. Here, a close reading of Wittgenstein's analysis of concepts such as "game" would prove helpful. For more on this, see ch. 3 in *Revolution of the Ordinary*.

28. North, *Novelty*, 5.

29. *Ibid.*

into something like an object existing independently of any specific observer. While he does stress both the “inherent impossibility of ever finding [the new] in a pure state,” and how difficult it is for scientists, philosophers, and scholars of the humanities to agree on what is to count as a new departure, he still casts the new as a an observer-independent phenomenon.³⁰ Nevertheless, North’s picture of the new remains something like a new law of physics, or a new element, like oxygen. But, as Kuhn constantly stresses, even a law of physics or a new element must be perceived and formulated by someone. And that someone must be someone who already has a concept of the old, of the past, or the new would just not strike her as new. In other words: the new can only appear new to someone who is already situated within a tradition, a context, a practice. If we eradicate the perceiving subject understood as a historically situated human being from our account of the new, we will be left either with positivism or its postmodern negation.

The challenge then becomes how to get properly into focus both the idea that the new is something real, something “out there,” and the idea that any talk about the new fundamentally depends on human perception, or experience. A further challenge is how to preserve the sense that the new can be profoundly ordinary. After all, everyone knows what it’s like to have a new insight, see a new connection, to have an “Aha!” moment. In a psychoanalytic session, for example, the analysand may suddenly realize something she never realized before. The new insight may be banal, ordinary, commonplace — the analyst may have seen it coming for months — yet it is still new to her, and it may well change her life in profound ways. The difference between different flashes of insight isn’t the structure of the experience, but its significance in the world.

North’s distinction between insignificant and subjective (“new to me”) and world-historical and objective (“absolutely, radically new”) kinds of newness obscures the real distinction, namely the difference between asking what the experience of the new is (asking about its essence, definition, or grammar) and asking what makes a specific new insight or discovery important, historically transformative, world-changing (asking about its significance). As in the case of language, the ordinary shows us what the use is — the practices, the language-games, the grammar — without which

30. *Ibid.*, 161.

we wouldn't even have any criteria for distinguishing between the usual and the unusual. What then is "ordinary newness"? I take Wittgenstein's account of aspect-seeing in *Philosophical Investigations* to provide a particularly compelling answer.

Aspect-Seeing, or Discovering the New

Wittgenstein's discussion of aspect-seeing is, in large part, a discussion of the experience of seeing or thinking something new. The experience appears to be commonplace, for most of his examples, including the very first one, are simple and ordinary: "I observe a face, and then suddenly notice its likeness to another. I see that it has not changed; and yet I see it differently" (PPF, §113). I know it's your face, but now I see in it that "unmistakable Karamazov quality" that I never noticed before.³¹ The famous duck-rabbit shows that an aspect can remain hidden until it suddenly "lights up" [*aufleuchten*] (see PPF, §118). (I only saw the duck, but now I see the rabbit!) Here too we see something new although nothing has changed.

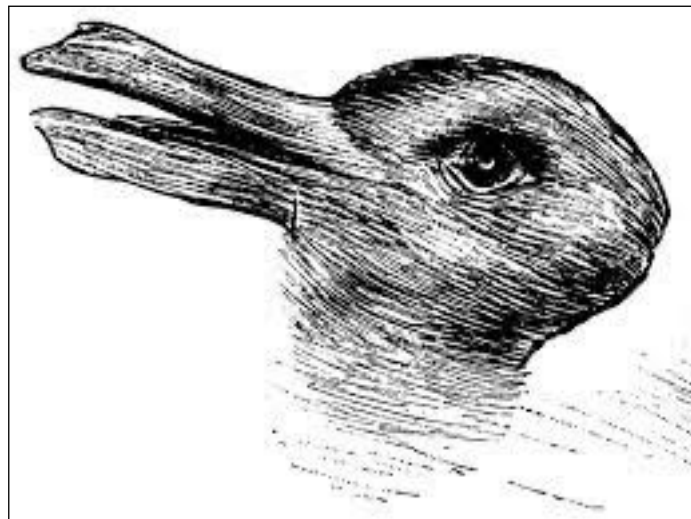


Fig. 1: Duck-Rabbit.

We should resist the temptation to turn the duck-rabbit into *the* exemplary case of aspect-seeing. Rather, as Avner Baz reminds us, in the case of the duck-rabbit one

31. I am echoing Cavell's formulation in *The Claim of Reason*, 187, which occurs in a discussion of Wittgenstein's understanding of essence as grammar.

aspect *eclipses* the other.³² The case of the face, for example, is not like that: when I suddenly notice your likeness to your father, I don't cease seeing your face as your face.

Aspect seeing is not just seeing. To see an aspect is not the same thing as to attribute a concept to something, i.e. to realize what a thing is. I don't see my fork *as* a fork. I just see a fork: "One doesn't '*take*' what one knows to be the cutlery at a meal *for* cutlery" (PPF, §123). Aspect-seeing always has a temporal dimension. Aspects dawn, but they can fade as well.³³ To see an aspect is to experience a sudden dawning, a feeling of discovery: *Now* I see the likeness! *Now* I see the rabbit! Such exclamations are not just descriptions or reports, for they are, as it were, "forced from us" [*Er entringt sich uns*] (PPF, §138). Like expressions of pain, they *escape* us.

To see an aspect is not to place an interpretation on an object: "But how is it possible to see an object according to an *interpretation*?" (PPF, §164). Discussing the example of the chalice/two profiles illusion, Jan Zwicky explains why seeing an aspect isn't an interpretation: "It makes no sense to say one is more basic than the other, nor to say that the drawing is "really" just splotches of paint that we can "interpret" as we choose."³⁴



Fig. 2: Chalice/Profiles.

32. Avner Baz, *Wittgenstein on Aspect Perception* (Cambridge: Cambridge University Press, 2020), 30. Baz short book has been invaluable to me in my attempts to understand Wittgenstein on aspect-seeing.

33. Baz is particularly good on the reasons why aspects aren't continuous, or permanent. See *Wittgenstein on Aspect Perception*, 25-33.

34. Jan Zwicky, *The Experience of Meaning* (Montreal and Kingston: McGill-Queen's University Press, 2019), 13.

Interpretations are needed when we are in doubt about something and require further explanations. But we don't first get puzzled by the duck, in the sense that we wonder whether it really can be a duck instead of a goose or a swan, before after much consideration, we decide to interpret it as a rabbit. In the duck/rabbit case, and the chalice/profiles case, we first see one figure plainly. Zwicky calls it "an experience of direct perception: we see one of the figures immediately, and the second shortly afterward (especially if we've been told it's there)."³⁵

For Wittgenstein, aspect-perception produces insight. When we give voice to the experience of aspect-seeing, we simultaneously express our own experience — the surprise, the delight, or the shock of the new insight — and describe or report on the insight. Wittgenstein writes that "the very expression which is also a report of what is seen is here a cry of recognition" (PPF, §144). The original term is *Erkennen*, which even more than the English "recognition" implies "cognition," "knowledge," "understanding," "insight," and so on. When the aspect dawns on us, we sometimes feel "as if an *idea* [*Vorstellung*] came into contact, and for a time remained in contact, with the visual impression" (PPF, §211). Aspect-seeing gives us new insight: "What forces itself on one is a *concept* [*Begriff*]," Wittgenstein writes (PPF, §191). The dawning of the aspect gives us a new concept. But "new" here doesn't mean a concept that has been utterly unheard-of until this moment: In Wittgenstein's examples it is just one we didn't have in our minds *here*, in *this* situation, until the aspect "lit up."³⁶ Aspect-seeing fuses *seeing* and *thinking*: "the lighting up of an aspect seems half visual experience, half thought" (PPF, §140). "Is it a case of both seeing and thinking? Or a fusion of the two — as I would almost like to say?" (PPF, §144) Zwicky rightly calls aspect-seeing's characteristic mix of perception and cognition by a simple name: "understanding." Wittgenstein teaches us, she writes, that the "traditional distinction between sense perception and thought is empty."³⁷ When the aspect dawns, we understand something new.

Wittgenstein's aspect-seeing challenges traditional philosophy's belief that the pursuit of truth requires us to begin with atoms, fragments, parts, the smallest possible units (as if that were even always an option). As Zwicky sees it, the point of

35. Ibid.

36. Unlike some philosophers, Wittgenstein didn't think the task of philosophy was to reach "unheard-of" insights, let alone to create unheard-of concepts to express them. See PI, §133.

37. Zwicky, *The Experience of Meaning*, 14.

Gestalt-theory is to show that a crucial part of human perception and human thinking happens because we grasp wholes (shapes, forms) *before* we grasp their internal parts. Atomizing, analyzing, taking apart is often (but not in every case) something we can do because we have *already* grasped the whole.³⁸

To my mind, Wittgenstein's vision of language already has a kind of Gestalt "feel" to it, for he insists, over and over again, that we can't begin our quest for meaning with individual words, or even individual sentences. To understand a word, we need to grasp the language-game in which it occurs, which again means having a sense of the grammar of the utterance, which means understanding the particular ways in which a group of speakers live their lives in language. The particular word only gains meaning in the context of the whole.³⁹

As usual, Wittgenstein is drawing our attention to something we already know but tend to forget.⁴⁰ In philosophy, for example, Frege's logical analysis of sentences presupposes, as it must, that we can't do the analysis unless we already know what the sentences mean, for otherwise we just couldn't tell what function specific words have in the whole.⁴¹ Ferdinand de Saussure, who unlike Wittgenstein, did assume that individual words taken in isolation were bearers of meaning, also took for granted that we can't determine the simplest linguistic units of a language unless we already know the meaning of the words they occur in: "Meaning justifies the delimitation," he writes.⁴² In other words: to determine that English has phonemes like /k/, /m/ and /r/, we need to already know the difference between "cat," "mat," and "rat." The building blocks emerge as a result of the analysis of the whole.⁴³

38. Zwicky mentions a "bag of marbles" as an example of exceptions to this rule. See Zwicky, *The Experience of Meaning*, p. 5.

39. When I write "grammar" and "grammatically" in this paper, I mean "grammar" in Wittgenstein's sense of rules for how we use language, rules arising from "shared human behavior" (PI, §206). Or as Rush Rhees puts it: "The rules of grammar are rules of the lives in which there is language." Cora Diamond, "Rules: Looking in the Right Place," in *Wittgenstein: Attention to Particulars. Essays in Honour of Rush Rhees (1905-89)*, ed. D. Z. Phillips and Peter Winch (New York: St. Martin's Press, 1989), 12.

40. This should not surprise us, for his aim in philosophy is to make us notice "the aspects of things that are most important for us [but which] are hidden because of their simplicity and familiarity" (PI, §129).

41. See for example James Conant's analysis of the different function of "Vienna" in "Trieste is no Vienna," as opposed to "Vienna is the capital of Austria," in "Wittgenstein on Meaning and Use." *Philosophical Investigations* 21, no. 3 (1998): 235.

42. Ferdinand de Saussure, *Course in General Linguistics*, trans. Wade Baskin (New York: Columbia University Press, 2011), 105.

43. Many followers of Saussure appear to forget this. They argue as if we somehow recognize "empty signifiers" or "marks" as free-floating linguistic units in search of a meaning (the "signified"), although it is obvious that we only recognize signifiers as signifiers because we already know the language, they are part of, as it were. See ch. 5 and 6 in RO.

Wittgenstein compares aspect-seeing to certain children's games, as when children "say of a chest, for example, that it is now a house; and thereupon it is interpreted as a house in every detail" (PPF, §205). This is why he insists that aspect-seeing "demands *imagination* [*Vorstellungskraft*]" (PPF, §217): "The concept of an aspect is related to the concept of imagination" (PPF, §254). I take this to mean that the dawning of an aspect is grammatically connected to the imagination. But if aspect-seeing mobilizes the imagination, then aspect-seeing is also grammatically connected to freedom. Linda Zerilli reminds us that Hannah Arendt defined freedom as "the human capacity to begin anew."⁴⁴ Seeing or creating the new is an act of freedom.

Baz also considers aspect-seeing to be a manifestation of freedom. He reaches that conclusion through a discussion of Wittgenstein's idea of aspect-blindness: "Could there be human beings lacking the ability to see something as something — and what would that be like? [...] We will call it "aspect-blindness" (PPF, §257). To be "aspect-blind" is to be in some peculiar way incapable of making imaginative leaps, of moving one's mind beyond the confine of the actual. The aspect-blind person can only see facts. Such a person could recognize a black cross, but he couldn't say "Now it's a black cross on a white ground!" (PPF, §257).

Baz draws a parallel to Maurice Merleau-Ponty's discussion of the famous Schneider case, first published in 1918 by Kurt Goldstein and Adhémar Gelb. Schneider suffered a brain injury in World War I, and as a result became unable to make any kind of imaginative leap. He couldn't, for example, project himself into the future, or understand himself as part of a concrete, meaningful situation. His injury made him relate to the world exclusively as an agglomeration of disparate facts. Schneider lives in a "ready-made or congealed" world, Merleau-Ponty writes, he is "tied to actuality," and "lacks liberty."⁴⁵ For Baz, Schneider is aspect-blind in the sense that he lacks the "capacity to project sense creatively, playfully — to perceive given things and situations otherwise than how 'one' would perceive them, or other-

44. Zerilli's formulation. Zerilli also rightly connects freedom and imagination to Kant's understanding of aesthetic judgment in the *Third Critique*, which I'll discuss below.

45. "[R]eady-made or congealed world," *Phenomenology of Perception*, p. 112 ["un monde tout fait ou figé," *Phénoménologie de la perception* (130)]; "tied to actuality," "lacks liberty" (135) ["lié à l'actuel," "manque de liberté" (158)].

wise than what [he] objectively knows them to be.”⁴⁶ An aspect-blind person is incapable of “seeing things anew.”⁴⁷

Another way of putting this is to say that aspect-blind people can’t create new *internal relations* between objects. This capacity is crucial to aspect seeing: “What I perceive in the lighting up of an aspect is not a property of the object, but an internal relation between it and other objects” (PPF, §247). In Gestalt-theory, which Wittgenstein invokes repeatedly in the aspect seeing chapter, two objects have an internal relation if you can’t change the one without changing the other. Certain figure/ground relationships, such as the chalice/profiles illusion, exemplify the point with particular acuity. When an aspect dawns, we suddenly see an object against a new background: we place it in a new context or, to use Wittgenstein’s habitual word for context: a new *Zusammenhang*, which means that we give it a place in a new sequence of events, come to see it as part of a new story.⁴⁸ To establish an “internal relation” between one object and another is to transform our understanding of both.

Wittgenstein’s examples of aspect-seeing quite often concern sudden perceptions of likeness (and therefore also differences), as in the case of seeing the chest as a house, or suddenly noticing your resemblance to your father. But if aspect-seeing makes us see likenesses, requires imagination, and gives us new insight, then it is akin to the capacity to see analogies and similarities, and to make metaphors. Zwicky draws the same conclusion: “The relevance of this figure for poetry is obvious — it is an example of metaphor in action, of seeing one thing (two faces in profile) as another (a chalice) on the basis of profound, inalienable, shared structure.”⁴⁹ At this point, Wittgenstein reminds me powerfully of Aristotle, who considered the capacity to see likenesses in different things to be crucial for poets,

46. Baz, *Wittgenstein on Aspect Perception*, 44.

47. *Ibid.*, 45. — After World War II powerful critics, including Carl Jung, voiced their skepticism of Goldstein and Gelb’s account of the Schneider case. Georg Goldenberg claims that their “enthusiasm” for a holistic understanding of human nature “induced [them] to fabricate” the case, and that “Schneider was willing to assume his part in that scenario.” Goldenberg, “Goldstein and Gelb’s Case Schn.: A Classic Case in Neuropsychology?,” in *Classic Cases in Neuropsychology, Volume II*, ed. Chris Code, Claus-W. Wallesch, Yves Joannette, and André Roch Lecours (Hove and New York: Psychology Press, 2003), 298. J. J. Marotta and M. Behrmann take a more nuanced position, pointing out, among other things, that other patients exhibited similar behaviors. See Marotta and Behrmann, “Patient Schn: has Goldstein and Gelb’s case withstood the test of time?,” *Neuropsychologia* 42 (2004): 633-38.

48. I am struck by the likeness to Zwicky’s remark that “Gestalt comprehension is insight into how things hang together.” *The Experience of Meaning*, 5.

49. Zwicky, *The Experience of Meaning*, 13.

and also as something that cannot be taught: “The greatest thing by far is to have a command of metaphor. This alone cannot be imparted by another; it is the mark of genius, for to make good metaphors implies an eye for resemblances.”⁵⁰ Wittgenstein’s understanding of aspect-seeing undoes the usual demarcation between perception and knowledge. It also transcends the traditional barriers between poetry (literature, the art of writing) and philosophy by showing that the power of metaphor is not just aesthetic but cognitive, and that both poets and philosophers need imagination to see (and create) the new.

In the moment the aspect dawns, I discover neither a purely subjective entity, nor a purely objective feature of the object or event. When I see the chest as a house, for example, I still see the chest: I would surely draw it in the same way both before and after I realized that children could play house with it. Nevertheless, my perception of the chest as a house is not private or subjective in the sense that only I can see it, for I can explain to you what’s going on with the chest-house game, and you can come to see it too. In a discussion of “aesthetic matters,” Wittgenstein notes that in a conversation about music someone might say: “You have to hear these bars as an introduction” (PPF, §178). If you try to do that, maybe the point will dawn on you. Or not.

In this respect, aspect-seeing is like the experience of beauty, according to Kant: My experience of beauty is subjective, in the sense that it is internal to me: nobody else can experience beauty on my behalf. But at the same time it is an experience, a perception of an object, of something in the world. Baz puts it well: “Like beauty as characterized by Kant, an aspect as characterized by Wittgenstein hangs somewhere between the subject and the object: it is not a property of the object, and yet we call upon others to see it *as if* it were.”⁵¹ Baz rightly stresses the difference between Kant’s invocation of judgment as part of his metaphysical universalism and Wittgenstein’s emphasis on judgment emerging as agreement in our words. Although the experience of beauty can neither be outsourced nor delegated, it is sharable. I can

50. Ch. 22 in Aristotle, *The Poetics*, S. H. Butler’s 1895 translation (online, Project Gutenberg). Cf. James Hutton’s translation: “but most important by far is to have an aptitude for metaphor. This alone cannot be had from another but is a sign of natural endowment, since being good at making metaphors is equivalent to being perceptive of resemblances.” *Aristotle’s Poetics*, trans. Hutton (New York: Norton, 1982), 71.

51. Baz, “The Sound of Bedrock: Lines of Grammar between Kant, Wittgenstein, and Cavell,” *European Journal of Philosophy* 24, no. 3 (2015): 611.

explain to you what it is about this landscape, this painting, this piece of music that makes it beautiful. And then you may come to hear or see it the way I do. Or not. Unlike the grasping of rational arguments, the perception of beauty — the judgment that this is beautiful — is a perception grounded in freedom, not in necessity. Yet it still responds to something in the object. Kant writes in §32: "For the judgment of taste consists precisely in the fact that it calls a thing beautiful only in accordance with that quality in it by means of which it corresponds with our way of receiving it."⁵²

Wittgenstein's account of aspect-seeing is an account of the experience of seeing the new in all kinds of contexts. It is an account of what it is to experience a "Eureka!" moment. Wittgenstein's understanding of aspect-seeing offers a phenomenology of the experience of having new ideas, and shows that it requires freedom, creativity, and imagination. The capacity to see "likenesses"— new connections—as when we make up metaphors is part of the experience of aspect-seeing. At the same time, the dawning of the new aspect is perfectly ordinary, and can arise in any activity or practice. It is as relevant for scientists as it is for artists, writers, and humanists.

To see an aspect, then, is to experience a sudden flash of insight, to have an experience which is at once an act of judgment and imagination, and a response to the world. This gets us to Kuhn, who argues that paradigm changes arise precisely through (Wittgensteinian) flashes of insight. In normal science, he writes, crises are terminated "by a relatively sudden and unstructured event like the gestalt switch. Scientists then often speak of the 'scales falling from the eyes' or of the 'lightning flash' that 'inundates' a previously obscure puzzle, enabling its components to be seen in a new way that for the first time permits its solution."⁵³

Just like Wittgenstein, Kuhn insists that the dawning of an aspect is not an interpretation: "No ordinary sense of the term 'interpretation' fits these flashes of intuition through which a new paradigm is born."⁵⁴ To grasp Kuhn's *Structure of Scientific Revolutions* we need to read it in the light of Wittgenstein's philosophy of aspect-seeing. Once we do, Kuhn's project emerges as far more useful for humanists than

52. Immanuel Kant, *Critique of the Power of Judgment*, trans. Paul Guyer (Cambridge: Cambridge University Press, 2000), §32, 162.

53. SSR, 122.

54. SSR, 123.

has conventionally been assumed. In particular, as I will show in later work, Kuhn's understanding of paradigm shifts illuminates Cavell's account(s) of the relationship between what he calls the "tradition" and the revolution in philosophy and literature that we call modernism.

Wittgenstein's philosophy is permeated by his conviction that the fact that human beings are finite creatures, embedded in human forms of life, isn't an obstacle to the search for knowledge, but its condition of possibility. Wittgenstein's late philosophy is profoundly critical of what Cavell calls the temptation to turn philosophy into a grand project of the "Rejection of the Human."⁵⁵ Kuhn's work is also committed to the idea that science is a human activity carried out by human beings, as opposed to an accumulation of purely objective facts about nature. I suspect that the tendency to overlook this commitment is one reason why his theory of paradigm shifts has been so frequently perceived as some kind of claustrophobic structure or machine, which then spectacularly fails to give any account of how one could ever get outside the structure. If one places the acting, thinking subject back into Kuhn's theory, it becomes obvious that this is not a plausible reading.⁵⁶

If Kuhn epochal book builds on his understanding of Wittgenstein's aspect-seeing, it follows that his philosophy of science is as relevant for literary history, and for the humanities more generally, as it is for the sciences. It is true that the humanities don't accumulate knowledge in the same ways as the sciences. It is also true that we continue to work on age-old questions, that there is no such thing as discarding Plato and Aristotle because later work has superseded their questions and analyses. But it is also true that the humanities do undergo, in large and small ways, something that I would certainly call paradigm shifts. In literary studies we can think of the shift from historical-biographical criticism to New Criticism in the mid-twentieth century. Or the rise of poststructuralist theory with its critique of the subject displacing older theories of authorship. Or the intense canon wars in the 1980s, which were essenti-

55. Cavell, *The Claim of Reason*, 207. Not surprisingly, Cavell writes this in a context where he discusses Wittgenstein's understanding of meaning as use: "The meaning is the use" calls attention to the fact that what an expression means is a function of what it is used to mean or to say on specific occasions by human beings" (206).

56. Kuhn discusses the numerous misunderstandings of his book in "Postscript — 1969," in Kuhn, Thomas S. *The Structure of Scientific Revolutions. With an Introduction by Ian Hacking*. Chicago: University of Chicago Press, 2012, pp. 173-209. See also the section on "paradigm" in Ian Hacking's splendid introduction.

ally paradigm wars. Or, in Britain, the “Ibsen wars” of the 1890s. What exactly is a paradigm, then?

Paradigms and the World They Reveal

Paradigm and *paradigm change* are Kuhn’s most famous concepts. Ever since the first edition of *The Structure of Scientific Revolutions* was published in 1962, scholars have debated the meaning of these terms. Faced with what he took to be a barrage of misunderstandings, Kuhn himself also set out to explain and nuance his concepts. I will attempt no overview. Instead, I will simply zoom in on the aspects that matter the most to me in the concept of paradigm, namely (1) Kuhn’s idea that the “lightning flash” that signals a paradigm change represents a Gestalt-switch, a change in internal relationship between a figure and a (back)ground, and (2) Kuhn’s use of the term “world,” as when he talks about scientists’ working in a different world after a paradigm change. (I have already stressed his fundamental commitment to the idea that science is carried out by human subjects, so I won’t return to that here.)

In his excellent introduction to the 50th anniversary edition of *Structure*, Ian Hacking points out that for Kuhn, the first, fundamental meaning of “paradigm” is “shared example” or “standard example,” of the kind one can find in physics textbooks, for example. The Greek *paradeigma* was used by Aristotle to signal an *exemplar*, an exemplary case nobody could dispute, a case one could appeal to in other, similar cases. In Latin, *paradeigma* became *exemplum*. Hacking stresses that the term had been little used in modern philosophy before Kuhn. The only exceptions were some passages in Wittgenstein’s *Philosophical Investigations*, and in the work of the (positivist) Vienna Circle.⁵⁷ Kuhn himself felt that “paradigm” was the least understood of his concepts. In his 1969 postscript he writes that: “The paradigm as shared example is the central element of what I now take to be the most novel and least understood aspect of this book.”⁵⁸

57. See Ian Hacking, “Introductory Essay,” in SSR, xvii-xxv.

58. SSR, 186.

While he always insisted that “shared example” was the original, and only fully meaningful use, he acknowledged that many of his readers had turned this original, “local” meaning of paradigm into a much more all-encompassing or “global” affair. I agree with Hacking that whatever the problems readers in the 1960s and 1970s had with the concept, it is time for us to “happily restore [paradigm as a shared example] to prominence.”⁵⁹

A paradigm, in the sense of an exemplary case, is not so much a theory (although theories may be developed from the paradigm) as an instantiation or embodiment of the right sort of scientific practice. Textbooks teach such practices by focusing on specific exemplary cases, which scientists are trained in, and which they rely on when they think about how to resolve new problems. The paradigm case stands for a way of working which relies on an array of shared assumptions, working practices and specific laboratory equipment. A paradigm is “knowledge embedded in shared exemplars,” as Kuhn put it in his 1969 postscript.⁶⁰

A paradigm shouldn’t be construed as a large, over-arching structure — a kind of closed box — that holds its practitioners in a vice-like grip. A paradigm can pertain to quite small, local areas of scientific inquiry. Kuhn writes that “paradigms need not be common to a very broad scientific group.”⁶¹ He also stresses that some paradigm changes “need be revolutionary only for the members of a particular professional subspecialty.”⁶² In so far as such members remain in conversation with colleagues in other subspecialties, they will not even be wholly immersed in their own local paradigm.

If a paradigm is a shared example, or a set of shared examples, as presented in textbooks of science, then there clearly are paradigms in the arts and humanities. In literary studies, for example, larger or smaller groups of critics share a sense of what the essential works — literary or theoretical — in a field are. Their “exemplars” are the works the practitioners in the group think everyone in the field should know, the works they regularly teach their students. The set of exemplars — the paradigm — gives rise to characteristic questions, ways of reading, assessment of

59. Hacking, “Introductory Essay,” SSR, p. xviii.

60. SSR, 192.

61. *Ibid.*, 49.

62. *Ibid.*, 50.

what counts as interesting, and so on. In the humanities, many different paradigms are simultaneously at work. When they clash, conflicts arise. But they don't always clash, for they don't all compete to give an account of the same phenomena. Because "culture wars" or "canon wars" express a conflict between paradigms they often signal what Kuhn would call a moment of "crisis," and point to a pending paradigm shift.⁶³

Kuhn uses the term "world" about reality as revealed by the paradigm. Here are some examples: "The very ease and rapidity with which astronomers saw new things when looking at old objects with old instruments may make us wish to say that, after Copernicus, astronomers lived in a different world. In any case, their research responded as though that were the case."⁶⁴ "After discovering oxygen Lavoisier worked in a different world."⁶⁵ Discussing the famous "incommensurability" of paradigms, he writes:

In a sense that I am unable to explicate further, the proponents of competing paradigms practice their trades in different worlds. . . . Practicing in different worlds, the two groups of scientists see different things when they look from the same point in the same direction. Again, that is not to say that they can see anything they please. Both are looking at the world, and what they look at has not changed.⁶⁶

In this passage, Wittgensteinian aspect-seeing is at work. Although the actual lines on the paper have not altered, I see the duck, you see the rabbit. To "live in a different world" means having different understanding of what it is we are seeing when we look at the same thing. (I'll return to this.) This is not skepticism, nor relativism. It is a deep-going acknowledgment of the imbrication of world and word, of the way our ways of talking about things affect our way of being in the world. Just as Kuhn's "paradigm" isn't a closed box, Kuhn's "world" isn't a closed, all-encompassing structure: "At times of revolution [...] [the scientist] must learn to see a new gestalt. After he has done so the world of his research will seem, here and there, incommensurable."⁶⁷

63. I return to culture wars in the literary-historical parts of my project.

64. SSR, 117.

65. Ibid., 118.

66. Ibid., 150.

67. Ibid., 112.

Note the “here and there”: this corresponds to the sense of paradigm as a series of exemplars, not as a self-enclosed “global” structure.

Kuhn’s way of talking about “world” arises from his Wittgensteinian understanding of language. At times, Kuhn on language sounds much like Cavell:

The child who transfers the word “mama” from all humans to all females and then to his mother is not just learning what “mama” means or who his mother is. Simultaneously he is learning some of the differences between males and females as well as something about the ways in which all but one female will behave towards him. His reactions, expectations, and beliefs — indeed, much of his perceived world — change accordingly.⁶⁸

Compare this to Cavell’s exquisite summary of how children learn language: “In ‘learning language’ you learn not merely what the names of things are, but what a name is; not merely what the form of expression is for expressing a wish, but what expressing a wish is; not merely what the word for “father” is, but what a father is; not merely what the word for ‘love’ is, but what love is.”⁶⁹ While there clearly are significant differences between these two passages, they share an underlying vision of language as intertwined with the world.⁷⁰

In the same year as Kuhn published *Structure*, Cavell published his magnificent essay “Availability of Wittgenstein’s Later Philosophy.” In this essay, Cavell conveys Wittgenstein’s vision of the intertwinement of world and word by saying that when we learn language, we learn how to share “routes of interest and feeling, modes of response, senses of humor and of significance and of fulfillment, of what is outrageous, of what is similar to what else, what a rebuke, what forgiveness, of when an utterance is an assertion, when an appeal, when an explanation — all the whirl of organism Wittgenstein calls “forms of life.””⁷¹ To share a world is to share some (but not

68. *Ibid.*, 128.

69. Cavell, *The Claim of Reason*, 177.

70. Kuhn’s idea of a “transfer” of the word “mama” from all humans to all females (etc.) strikes me as strange. What child begins by calling all humans “mama” and ends by discovering her own mother? Cavell would say that we learn a word in a specific context, and then learn to project it in new contexts. Cavell also insists that when we learn how to talk about things and practices, we learn what they are. This is in keeping with Wittgenstein’s reminder that “*Essence* is expressed in grammar” (PI, §371).

71. Cavell, “The Availability of Wittgenstein’s Later Philosophy,” 52.

all) such routes: to enjoy the same movies, laugh at the same jokes, understand why you take offense, and what it would take to be forgiven. To learn a language as a child is to be initiated into the ways of a particular world. In the same way, when Kuhn's scientists learn to speak the language of their specialties, they are, as it were, initiated into a world which takes some cases to be paradigmatic for its activities.

To "share a world" does not mean to be locked up together in an impermeable prison-like structure. Worlds are open-ended and imbricated in other worlds. My world and yours may overlap significantly yet be different. If we are lucky, we get to educate our experience, learn to grow into new modes of feeling and thinking throughout our life. These are the kinds of changes Kuhn has in mind when he talks about scientists no longer sharing a world after a paradigm shift. He doesn't mean that they have nothing in common, or that nothing they did before the paradigm shift makes sense after. On the contrary, he stresses how old ways of measuring and gathering data may be roped into supporting the new paradigm. Yet, on some points, communication will no longer be possible. On certain points, the adherents of the new paradigm will feel that they have reached bedrock, as Wittgenstein describes it: "Once I have exhausted the justifications, I have reached bedrock, and my spade is turned. Then I am inclined to say: "This is simply what I do" (PI, §217). I have sometimes felt like this when I have tried to convey ordinary language philosophy to colleagues trained in the poststructuralist paradigms. It is as if we, in some crucial areas, no longer make sense to one another.⁷² Yet in others, we still communicate just fine. Regardless of our professional orientation, we often — but not always — agree perfectly on things like who the top candidates for admission are, or on whether exam candidates performed admirably or abysmally.

Aspect-dawning can't be forced. Someone stuck with the duck, can't simply will the rabbit into existence. This is why Kuhn talks about "conversion experiences" in relation to paradigms. Conversion doesn't replace reason. The point is not that there are no rational arguments to be made in favor of the new paradigm. It's rather that however rational the arguments for the new paradigm might be, they still violate the norms of the old paradigm, to the point that masters of the old paradigm might

72. See my discussion of the relationship between Derrida, Cavell and Wittgenstein in *Revolution of the Ordinary*, ch. 3.

exhibit life-long resistance to the new one. If some scientists come round it is often because the new paradigm solves some problems important to them. But it is also because the old guard has died off, or because of differences in sensibilities, generational differences, different needs and projects: in short, because of the complex interweaving of their lives and their science. It follows that someone who feels at home in one paradigm may simply never be persuaded that the new one is either important or useful. To my mind, the question of theoretical, philosophical, and literary “conversions” — a genuine change of mind — is particularly complicated, and particularly pressing in the humanities.⁷³

Kuhn insists that to change one paradigm for another isn't the same thing as to get closer to the truth about nature, as if the language of the old paradigm somehow was more distant from the world than the language of the new. His point is *not* that science doesn't uncover what we rightfully want to call truths about the world. On the contrary: the new paradigm clearly solves problems the old one couldn't explain. The point is, rather, that it makes no sense to think of language, or science, as either closer or further away from the world. That's the wrong picture. World and word, world and scientific practices, are intertwined from the start. It's because world and word meet in *us*, the users of language, that Kuhn denies that there can ever be a “pure observation-language,” a language stripped of every trace of the speaking subject and her investments in her world.⁷⁴ Kuhn, like Wittgenstein and Cavell, stands opposed to positivism, empiricism, and scientism.

Finally: the paradigm doesn't just enable “normal science.” It is the condition of possibility for revolutions, for without a paradigm we would never perceive the anomalies that one day may lead to a paradigm shift. The relationship between paradigm and anomaly is “grammatical” in Wittgenstein's sense of the word, for without a notion of the old, we would never be able to discern the new. When Kuhn writes that “Anomaly appears only against the background provided by the paradigm,” the paradigm becomes the indispensable background that allows the anomaly to be perceived.⁷⁵ To perceive the new, we need to see it against the right background, the right paradigm. In literary history, it's easy to make mistakes here. In my own work on Ib-

73 . I will discuss such cases in the literary part of my project.

74. SSR, 126.

75. SSR, 65.

sen, for example, I didn't really understand what made his theater so radical until I began to see it not against the background of realism, which had been the common move, but against the background of aesthetic idealism, the belief that art should uplift us by showing us the true, the good, and the beautiful. The question of background is a question of paradigm, and so of tradition. We have arrived at Cavell.

2. The “New” in Science and Art: Explorations into the Two-Culture Divide through Kuhnian-Cavellian Thought

ARYA MOHAN

Conventionality and novelty — these two concepts came to occupy a prominent role in the philosophical discussions on both sciences and the arts in the second half of the twentieth century. These domains had established themselves as two autonomous and very different expressions of human creativity. Though they represent two ways of interpreting the world, the two cultures getting polarized to the extent of denying any imbrications is an unpleasant scenario. Discourses addressing the growing divorce between the sciences and the arts began to take shape in the 1950s. In the science world, methodological pluralism and a consequent multiplicity of truth(s) shattered the positivist view of scientific progress as an advancement towards a single, unchanging, worldview. With “progress” in science itself becoming a dubious concept, the status of science as a progressive discourse began to look like an exaggerated claim.¹ The absence of ahistorical, atemporal truth foregrounds conventions as the decisive factor for the knowledge claims constituting the body of science, as exemplified by Thomas Kuhn’s idea of the *paradigm*. Around this time, when the conventionality of knowledge was coming to prominence, similar ideas emphasizing the conventionality of art appeared in philosophical discourse. Danto’s essay, “The Artworld,” talks about the “artworld” in a way which can be compared with Kuhn’s paradigms. The claim is that for something to be recognized as art, it must make sense in “an atmosphere of

1. The idea of progress conceived as proximity to an objective truth, discovered by a rational methodology, was so crucial to the epistemological superiority of science as a discourse synonymous with knowledge that the historian of science, George Sarton argued that “the acquisition and systematization of positive knowledge are the only human activities which are truly cumulative and progressive,” and “progress has no definite and unquestionable meaning in other fields than the field of science.” See George Sarton, *The Study of the History of Mathematics and the Study of the History of Science* (New York: Dover Publications, 1936), 5.

artistic theory, a knowledge of the history of art: an artworld.”² The parallel between Kuhn’s paradigm and Danto’s artworld could be briefly presented like this: a particular construction makes sense as science or knowledge only in the context of a paradigm conducive to that; something is recognized as art only in the context of the artworld. Along with these discussions on conventions, the philosophical discourses pertaining to both science and the arts stressed “novelty” as central to understanding progress. Thomas Kuhn’s notion of “paradigm-shift” redefined the advancement of science in terms of the revolutionary changes brought to the domain, challenging the received view of science as a linearly progressive.³ The epistemic merit of paradigm-shifts lies in the liberation it brings forth from the set ways of interpreting the world in order to open “new” epistemological possibilities or to conceive the hitherto inconceivable.⁴ Thus, in a way, positivist truth is replaced by “novelty” as a decisive element in the scientific epistemology. Similarly, in the art world, “make[ing] it new,” sloganeered by Ezra Pound and almost synonymous with modernism, served as the touchstone for measuring artistic progress.

Thus, it is in the context of the conceptual pair of conventionality and novelty that I seek to understand the philosophical similarities and differences between Cavell and Kuhn. I am interested in how each of them engages with the role of conventions and how they conceive novelty within the disciplines. At the first glance, they do seem to share certain similarities. For example, In *Must We Mean What We Say?*, Cavell observes that minimalists and pop artists who defy the paradigm so much so that it is not informed by a commitment to the tradition are not doing art.⁵ This is reminiscent of Kuhn who stated that there could be scientists but no science outside a paradigm.⁶ Delving into their texts may reveal how far their philosophies are compatible with each other and if they, combined or individually, provide cues on to overcome the “two cultures” divide.

2. Arthur Danto, “The Artworld,” *The Journal of Philosophy* 61, no. 19 (1964): 580.

3. Thomas Kuhn. *The Structure of Scientific Revolutions* (Chicago, IL: The University of Chicago Press, 1962), 66.

4. Arya Mohan S, “The Sciences and the Humanities: Building a Bridge between the ‘Two Cultures’ through Rhetoric,” *New Literaria* 3, no. 2 (2022): 38-44.

5. Cavell, *Must We Mean What We Say?: A Book of Essays* (Cambridge: Cambridge University Press, 1969), 221-22.

6. Caroline A. Jones, “The Modernist Paradigm: The Artworld and Thomas Kuhn,” *Critical Inquiry* 26, no. 3 (2000): 507.

1. Essence Reconciled with Conventionality in Cavell's Theory of Knowledge and Art

Modernism, as theorized by Greenberg, insisted on medium specificity.⁷ The notion underlying formalism was that each art or medium has an essence which should not be contaminated by its traffic with another medium. For Greenberg, modernism is a self-critical activity that prompts each art to dispel everything unnecessary so that it can exist in its pure form.⁸ The search for the “unique and irreducible” core must entice us with an artistic catharsis whereby the medium purges itself of everything it shares with other media.⁹ But it's hard to brush aside the irony of emphasizing an imperishable core to art at a period when stability and coherence of everything else is being questioned and shattered. An atemporal essence specific to each artform is a venturesome claim in such an epoch. Michael Fried, Greenberg's early follower, later questioned the idea of timeless essences while maintaining that each art form within each period has an individual essence.¹⁰ Essence is reconceptualized as a product of conventions, susceptible to change. Fried cites Wittgenstein directly in support of this understanding of essence as historically contingent and subject to change, “I say [...]: if you talk about essence —, you are merely noting a convention [...]. But what if I reply: to the depth that we see in the essence there corresponds the deep need for the convention.”¹¹ The depth of essence directly reflects the depth of the need for conventions, the innate human need to make an order of things. What we can mean, say, and understand is determined by the shared conventions to the point that the conventional becomes our *natural*. Thus, Cavell writes, “underlying the tyranny of convention is the tyranny of nature.”¹²

Thus, the foundations of art or knowledge or being are not in a pre-existing essence or reality, but in the conventions. Not only an apriori truth and a deterministic universe of the positivist science are re-articulated as the residuum of an or-

7. See Diarmuid Costello, “On the Very Idea of a ‘Specific’ Medium: Michael Fried and Stanley Cavell on Painting and Photography as Arts,” *Critical Inquiry* 34, no. 2 (2008): 274-312.

8. Greenberg, “Modernist Painting” in *Modern Art and Modernism: A Critical Anthology*, ed. by Francis Frascina and Charles Harrison (New York: Harper & Row, 1982), 5-10.

9. *Ibid.*, 5.

10. Costello, “On the Very Idea of a ‘Specific’ Medium,” 26.

11. Ludwig Wittgenstein, *Remarks on the Foundations of Mathematics* (Oxford: Blackwell, 1956), 65.

12. Cavell, *The Claim of Reason: Wittgenstein, Skepticism, Morality, and Tragedy* (Oxford and New York: Oxford University Press, 1999), 123.

der-seeking pathos but even rationality is understood as the product of a preconditioning that Foucault called epistemes.¹³ Resembling the Foucauldian perspective on rationality as subject to the generative principles of particular epochs, Kuhn points out in the introduction to the *The Structure of Scientific Revolutions* that those points of view which are discarded as myths or errors, say Aristotelian dynamics, phlogistic chemistry, or caloric thermodynamics, were produced by the “same sort of methods” we rely on for the production of knowledge claims currently accepted as science.¹⁴ If we accept those discarded views as science, then we have to accept that science consists of frameworks inconsistent with the notions of rationality relevant in the modern times. The body of scientific knowledge constructed across time would then have different modes of rationality incomparable with each other. Hence, in systems of thought, anything that has come to perform like an objective entity has always been a contingent construct, be it positivist truth or apriori essence or an intact logic.

Echoing the Kuhnian emphasis on the conventionality of knowledge, Cavell writes in *The Claim of Reason*, reminding us of how he used to finish Kuhn’s sentences in Berkeley, that conventions — “grammar, codes, territorialities, myths, rules, standards, criteria” — are all that we have.¹⁵ Conventions and the consensus they generate reflect values, for they express what counts as what matters. This general claim takes a systematic, methodical shape in Kuhn’s analysis of scientific discourse. Based on the incommensurabilities made manifest past occurrences of revolutionary change in the history of scientific development where the advancement from one episode to another, say from Newtonian mechanics to Einsteinian relativity, Kuhn proposed “paradigm shift” as the mark of scientific transformations. Despite some twenty-three meanings of the word “paradigm” that Masterman identifies, the word can be understood as expressing the idea that “universally recognized scientific achievements that for a time provide model problems and solu-

13. By “episteme,” Foucault meant the set of unconscious rules that govern all serious scientific discourse in a certain society and time period and determine what does and what does not get taken seriously by that scientific community. Thus, episteme is the generative principle of knowledge or the ordering principle in a certain time. See Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (Paris: Éditions Gallimard, 1966), 34.

14. Kuhn, *The Structure of Scientific Revolutions*, 2.

15. Ibid., xiii. Kuhn quotes how Cavell and he could communicate in incomplete sentences. Charles Bernstein, “Reading Cavell Reading Wittgenstein,” *boundary 2* 9, no. 2 (1981): 299.

tions to a community of practitioners.”¹⁶ Nothing outside the paradigm is relevant to science. Hence, without the paradigm, there could be scientists but little science. Since each paradigm is self-justifying, there is no objective means of comparison between two successive paradigms. With the rival paradigms being incommensurable, scientific judgments on their relative merits are not just a matter of applying rules that could prove one paradigm superior to another. Consequently, when a proposition disrupts an existing paradigm (what Kuhn calls “revolutionary science”) needs to be evaluated, an appeal to factors not part of the ontological apparatus of the frameworks becomes imperative. And that criterion is the consensus among the scientific community. Given that scientists are specifically trained to make fair and informed judgments of this sort, Kuhn asks, “What better criterion than the decision of the scientific group could there be?”¹⁷ This emphasis on the scientific community’s judgment as the ultimate source of science’s rational authority is the most fundamental feature of his account of science.

While Kuhn’s inquiry was restricted to the construction of scientific knowledge, Cavell was concerned with the structures that engender shared constraints on what can and what cannot be articulated metaphysically, aesthetically, scientifically, and philosophically. Cavell’s early works probed into the analytical tradition that advocated a “scientific conception of the world,” which, with its famous verifiability theory, rendered metaphysical and subjective statements meaningless.¹⁸ Verifiability became the very condition of intelligibility in the analytical discourse. In “Existentialism and Analytical Philosophy,” Cavell pointed out that the first revolution in the analytical tradition grew out of the development of new logic or mathematical logic in the nineteenth century, as embraced by Russell and the early Wittgenstein.¹⁹ It held that the linguistic expression of a proposition is a distortion of its real logical form. Thus, the early analytical philosophers tried to lay bare the logical structure of expressions to find statements’ meanings rather than relying on the linguistic utterances themselves. In refusing to take ordinary language, which is influenced by the context and social processes of arti-

16. Margaret Masterman, “The Nature of a Paradigm,” in ed. Lakatos and Musgrave *Criticism and the Growth of Knowledge* (Cambridge: Cambridge University Press, 1970), 59–89. Kuhn, *The Structure of Scientific Revolutions*, xiii.

17. *Ibid.*, 170.

18. Cavell, “Existentialism and Analytical Philosophy,” *Daedalus* 93 no. 3 (1964): 950.

19. *Ibid.*, 949.

ulation, as the structures generating the intelligibility of the utterances, the human articulator is removed from the everyday. Thus, Cavell, following Austin and the late Wittgenstein, sought to subvert the analytical tradition with “ordinary language philosophy” by emphasizing that *we must mean what we say* without having to abstract a logical form underlying it. In OLP (which Cavell paradoxically identified as the latest phase in the analytical tradition), the focus is on how meaning is generated through the subjective utterances in everyday situations. Thus, language is brought closer to ordinary life. This method of bringing language or “words back” to the everyday is an attempt at humanizing language philosophy.²⁰ While the analytical aspiration for a logical reformulation of everyday language distances the human from his/her language, OLP brings the human back into discourse. Thus, Cavell’s interest in the “logic” of the ordinary language is part of the background to *The Claim of Reason*, a book in which he sought to humanize epistemology by bringing the human back into all the shared structures that constitute the fabric of human experiences. Hence, he delves into the logical depths of human experiences, including something as simple as identifying a toothache, in his discussions of criteria.

Cavell makes a distinction between criteria and standards. Criteria are the principles by which we decide if a particular thing is of a particular kind whereas standards refer to the degree to which that candidate meets the criterion.²¹ Rationality, consistency, objectivity, non-arbitrariness — qualities that have traditionally been thought to distinguish the sciences from the arts — are ensured by formulating criteria which we all agree to, although always open to repudiation. Cavell emphasizes criteria as crucial to the intelligibility of utterances. And it is criteria that decide what could even amount as counting as relevant proof, though even criterion cannot satisfy our demand for proof. Cavell considers a variety of experiences, like someone being in pain, waiting for something, expecting something, claiming that it is raining, as prompting the question “but by what criterion do we know that?” The precedence Cavell attributes to criteria, a *man-made* framework, over evidence, an *impersonal* correlation between two distinct items, in generating the system of relations that matter in the knowability of anything, I feel, is Cavell’s cogent contribu-

20. Wittgenstein, *Philosophical Investigations*, trans. G. E. M. Anscombe (Englewood Cliffs, NJ: Prentice-Hall, 1958), 116.

21. Cavell, *The Claim of Reason*, 11.

tion to the discourse surrounding the textuality of knowledge. Cavell reads Wittgenstein,

Wittgenstein's insight, or implied claim, seems to be something like this, that all our knowledge, everything we assert or question (or doubt or wonder about...) is governed not merely by what we understand as "evidence" or "truth conditions," but by criteria. ("Not merely" suggests a misleading emphasis. Criteria are not alternatives or additions to evidence. Without the control of criteria in applying concepts, we would not know what counts as evidence for any claim, nor for what claims evidence is needed).²²

Mutually agreed upon criteria are indispensable for human life, whether this is for the production of scientific knowledge or for the creation of art or for living in a society by already entering into a "social contract" to be governed politically by a system.²³ In the context of mutual disagreement on an underlying criterion, no knowledge is possible. Language is shared and so is everything. All the structures that we use in order to know something, say pain or depression or expectation or being of an opinion, is dependent on human-made forms, "a background of pervasive and systematic agreements among us which we had not realized or had not known we realize" that Wittgenstein sometimes calls "conventions" or "rules."²⁴

Cavell surely does destabilize the concept of a pre-existing, objective reality but his tone is positive. He looks at conventions as the generative structures that make knowledge possible rather than absurd networks of thought rendering false perceptions faulty. For him, there is stability despite the instability, essence despite the arbitrariness of conventions. Later when he discusses skepticism, even as he subverts the certainty of these very conventions which construe the matrix of all human experience, he steers clear of epistemological despair. Quoting the Malcolm-Albritton example, Cavell describes that pain gets manifested in different ways physically and mentally.²⁵ Mapping the changes in the brain activities could reveal that a physical

22. *Ibid.*, 14.

23. *Ibid.*, 23.

24. *Ibid.*, 30.

25. *Ibid.*, 38.

criterion for the experience of pain is met, but the absence of this does not suffice to rule out the existence of pain. Meeting a criterion doesn't imply the certainty of its being, it only implies the "near certainty" of an event.²⁶ A criterion is something whose presence could be used to show the existence of a thing, but its absence doesn't guarantee the unreality of the thing. Hence there is a gap between "the (seeming) presence of a criterion and its satisfaction."²⁷ This gap creates the room for skepticism. In the absence of an unfailing criteria, it is a question of deep importance how we could even judge if we are using language correctly. When criteria are not universally applicable, this becomes an irresolvable problem and there is always an uncertainty if we have communicated ourselves correctly or understood the other correctly. We cannot know other minds and the external world. In that epistemological gap, uncertainty fills in. Skepticism is the human disappointment with the limitation of human knowledge.²⁸

Thus, the relation between certainty and criterion is severed and the ontological status of criteria itself is disturbed, for Cavell asks, quoting Wittgenstein, "what are criteria criteria of?"²⁹ But Cavell doesn't leave us in an abyss with respect to the unreliability of our criteria. He equips us to settle with the "threat of skepticism" by talking us down from our disappointment with criteria, since criteria function as criteria "in certain circumstances" as Wittgenstein and Malcolm repeatedly emphasize.³⁰ In the instance of someone groaning, it could either be because the person is in pain or because he is feigning pain for a rehearsal. Neither scenario disturbs the equation between groaning and pain, for in both scenarios, groaning remains as a pain behavior. A person's groaning as part of a rehearsal is an instance of pretending to groan in pain. Hence, criteria dictate the conditions for something to be like something or for something's being so, even when things are not necessarily thus and so.³¹ And, in certain circumstances, the satisfaction of the criteria seems fully concomitant with certitude. About how Wittgenstein's work circumvents the pathos associated with skepticism, Cavell says, "while at the same time this work seems to give the impression and often seems to some to as-

26. *Ibid.*, 39.

27. *Ibid.*, 41.

28. *Ibid.*, 42.

29. *Ibid.*

30. *Ibid.*, 7 and 39.

31. *Ibid.*, 42.

sert, that nothing at all is wrong with the human capacity for knowledge, that there is no cause for disappointment, that our lives, and the everyday assertions sketched by them, are in order as they are.”³² The longing for a balance in “the struggle of despair and hope” that he identifies in Wittgenstein’s works reflects the arbitrariness of criteria and simultaneously preserves the apparent stability and meaning that they enable.³³

Though our criteria do not provide an infallible condition of agreement, they do provide the set of conditions necessary for disagreement. We do not really need to know for sure if another person is in pain. We only need an accessible association between pain and pain behaviour to keep the conversation going. Thus, conventions are the dependable structures generating the possibility of agreements (and disagreements). These conventions that we agree *in* and not on — which Wittgenstein calls the “forms of life” — are the reliable apparatus in our apprehensions of the world.³⁴ Everything is a product of conventions. Knowability itself is a possibility generated by conventions. The domains segregated as sciences and arts are the consequences of conventions woven differently for each. But here is a key to building a bridge between the discourses of the sciences and arts. When Cavell writes about the dependence of every human formation on conventions that, “human speech and activity, sanity and community, rest upon nothing more, but nothing less, than this,” he exposes their common foundations, and the epistemological distinctions between arts and sciences begin to blur.³⁵ Cavell’s theory of knowledge and art are the same. In knowledge and art, conventions are what we have; meaning in essence their outcomes. Just as a mutually agreed upon criteria meet certitude under certain circumstances, mutually agreed upon conventions in a particular time construct the essence of art. Thus, in “A Matter of Meaning It,” Cavell writes, “it is not clear a priori what counts, or will count, as a painting, or sculpture or musical composition. [...] We haven’t got clear criteria for determining whether a given object is or is not a painting, a sculpture. [...] The task of the modernist artist, as of the contemporary critic, is to find what it is his art finally depends upon.”³⁶ The essence of the art is not in some definitively fixed features internal to the art but in the relevant conventions that arose in response to the

32. Ibid., 44.

33. Ibid.

34. Cavell, *Must We Mean What We Say?*, 52.

35. Ibid., 52.

36. Ibid., 219.

historical pressures and what deviates from the conventions falls into a void. Here is a “historicisation of essence,” the encasement of certainty to certain circumstances.³⁷ Thus, in Cavell’s theorization, it is conventions that formulate the criteria decisive in the knowability of the world; it is conventions that engender the medium for conceiving art. Just as criteria make intelligibility possible, artistic conventions and adherence to the medium make something recognizable as art. Therefore, Cavell would have a problem with the pop and minimal artists who would alter their art to the point that no common standard of judgement is possible. Such productions are inter-medial and therefore not art related. The essence that Cavell and Greenberg emphasized is not a timeless quality but what the conventions at a particular period are capable of articulating. Essence is reconciled with arbitrariness, and stability is reconciled with the precariousness that characterizes life.

2. The Pathos of Epistemological Loss: Departure between Kuhn and Cavell

Cavell embraces the conditional certainty and conditional essence afforded by conventions, without despairing about the ineliminable human wish for certainty. Skepticism pervades life and it is in attempts to get past uncertainties that knowledge is constructed. Thus, absolute certainty could be the end of knowledge. In his later work, *On Certainty* (which did not really form the basis of Cavell’s work in *The Claim*), Wittgenstein segregates certainty from knowledge by saying that self-evident statements that do not elicit doubt foreclose investigations into them and do not amount to knowledge-claims. They are rather instances of certainty. Hence, to statements of indisputable conviction fashioned after G. E. Moore’s famous “here is one hand” argument, Wittgenstein says, “I am familiar with it as a certainty.”³⁸ Only those statements qualify as knowledge claims if there is a scope for disagreement and doubt. The divorce between certainty and knowledge that Wittgenstein proposes re-

37. Diarmuid Costello, “On the Very Idea of a ‘Specific’ Medium: Michael Fried and Stanley Cavell on Painting and Photography as Art,” *Critical Inquiry* 34, no. 2 (2008): 292.

38. G. E. Moore, *Philosophical Papers* (New York: Collier Books, 1959), 144. Wittgenstein, *On Certainty* (Oxford: Blackwell, 1974), 272.

sonates with Cavell's explication of the skeptical thesis as: "our relation to the world as a whole, or to others in general, is not one of knowing, where knowing construes itself as being certain."³⁹ Thus, Cavell's theory of knowledge involves rethinking certainty from the center of epistemological discourse.

Distancing certainty from epistemology would re-consider the place of objectivity with respect to knowledge. Traditionally, only ahistorical, and objective knowledge that entailed certainty was considered authentic. Certainty is associated with an objective criterion of judgement, uninfluenced by any personal, prejudiced elements. This conception of knowledge that emphasized objectivity removed the human subject from the discourse. However, when Cavell embraces skepticism, he makes room for uncertainties, and, in a way for the subjective, the sacrifice of which ensures objectivity. Thus, in this paper, I juxtapose Cavell's views on epistemology that accommodate the subjective with his perspectives on artistic innovation, in order to interpret his explication of novelty in terms of adherence to tradition as a corollary of his humanized epistemology. Perhaps, this would be an opportune moment to also clarify the subtle difference between Kuhn and Cavell in their attitudes to convention-changes in science and arts respectively, where the former embodies a tragic sense of giving up the paradigm and the latter embodies a comic way of preserving the tradition. But, before I get into this analysis, I beg pardon for lingering on a few details from the history of science to emphasize the equation between authentic knowledge and the "giving up" of the self in scientific epistemology. After all, the postmodernist, post-positivist discourses on science have emphasized that the content of science is not separate from its history and philosophy. This could be the reason Kuhn himself was "often at a loss for response" when trying to decide on whether *The Structure* belonged to the works on the history or philosophy of science.⁴⁰ Hence, I feel that placing Kuhn's thesis in the context of the notion that reliable knowledge comes from detachment would benefit us in understanding the ethos underlying his concept of paradigm-shift.

A major aspect of Kuhn's work is the foregrounding of the communal nature of scientific discourse that challenged the long-standing positivist projection of science

39. Cavell, *The Claim of Reason*, 48.

40. Karl Hufbauer, "From Student of Physics to Historian of Science: T. S. Kuhn's Education and Early Career," *Physics in Perspective* 14 (2012): 459.

as consisting of contributions from individual geniuses, recounted in history as linearly progressing events. In Kuhn's theorisation, the paradigm itself is inseparably linked to the community of practitioners and its consensus. Hence, the ethos which evolves along with the development of a scientific community is important for understanding the modern muddle of objectivity, reason, impartiality, morality and self-effacement that forms the background to my analysis of Kuhn's concept of paradigm shift. Even though science had been a collaborative activity since the seventeenth century, it was in the nineteenth century that it began to get professionalised in the modern sense and an "idealized impartiality" emerged as a characteristic of the scientific domain.⁴¹ Subjective passions and positions were thought to result in perspectival distortions. "Transcendence of individual viewpoints," Lorraine Daston observes, "seemed to some nineteenth century philosophers a precondition for a coherent scientific community."⁴² With the professionalization of science, communication across borders increased and a common viewpoint had to be adopted. Daston rewrites the uniformity in nature as the result of the homogeneity maintained in the communication among scientists in order to keep it a collaborative activity rather than the uniformity in nature enabling homogeneity in scientific communication. The self and the subjective must be lost in the scientific activity, either for the "collective good" or for "collective comprehension." Objectivity manifested as "empirical reliability," "procedural correctness," and "emotional detachment" comes from losing some aspect of the self, and critical distance has to be maintained in scientifically knowing something.⁴³

Sociological studies of science reveal that the ideal of self-sacrifice of a scientist has been a crucial element in the institutionalization of science as an objective discourse. For example, scholars in the seventeenth century dedicated their work to the sovereign or a person in power to whom the work is addressed.⁴⁴ Inherent in this rhetoric of dedication is the feigned indifference to material rewards and personal ambitions on the part of the scientist. The trope of reluctant authorship enhanced the credibility of a theory since no economic benefits were to be reaped from the pu-

41. Lorraine Daston, "Objective and the Escape from Perspective," *Social Studies of Science* 22, no. 4 (1992): 604.

42. *Ibid.*, 607.

43. Daston and Peter Galison, "The Image of Objectivity," *Representations* 40 (1992): 82.

44. Roger Chartier, "Foucault's Chiasmus: Authorship between Science and Literature in the Seventeenth and Eighteenth Centuries," in *Scientific Authorship: Credit and Intellectual Property in Science*, ed. Mario Biagioli and Peter Galison (New York: Routledge, 2002), 13-33.

blished knowledge claims. A perfect example of this is Galileo's dedication of the *Sidereus Nuncius* to the prince Cosimo de Medici which transferred the authorship to the prince and thereby earned him credit for his contribution.⁴⁵ Though the practice of giving up the authorship claims declined with an increase in priority disputes following the professionalization of science, the self-effacing qualities of the scientists were emphasized in other aspects of their practice of science. For example, about the nineteenth century botanist Joseph Hooker's ideals of a professional man of science, Richard Bellon notes that Hooker valued a commitment to the "good of science" rather than to one's personal satisfaction as the central characteristic of a good scientist.⁴⁶ Hooker had clear demarcations between love *of* science and love *for* science.⁴⁷ A man of science working to quench his personal desire or to realize his passion, according to Huxley, is still engaging in a selfish pursuit. His disdain for knowledge produced from one's passion for science comes from the difficulty of relying or trusting knowledge that originates from (and hence contaminated by) desire. In the construction of science as the domain of reliable knowledge, the knower has to detach himself from what he seeks to know. The details considered so far could be summed up to make the following assertion: certainty, in traditional epistemology, derives from objectivity that demands a sacrifice of subjectivity, a giving up of the personal. Self-abnegation and some form of "giving up" has always been a condition for attaining objective knowledge.

In my unpacking of Kuhn's idea of paradigm shift in the following paragraphs, I will show that Kuhn's theory retains an element of loss (in concordance with the rhetoric of self-sacrifice central to the positivist scientific epistemology), despite the sense of jocundity deriving from the epistemological liberation towards the "new" during a scientific progress. It is in the underlying pathos of Kuhn's perspective which is absent in Cavell's that, I feel, Cavell and Kuhn part ways. While scientific advancement in Kuhnian terms necessitates giving up the existing, constrictive conventions, Cavell insists on preserving tradition, manifested in his ideal of the conservation of conventions in an artistic innovation. I understand the Cavellian emphasis on preser-

45. *Ibid.*, 22.

46. Richard Bellon, "Joseph Dalton Hooker's Ideals for a Professional Man of Science," *Journal of the History of Biology* 34, no. 1 (2001): 52.

47. *Ibid.*, 51.

vation of conventions while modernizing an art as an extension of his views on skepticism. It would be instructive to recall that this section began with how Cavellian acceptance of skepticism sidelines certainty from knowledge. Since Cavell does not regard certainty and objectivity as conditions of knowledge, he does not demand relinquishment of the subjective either. Thus, as he humanizes epistemology by putting the human and subjectivity back into the discourse, he minimizes the “critical distance” (the source of objectivity) by insisting on a view of innovation construed in terms of resemblance to the convention, and thereby subtly differs from the Kuhnian rhetoric of letting go of one’s personal convictions in the existing paradigm, an instance of distancing from the self. This inclination towards preservation reflects in the way he conceives the “new,” i.e., in terms of the extension of the old, as will be explained shortly. But before that, I will explain how the rhetoric of the loss of the self or the subjective echoes in Kuhn’s idea of paradigm shifts.

The replacement of an existing paradigm by a new paradigm, which marks scientific progress for Kuhn, is a sacrifice no less than self-abnegation, for the practitioners have boundless commitment to the paradigm, something Kuhn’s predecessor Michael Polanyi called “intellectual passion.”⁴⁸ Their commitment to the existing framework is so strong that they don’t feel compelled to reject the paradigm in order to explain the anomalous detail. Instead, they reserve such details inconsistent with the paradigm in the hopes that the existing framework would someday be able to either account for them or just explain them as illusory. Polanyi quotes how the French Academy of Science refused to admit the proof for the fall of meteorites throughout the eighteenth century despite its great obviousness just because it disturbed the traditional superstitious theories regarding heavenly bodies.⁴⁹ About the resistance to the new paradigm, Kuhn writes, “The source of resistance is the assurance that the older paradigm will ultimately solve all its problems, that nature can be shoved into the box the paradigm provides.”⁵⁰ The idea of convention here is as a constrictive framework that suppresses a different logic or a different way of seeing “nature,” slightly different from Cavell’s perspective of conventions as enabling forms whi-

48. Michael Polanyi, *Personal Knowledge: Towards a Post-Critical Philosophy* (Chicago, IL: The University of Chicago Press, 1958), 143.

49. *Ibid.*, 138.

50. Kuhn, *The Structure of Scientific Revolutions*, 150.

ch he relies on for making sense of the world. Kuhn's contemporary Paul Feyerabend also viewed this rigidity of conventions as scientific orthodoxy rather than as a source of stability and meaning. An obsession with the existing paradigm is limiting and impedes the scientists from accessing alternative sets of knowledge claims which could be construed using other frameworks. Emphasizing the constrictive aspect of conventions and the need to duly abandon them, he notes in *Against Method* that "the attempt to increase liberty, to lead a full and rewarding life, and the corresponding attempt to discover the secrets of nature and of man, entails, therefore, the rejection of all universal standards and of all rigid traditions."⁵¹ Thus, a tradition kept intact and mechanically repeated is counterproductive for a meaningful life.

In addition to the scientists' emotional commitment to conventions that tyrannize an alternative framework, the theory-ladenness of the ontological clusters of an existing paradigm always already constrains the possibility of conceiving conceptual fabrics inconsistent with the existing one.⁵² Since the conception of alternative ways of perception is impossible within the same interpretive framework, one paradigm has to be given up for another. Without a loss of conviction in the already existing paradigm, no revolutionary change would be possible. Hence, scientific advancement, understood in terms of paradigm shifts, would not be possible without departing from the existing conventions. The painful separation from the paradigm which they felt intellectually committed to is a form of self-sacrifice, as required of an objective discourse aspiring for certainty.

What impedes progress has to be given up, what enables it has to be preserved. It is because Cavell looks at conventions as enabling that he presents the disruption of conventions in preservationist terms. When artistic conventions are modified — when there is a change — that change itself is enabled by these very conventions and by artists who seek to preserve the conventions. Thus, he writes, "it is because certain human beings crave the conservation of their art that they seek to discover how, under altered circumstances, paintings and pieces of music can still be made, and hence revolutionize their art beyond the recognition of many."⁵³ Here,

51. Paul Feyerabend, *Against Method: Outline of an Anarchistic Theory* (London: Verso: 1993), 12.

52. Feyerabend, *Problems of Empiricism, Philosophical Papers* (Cambridge: Cambridge University Press, 1981), 45.

53. Cavell, *The Claim of Reason*, 121.

I'm reminded of the skeptic who does not obsess over certainty and objectivity, and hence resists giving up the "self" which is expressed as his/her conviction in the conventions — conviction not enough to be certain, but sufficient to generate agreement. Thus, I understand the Cavellian interpretation of artistic change as an extension of that which already exists, juxtaposing it with his views on skepticism. Skepticism, as previously stated, involves an epistemological gap where you cannot know for sure if you have understood the other correctly or if you have communicated yourself correctly. One person's utterances do not have anything in common with another person's utterances, if they mean different things. Still, they must agree *in language* or (in criteria in general) in order to be speaking at all. Hence, the utterances have something in common despite having no meaning in common. Cavell's interpretation of change as an extension of the already existing is an instance of finding something in common between the two articulations, where for the differences to be noticed, there should be something in common. For two things to be different, they should be sufficiently similar. A change counts as relevant only in its relationship to the previous paradigm. The change has to be from within. Thus, in changing the convention, the artist does not really depart from it. Cavell disregards pop, minimalism and conceptual art as irrelevant because they diverge from the tradition to the point that it no longer resembles the tradition, making it impossible to comprehend them as anything meaningful. Greenberg blankets them under "novelty art," rhetorically equating it with the low-grade commodities that were branded "new" for marketing purposes.⁵⁴ Only "reluctant revolutionaries" who in their later career were drawn back to the tradition they were modifying are considered as genuine innovators.⁵⁵ Greenberg too minimizes the sacrifice involved in an artistic progress when he discusses Cézanne who despite his impressionistic inclinations didn't fully give up the conventions. Greenberg writes, "It was almost precisely because of his greater reluctance to 'sacrifice' to innovation that Cézanne's newness turned out to be more lasting and also more radical than that of other post-Impressionists."⁵⁶ Even the act of changing the paradigm which, for Kuhn, is a relinquish-

54. North, *Novelty*, 175.

55. See the debate with Greenberg in Thierry de Duve, *Clement Greenberg Between the Lines* (Paris: Dis Voir: 1996), 125.

56. Greenberg, "Conventions and Innovations," in *Homemade Esthetics: Observations on Art and Taste* (Oxford and New York: Oxford University Press, 1999), 54.

ment of the same, Greenberg calls an act of possessing. He says that in order to revolutionize a convention, one must “possess” it first.⁵⁷ Thus, the extent of change is re-articulated as an extent of possession; change is presented as fuller possession, downplaying the sense of abandonment.

Hence, there is continuity, rather than a loss of it. For Cavell, while the “relevant change” is always already a part of the tradition, for Kuhn, revolutionary change, is undeniably incommensurable with the conventions.⁵⁸ The result is a rupture, a discontinuity. There is no “entailment, inclusion, contradiction, disjunction” and the two paradigms are completely independent.⁵⁹ Science is re-articulated as a progressive but discontinuous discourse in post-positivist philosophy whereas each new tradition in art is a part of the old for Cavell. One recalls the age-old ambiguity surrounding the “new.” Since the “new” exists only in relation to the old, it always carries the past with it which makes novelty an ontological absurdity.⁶⁰ Novelty is a problematic concept for any system since novelty might disrupt the static fundamentals of that very system. According to the mechanical view of the world which holds that the world runs according to a set of natural laws, “the end is foreseeable in the beginning, the end is contained in the beginning.”⁶¹ Novelty undermines this contribution of science. In fact, novelty is very disruptive to science, since science depends on the reproducibility of results and on the anticipation of results from a cause.

But Kuhn attaches “progress,” a very prized concept in science, to the “new” when he locates scientific progress in paradigm shifts as it brings a liberation from the old. Kuhn looks at the traditions as delaying the truly novel for a very long time. For novelty to be an actual ontological possibility, there must be a break with the tradition so that what comes after is unanticipated. Thus, Kuhn writes in an anti-teleological tone, “the entire process may have occurred, as we now suppose biological evolution did, without benefit of a set goal, a permanent fixed scientific truth, of

57. *Ibid.*, 52.

58. Cavell, *Must We Mean What We Say?* 253.

59. Struan Jacobs, “Michael Polanyi and Thomas Kuhn: Priority and Credit,” 30, <http://polanyisociety.org/TAD%20WEB%20ARCHIVE/TAD33-2/TAD33-2-fnl-pg25-36-pdf.pdf>.

60. North, *Novelty*, 17.

61. Richard Boyle, *Natural Novelty: The Newness Manifest in Existence* (Lanham, MD: University Press of America, 2016), 23.

which each stage in the development of scientific knowledge is a better exemplar.”⁶² Cavell takes the exactly opposite perspective on novelty. He articulates a version of novelty that might kill novelty, since, for him, traditions determine and enable novelty. Even in the abstract sense, novelty makes sense only in relation to a past that didn’t contain it. Cavell focuses on that invisible and inextricable link between the old and the new when he writes, “the modernist is incomprehensible apart from his questioning of specific traditions, the traditions that have produced him. The modernizer is merely blind to the power of tradition, mocking his chains.”⁶³ The modernizer is not a threat to artistic essence for the conventions that construct the essence is not entirely sacrificed. There is no conflict between the old and the new; nor is there any loss incurred by a sacrifice of one’s convictions in conventions since the same conventions beget innovations. This resonates with a humanized epistemology that does not demand a relinquishment of the subjective, manifested even in the form of strongly held beliefs, to ensure objectivity.

3. Concluding Thoughts:

Kuhn and Cavell’s Comments on “Science and Art”

In this paper, I have attempted to decipher Cavell’s philosophy of artistic progress by exploring its intersections with his speculations on skepticism and knowledge, and I have compared this philosophy with Kuhn’s ideas on scientific revolution. Cavell can construe a version of innovation that does not really part from conventions or does not require losing one’s conviction in conventions. I read this articulation of innovation in terms of preservation of traditions as comparable with his philosophy of skepticism. Cavell’s exposition of skepticism prepares us to settle for the perpetual condition of uncertainty in the knowability of anything. It would then re-think the aspirations for objectivity and the need to sacrifice the subjective, expressed here as one’s personal convictions in conventions. Thus, the preservational undertones of Cavell’s account of artistic innovation, are, for me, a corollaries of his views on a humanized

62. Kuhn, *The Structure of Scientific Revolutions*, 172-73.

63. Cavell, *The World Viewed: Reflections on the Ontology of Films*, enlarged ed. (Cambridge, MA: Harvard University Press, 1979), 15.

epistemology. But why would I read Cavell's philosophy of the arts in terms of his views on epistemology? I am inspired to attempt this juxtaposition by Cavell's own bringing together of the two discourses of arts and sciences in his thoughts on the asymmetry in their relationship. Addressing the "inner loss" of the scientific discipline where young scientists go remote from the body of work that exerts its own inspiration, Cavell suggests that instead of introducing science students to art, they should engage in science as art and that they should "in short, become artists, to care whether their art is going to survive."⁶⁴

Preservation is characteristic of arts, which is fundamentally creative in spirit, since art embodies the human wish to leave behind some remnants and hence beat the process of having to finally give up. Through art, life surpasses death. As Greenberg put it, "Art, is among other things, continuity."⁶⁵ Of life. Kuhn realizes this aspect about the art domain and notes that artistic outputs of a previous era remain vital parts of the contemporary artistic scene despite the altered sensibility.⁶⁶ For Kuhn, the differences between science and art become the most pronounced in the relevance the past traditions hold in the artistic sensibilities of the era that succeeds it. He points out that archival structures like museum would be important for art, but not so much for science, in formulating public taste or inspiring novices to the field.⁶⁷ This resonates with the Cavellian version of innovation that arise in arts while keeping the bond with the past intact. Kuhn observes that the scientist's goal is to find the best solution to a problem, hence the trajectory followed in its discovery and the account of idiosyncrasies of the scientists are an unnecessary liability for science.⁶⁸ He also points out that within the same tradition of styles, earlier sketches of a work of art would lead to its fuller appreciation by enabling the derivations of different meanings from the work's past shapes. Commenting on the impossibility of such an appreciation in science, he concludes rather affirmatively that "unlike art, science destroys its past."⁶⁹ However, Cavell understands this preservational aspect to be common to both science and art, as he writes,

64. Cavell, "Observations on Art and Science," *Daedalus* 115, no. 3 (1986): 174.

65. Greenberg, "Modernist Painting," 10.

66. Kuhn, "[The New Reality in Art and Science]: Comment," *Comparative Studies in Society and History* 11, no. 4 (1969): 407.

67. *Ibid.*

68. *Ibid.*, 408.

69. *Ibid.*, 407.

“the wish to make something, to *counter destructiveness*, to leave the world marginally better than you found it, to mend it, is at the heart of both the arts and the sciences.”⁷⁰ Thus, while Kuhn detaches and gives up traditions, Cavell possesses, preserves and sometimes obsesses about them.

70. Cavell, “Observations on Art and Science,” 174.

3. Autonomy, Constitutivity, Exemplars, Paradigms

TIMUR UÇAN

Introduction

This paper proposes an exploration of relationships and exchanges between the philosophies of Cavell and Kuhn by the study of aspects of the philosophy of Wittgenstein.¹ Although the notions of language games and family resemblances used by Kuhn in the *Structure of Scientific Revolutions* have been elaborated by Wittgenstein, Cavell's reading of Wittgenstein inspired that of Kuhn. I will attempt to show that against this background, Cavell's conception of the relations of arts, works of arts, and artists, can be relevantly compared to Kuhn's conception of the relations of sciences, scientific successes, and scientific practitioners. Three ways of elucidating the mutual exchanges between Cavell and Kuhn may be distinguished: One consists in clarifying the ways in which Cavell and Kuhn *explicitly* mutually inspired each other. Another one consists in clarifying that Cavell's Wittgenstein inspired Kuhn. And a third one consists in clarifying that Wittgenstein inspired both Kuhn and Cavell and the ways in which he inspired them. This third way is not exclusive of the first two and even contributes to these by rendering explicit their stakes. For at stake is not only the restitution of the truth of an exegetical mediation: that Kuhn's Wittgenstein cannot be truly understood without accounting for Cavell's Wittgenstein. Rather the transitive character of the mediation implied by interpretation does not substitute for the intransitive character of a thoroughly philosophical inheritance. It is not the case that because Kuhn was inspired by Cavell who was inspired by Wittgenstein, that Kuhn could be inspired only by Cavell's

1. I thank the editors and reviewers of this special issue of *Conversations*, and also Donald Cornell, for their helpful remarks, comments and suggestions on earlier versions of this text.

Wittgenstein, and not by Wittgenstein. Further, the question is not only philological but philosophical if we take into account the methods and the philosophy of Wittgenstein. To use an image: that a path was indicated by someone to someone else could not have implied that what was indicated by a person to another was oneself; this much was already known to us with the old fable of the moon, the finger and the sage. With this paper I will thus first seek to establish the relevance of the comparison of Cavell's conception of the relations of arts, works of arts, and artists with Kuhn's conception of the relations of sciences, scientific successes, and scientific practitioners. Then I will attempt to render explicit the unrestrictive limits of this comparison both to account for the mutual exchanges between Cavell and Kuhn and consider or bring out some symmetries and asymmetries concerning the place of paradigms in sciences and arts.

I. The Relevance of the Comparison of the Place of Paradigms in Arts and Sciences

Could someone be interested and become absorbed in a pin, or a crumpled handkerchief? Suppose someone did. Shall we say, "It's a matter of taste"? We might dismiss him as mad (or suppose he is pretending), or, alternatively, ask ourselves what he can possibly be *seeing in* it. That these *are* our alternatives is what I wish to emphasize. The situation demands an explanation, the way watching someone listening intently to Mozart, or working a puzzle, or, for that matter, watching a game of baseball does not. The forced choice between the two responses – "He's mad" (or pretending, or on some drug, etc.) or else "What's in it?" – are the imperative choices we have when confronted with a new development in art. (A revolutionary development in science is different: not because the new move can initially be proved valid – perhaps it can't, in the way we suppose that happens – but because it's easier, for the professional community, to spot cranks and frauds in science than in art; and because if what the innovator does is valid, then it is *eo ipso* valid for the rest of the professional community, *in their own work*, and as it stands, as well.) But objects of art not

merely interest and absorb, they move us; we are not merely involved with them, but concerned with them, and care about them; we treat them in special ways, invest them with a value which normal people otherwise reserve only for other people – *and* with the same kind of scorn and outrage. They *mean* something to us, not just the ways statements do but the way people do.²

[T]he act of judgment that leads scientists to reject a previously accepted theory is always based upon more than a comparison of that theory with the world. The decision to reject one paradigm is always simultaneously the decision to accept another, and the judgment leading to that decision involves the comparison of both paradigms with nature and with each other.³

[...] I have been concerned to emphasize the similarity of the evolutionary lines of the two disciplines [art and science]. In both the historian can discover periods during which practice conforms to a tradition based upon one or another stable constellation of values, techniques, and models. In both he is also able to isolate periods of relatively rapid change in which one tradition and one set of values and models gives way to another. That much, however, can probably be said about the development of any human enterprise. [...] Recognizing that fundamental resemblance can therefore be no more than a first step. Having made it, one must also be prepared to discover a number of revealing differences in developmental fine structure.⁴

That the place of paradigms in arts and sciences can be limitedly but relevantly compared is quite clear both for Cavell and Kuhn in the passages quoted above.⁵ In both disciplines, practices, new moves and innovations do involve the reappraisals of

2. Cavell, "Music Discomposed," in *Must We Mean What We Say?: A Book of Essays* (Cambridge and New York: Cambridge University Press, 1976), 197-98.

3. Thomas Kuhn, *The Structure of Scientific Revolutions*, 3rd ed. (Chicago, IL: The University of Chicago Press, 1996), 77.

4. Kuhn, *The Essential Tension: Selected Studies in Scientific Tradition and Change* (Chicago, IL: The University of Chicago Press, 1977), 349.

5. These passages ought to be read with passages from Clarence Irving Lewis, "A Pragmatic Conception of the A Priori," *The Journal of Philosophy* 20, no. 7 (1923): 169, <https://doi.org/10.2307/2939833> and *Mind and the World Order: Outline of a Theory of Knowledge* (New York: Dover Publications, 1991), 232-33, 256, 304, 306-7, and 385. These works deeply inspired both Kuhn's and Cavell's approaches to periods of transition.

past achievements with new ones and inversely, to evaluate the present of a practice, open to further developments. However, exegetical debates concerning the mutual contributions of Kuhn and Cavell, and especially concerning Kuhn's notion of incommensurability have rendered difficult, if not unintelligible, the achievability, and eventually, the relevance, of this comparison. Jones' formulation of incommensurability as "the idea that possessors of different paradigms could not even be said to possess the same language" could eventually provide us with a condensed expression of this difficulty.⁶ For, might it be the case that possession of both paradigms and languages would be required for a paradigm change or shift to be conceivable, it would be at best unclear that the conception of a new paradigm and eventually the occurrence of a paradigm change would be conceivable at all. Kuhn does surely consider that relations of possession do hold between paradigms and persons.⁷ However, could this have implied that relations of possession could have held, and could even have been *constitutive* of relations of persons and languages?⁸ That this second question could be at best rhetorical is a possibility whose vividness needs to be clarified. Jones' formulation of the notion of incommensurability, as innocuous as it may seem, does also convey several myths about the relations or quasi-relations of persons, paradigms and languages. It involves a myth that Wittgenstein, among other philosophers, relentlessly criticized: that of a private language, of the pseudo-idea of a basic relation of possession (by contrast with appropriation, in an eventually moral yet not moralistic sense) between languages and persons.⁹ The mediation by the notion of possession could be ineluctably implied to envisage any relation or quasi-relation between persons, languages and paradigms.

6. Caroline A. Jones, "The Modernist Paradigm: The Artworld and Thomas Kuhn," *Critical Inquiry* 26, no. 3 (2000): 488-528 and 501, <https://doi.org/10.1086/448976>.

7. Kuhn, *The Structure of Scientific Revolutions*, xi, 47, and 168.

8. Even when Kuhn considers the case in which the outcome of a shift of paradigm is the appropriation of a different lexicon (Kuhn, "Commensurability, Comparability, Communicability," *PSA: Proceedings of the Biennial Meeting of the Philosophy of Science Association* 1982, no. 2: 668-88, 683, <https://doi.org/10.1086/psaprocbienmeetp.1982.2.192452>), Kuhn does not consider the hypothesis of the relevance of the constitutivity of the ownership relation between languages and persons. The derivative and metaphoric character of such passages is clear when considered against the background of the negation of the existence of a language into which paradigm-relative-languages, considered as sets of propositions containing coordinated translations of each of their sub-components, could be translated. Kuhn thereby calls into question the coherence of the idea of an all-comprehensive language conceived in a set-theoretical manner.

9. On this see Timur Uçan, *The Issue of Solipsism in the Early Works of Sartre and Wittgenstein* (2016), 116, https://ueaeprints.uea.ac.uk/id/eprint/62314/1/2016UcanTUPhD_%282%29.pdf.

The relation of possession could be the paradigm of the relations between persons and paradigms.¹⁰ And surely if it is the case that relations of persons and languages could basically be relations of possession, then it could be the case that relations of persons and paradigms could also basically be relations of possession. Practitioners could thus *per se* be confined by the very paradigms of their own practices. However, from the outset, lost would be that the limited comparison between arts and sciences made both by Cavell and Kuhn is not only unproblematic but also relevant, and that making such comparison could not presuppose the holding of a (constitutive) relation of possession between persons, languages, and paradigms. To this extent, the task of the establishment of the relevance of this comparison, or, facing the charge of anachronism, of the reestablishment of the relevance of this comparison, remains to be achieved. It is at best unclear that all we use within our lives, all that we need to live our lives, could need to be all that we possess; and this could especially matter with respect to our consideration of our (quasi-)relations with language.

To begin, I propose two remarks. The first is that no more than according to Kuhn normal science could have existed without paradigms, could arts and genres have existed without paradigms according to Cavell. It might be said that such consideration is not (even) compatible with the diversity of the meanings of the very term “paradigm,” according to Kuhn himself. However, that the supposedly irreducible diversity of meanings that the term “paradigm” can contextually come to receive is not compatible with the unity presented by the notion of paradigm, the exemplary paradigm, the successfulness of the success, alluded to by Hacking is also a point explicitly made by Kuhn himself.¹¹ In this apparently rather weak sense, that paradigms are constitutive can be rendered explicit without transcendentalism or metaphysics. For, non-reversible relations hold between *that* which realized paradigms render intelligible and possible, and the practices and communities of persons who understand and realize against the background of the internalization of at least aspects of paradigms. The recourse to the notion of background does not necessarily imply

10. On this see Cavell, *The Claim of Reason: Wittgenstein, Skepticism, Morality, and Tragedy* (Oxford and New York: Oxford University Press, 1979), 125.

11. Ian Hacking, *Representing and Intervening: Introductory Topics in the Philosophy of Natural Science* (Cambridge and New York: Cambridge University Press, 1983), 10. Kuhn, *The Essential Tension*, 351.

background *syntheses* to render possible the thought that paradigms are constitutive — the transcendental could not be unavoidable, and it is, in spite of the pretense that goes together with such projects, a mistake to suppose its ineluctability as *propaedeutics*.¹² The second remark is that the realization of a philosophical study of the relations of the philosophies of Cavell and Kuhn implies to distinguish what we nevertheless need to study relationally, that is to say, exactly in the relations in which we find, discover, live, experiment; and this involves the distinct consideration of two triplets: the first is that of arts, artworks and artists, and the second is that of sciences, discoveries and scientists. The compared artistic or scientific products of the enactments of hexises or dispositions could not be achieved without their *distinct* considerations. We could not have come to compare these if it was not entirely obvious that the consideration of limit-cases, eventually more complicated cases, are *secondary* in and to our world-conceptions. That is to say, the consideration of some cases can rightly or wrongly lead us to think that a shift of paradigm (not in the sense of the paradigmatic example, but in the sense of a world-conception, ideological or not) occurred, imposed itself, or should occur, etc. (consider, for example, the recent success of a production realized by Jason Allen with the mediation of an artificial intelligence at an art competition and which gave rise to many questions with respect to the future of art, about the significance of human creativity, and about the excesses of the markets of art). However, considerations of such limit-cases, are secondary within the practices whose evolutions are analyzed by Kuhn and Cavell. Such practices are secondary in the sense that, if we want to use the form-background distinction to render explicit the stakes, it is against backgrounds of regularity, conventionality, conformity, that irregularity, unconventionality, unconformity appear as such. And both philosophers immensely contributed to understand and account for such backgrounds.

Then let us ask: could one be bound to make either the apology of modernism or the post-modernist claim that the swan song of modernism has already occurred?¹³

12. This point matters both to integrate and differentiate Cavell's approach of phenomenology from attempts by classical or traditional phenomenologists to account for worldliness and for relations between perception and action. See on this part II.1 of this text.

13. For, from the outset, if it can (circumstantially and enormously) matter to argue in favor of an earlier or a later paradigm, it is nevertheless rather unclear that arguing in favor or against a paradigm could be *unavoidable* at all. Further, it is the depth of the involvements of our lives with several paradigms that can come to be thereby neglected, an aspect whose explanation is attempted in the second part of this paper.

Let us remark that the consideration of such an alternative goes together with a tension that is characteristic of the transition periods considered by Cavell and Kuhn and that they in fact have shown not to be problematic, a tension between the compatibility of the contingent existences of a plurality of paradigms and the incompatibility and sometimes the inadequacy of some paradigms given some means and ends. The use of the limited comparison of the place of paradigms within arts and sciences eases mutual contributions and exchanges among practices as it contributes to a better distinction of their mutually independent evolutions and achievements.

Yet, the relevance and mutually explicative character of the comparison of the place of paradigms in arts and sciences according to both Kuhn and Cavell is to be unfolded and explained. According to Kuhn's own terms, it is nothing but a first step, a first step inspired from Wittgenstein, towards a better understanding of differences.¹⁴ But that it is a first step, came to be lost. To recover its obviousness involves the explicitation of a common philosophical background. I shall argue that the relevance and mutually explicative character of this comparison is dependent upon a threefold point, the contingency, the freedom, and the relationality of paradigms.

1. The Contingency of Paradigms

We shall first start by considering the *contingency of paradigms*, that works of art and scientific successes necessarily contingently are part of nature, a probably non-informative triviality, yet to render explicit, as its place within our world-conceptions is *not* superficial. We furthermore owe to ourselves such explicitation as the affirmation of the contingency of paradigms gave rise to many puzzles some of which were expressed by Kripke in *Naming and Necessity*.¹⁵ For, what could have seemed to override any conception, is that necessary relations (some of which could be a priori, if we recall the treatment proposed by Kripke of mathematical statements; and probably some others a posteriori, if we think the fact of history, rather than historicity or historicity as an essentialized feature of consciousness) may hold

14. Kuhn, *The Essential Tension*, 349.

15. Saul A. Kripke, *Naming and Necessity* (Cambridge, MA: Harvard University Press, 2003).

among elements which are not so — whose non-existence could not have been inconceivable. How could constitutive relations — necessary in some sense — (may) hold between paradigmatic exemplars if all the parts of all the elements involved by such relations are contingent? It was one of the major advances made by Wittgenstein with the *Tractatus*, radicalized in the *Investigations*, to dispel the specter, to dissolve the illusion of an incompatibility between the modalities of the existence of elements and relations. Both Cavell and Kuhn, I argue, have fully integrated what could have seemed an unimportant point within their accounts of the place of paradigms within arts and sciences. Both the attention provided by Cavell to the grammatical, with his substitutive account of learning inspired by the philosophy of later Wittgenstein (as our forms of life are achievements realized by substitution of expressions to others), and that of Kuhn to the quasi-internal relations between paradigms and anomalies are two ways that are relatively autonomous, independent and distinct to thoroughly think and account for the *contingency of paradigms* without thereby calling into question in any sense whatsoever both, the historical character of relations and the necessity of some of them, and, the certainty of the knowledge and of the practices that paradigms render possible or, at least, contribute to render possible.¹⁶ The achievement of this task involves on Kuhn's approach to have established that paradigms are constitutive not only with respect to science but also with respect to nature:

Like the issue of competing standards, that question of values can be answered only in terms of criteria that lie outside of normal science altogether, and it is that recourse to external criteria that most obviously makes paradigm debates revolutionary. Something even more fundamental than standards and values is, however, also at stake. I have so far argued only that paradigms are constitutive of science. Now I wish to display a sense in which they are constitutive of nature as well.¹⁷

Thereby, Kuhn asks us to philosophically acknowledge both the immanence and inherency of paradigms to nature, which is not a triviality inasmuch as at stake is not,

16. Cavell, *The Claim of Reason*, ch. VII. Kuhn, *The Structure of Scientific Revolutions*, ch. 5.

17. *Ibid.*, 110.

or at least not only, the successfulness of the inclusion of paradigmatic elements within the set of all, but to account for structuring relations between paradigmatic parts and whole without which there would not be notions of whole, world and nature. For if it is the case that paradigms are constitutive not only of science but also of nature, then this does imply that although contingent, paradigms contribute to shape not only our understanding of reality, but reality throughout, contrary to Platonist assumptions. The intelligibility of the kind of revolutionary and transitory situations considered by Kuhn in the tenth chapter of the *Structure*, when the question can, at times, even come to seem relevant whether the world prior to a research is commensurable at all with the world after its achievement, precisely implies that the contribution of paradigms to the structuration of reality could not remain confined to contexts that are internal to scientific practices.¹⁸ This much could nowadays seem a void philosophical demand, yet a stake was the realization of the rupture from Platonism which implied to grant the eventuality of the relevance of a radical separation of sense from its conditions, and more generally the criticism of what Cavell came to characterize, after C. I. Lewis and in accordance with T. Clarke, as traditional epistemology.¹⁹

Let us now ask: What are we imagining when we think of this as merely "in fact" the case about our world, in the way it is merely in fact the case that the flowers in this garden have not been sufficiently watered, or that there are six white houses with rose gardens on this street? It is my feeling that such things could present themselves to us as just more facts about our world were we to (when we) look upon the whole world as one object, or as one complete set of objects: that is another way of characterizing that experience I have called "seeing ourselves as outside the world as a whole," looking in at it, as we now look at some objects from a position among others. This experience I have found to be fundamental in classical epistemology (and, indeed, moral philosophy). It sometimes presents itself to me as a sense of powerlessness to know the world, or to act upon it; I think it is also working in the existentialist's (or, say,

18. Ibid., 111.

19. Thompson Clarke, "The Legacy of Skepticism," *The Journal of Philosophy* 69, no. 20 (1972): 754-69. See Lewis, *Mind and the World Order*.

Santayana's) sense of the precariousness and arbitrariness of existence, the utter contingency in the fact that things are as they are. (Wittgenstein shares this knowledge of the depth of contingency. His distinction in this matter is to describe it better, to live its details better. I would like to say: to remove its theatricality.)²⁰

Cavell diagnoses the acknowledgment of contingency as a difficulty basic to philosophy. And he does make a liberatory use of a quasi-image to solve it. The would-be image is that of the world as an object, which thereby implies that we can exactly as an object, look at it from the outside. Now, the obvious difficulty is that such would-be representation tends to force two opposite demands on our conception of our worldliness: that of the acknowledgement of the contingency of our situation, for we do conceive the eventuality of its nonexistence, and that of the acknowledgement of the necessity of our situation, for even the nonexistence of our conception would result from its termination. The unfreeing use of the analogy is ultimately deceptive and misled in that it tends to lead us to represent the world as a room, as a place, whose exteriority would thus unquestionably be certain. But given that the sort of exteriority that we should be able to have needed for the analogy to be conclusive is not unquestionable as such, its inconclusiveness leaves us with the acknowledgement and the knowledge of contingency as a task.²¹

2. The Freedom of Paradigms

The consideration of the contingency of paradigms, to this extent, leaves us before that of their *freedom*, both according to Cavell and Kuhn. It is, I argue, the second relevant aspect of the limited comparison of the place of paradigms in arts and sciences: there are no such things as criteria predetermining what could count as a successful work of art or science. Such negation can seem to be peremptory and

20. Cavell, *The Claim of Reason*, 236.

21. This reading and proposal of mine is not a departure from Cavell's thought, but an attempt to underscore, extend, and radicalize the point he made. Indeed, according to Cavell, but also according to Sartre and Wittgenstein, realization of one's own "finitude" by oneself could not imply that one could be "bounded" or "restricted" by such realization. Such that the difficulty does not prove to be lying in an attempt by a person to represent something to oneself, but in a confusion by a person of imaginary and real relations.

gratuitous, as not only can it come to seem at odds with claims of Cavell and Kuhn, but also perfectly incompatible with these:

To think of a human activity as governed throughout by mere conventions, or as having conventions which may as well be changed as not, depending upon some individual or other's taste or decision, is to think of a set of conventions as tyrannical. It is worth saying that conventions can be changed because it is essential to a convention that it be in service of some project, and you do not know a priori which set of procedures is better than others for that project. That is, it is internal to a convention that it be open to change in convention, in the convening of those subject to it, in whose behavior it lives. [...] The internal tyranny of convention is that only a slave of it can know how it may be changed for the better, or know why it should be eradicated. Only masters of a game, perfect slaves to that project, are in a position to establish conventions which better serve its essence. This is why deep revolutionary changes can result from attempts to conserve a project, to take it back to its idea, keep it in touch with its history. [...] It is because certain human beings crave the conservation of their art that they seek to discover how, under altered circumstances, paintings and pieces of music can still be made, and hence revolutionize their art beyond the reception of many. This is how, in my illiteracy, I read Thomas Kuhn's *The Structure of Scientific Revolutions*: that only a master of the science can accept a revolutionary change as a natural extension of that science; and that he accepts it, or proposes it, in order to maintain touch with the idea of that science, with its internal canons of comprehensibility and comprehensiveness, as if against the vision that, under altered circumstances, the normal progress of explanation and exception no longer seem to him to be science.²²

To the extent, as significant as it is incomplete, that two scientific schools disagree about what is a problem and what a solution, they will inevitably talk through each other when debating the relative merits of their respective paradigms. In the partially circular arguments that regularly result, each

22. Cavell, *The Claim of Reason*, 120-21.

paradigm will be shown to satisfy more or less the criteria that it dictates for itself and to fall short of a few of those dictated by its opponent.²³

Recognition of the existence of a uniquely competent professional group and acceptance of its role as the exclusive arbiter of professional achievement has further implications. The group's members, as individuals and by virtue of their shared training and experience must be seen as the sole possessors of the rules of the game or of some equivalent basis for unequivocal judgments.²⁴

Both Cavell and Kuhn acknowledge and philosophically demand from us the acknowledgment of the place and importance of conventions, competences, trainings, educations, rules and games *in order to* think of innovation and of the evolution of practices with them — these are important to *us*. That is to say, in accordance with insights of Wittgenstein, and eventually radicalizing these insights, both Cavell and Kuhn brought out that relations between paradigms and language-users are internal: strictly speaking there could not be such a thing as a paradigm without relevant groups of persons whose circumstantiated interactions contribute to constitute the background against which paradigms can count and function as such, so as to enable or contribute to applications, appreciations, evaluations and actions (as we shall see in the next part, although less obvious, the truth of the opposite relation between persons and paradigms is also relevant to our understanding of the places of paradigms in our lives). However, Cavell's characterization of relations between conventions — some of which essentially are dependent upon paradigms — as measurement systems — and practitioners as possibly tyrannical, and Kuhn's characterization of relations between paradigms and criteria as dictatorial, can eventually raise concerns with respect to the freedom both of paradigms and of our dealings with these. For thusly characterized, everything would be as if, necessarily constrained by paradigms, we could be bound to claim the freedom of paradigms only at our expenses, at the expense of our own freedom. To avoid such a counter sense, partly invited by the social and collective images of a lack of freedom (by contrast

23. Kuhn, *The Structure of Scientific Revolutions*, 109-10.

24. *Ibid.*, 168.

with unproblematic cases of circumstantial absences of determinate freedoms) used to characterize human relations thematically involving paradigms, the utter incompatibility of the thoughts of Cavell and Kuhn with conventionalism and apriorism (two tendencies which often go together) needs to be rendered explicit. The tension can be explained as rising from the rejection (and eventually the denial) of the uninformative character of the absence of conceivable recoil between some paradigms and some actions rendered possible by their internalization or appropriation — among which centrally, linguistic ones (as, for example, expressing one's puzzlement with respect to a scientific or artistic innovation). Because one could have lacked a margin of action during the internalization of at least one aspect of a paradigm, one could not but be bound, constrained, or forced, in one's actions not only by the internalized aspect of a paradigm but also by the consequences of its internalization; conventionalism, and probably apriorism as well, would thus be unavoidable. Not only that a production that would satisfy established criteria and standards of a relevant community could count as an artistic or scientific achievement, but also, could count as a production *only* such a production. Now, this is a (would-be) conception whose relevance is deeply challenged both by Kuhn and Cavell, inasmuch as it either is incompatible with the intelligibility of novelty or prescind the evaluation of change and novelty from any relevant continuity, thereby rendering difficult or impossible its evaluation and its appreciation as such. To be sure, such criticism does not imply neglecting one legitimate range of concerns that can be had, and to which both Cavell and Kuhn call our attention. For a relevant contestation or revocation of the artistic or scientific character of a production can rightly be grounded by the criteria and standards of a group. The very possibilities of fraudulence, of scam, of counterfeiting hardly could have been without conceivable relations with scientific or artistic practices, and part of the activities of some members of relevant groups is to verify that such possibilities do not actually hold.²⁵ To claim the contrary could amount to depriving ourselves until the idea of a scientific or artistic community, and not because we would have thereby somehow misidentified an entity, but inasmuch as the purposes of activities, notably that of verification would without relevant contrasts remain unavailable to us as such

25. Cavell, *Must We Mean What We Say?*, ch. VII.

(verificationism could nevertheless not be invited by such remark). Now, such a range of cases, not only can be contrasted with cases of artistic or scientific successes, but also with cases in which our very notions of success are relevantly challenged by artistic or scientific productions. This is, in fact, the range of cases to which Cavell draws our attention when characterizing the achievements of Kuhn with respect to the history and the philosophy of science in the previously quoted passage. In such cases of innovation, of radical and eventually revolutionary novelty, precedent criteria of established relevant groups do not or fail to constitute grounds for rejection or revocation; strictly speaking it is unclear that in such cases criteria should have had to be applied, or have functioned in any such way. Now, as mentioned by Cavell and Kuhn, there are differences, divergences, and also asymmetries between the occurrences of such cases within art and science, and that we shall render explicit in the second part of this paper. Yet, the sense in which the recognition of a fundamental resemblance between the place of paradigms within arts and science, the sense in which the limited comparison of their place is relevant and significant, with respect to our practices, has been recovered. The affirmation of the freedom of paradigms is neither false nor misled if conceived as a reminder of a requirement internal to scientific and artistic practices, that of the necessity of the intelligibility of novelty, of creativity, of openness of art and science as such for any such activity. The consideration of the prospective eventuality of such cases surely does not deliver ways and dimensions in which our criteria, experiences could be overridden, new actions and experiences rendered intelligible and possible by these and their appropriation. But paradigms are both expressive of freedom as products and expanders of freedom as means and ends. How could paradigms have had us deceived in such ways anyway?

3. Paradigms and Community

If a paradigm, with the necessary connexions it constitutes or that it at least helps to institute, implies nothing less but nothing more than *contingent* existence, and that the practices within which it has a place and contribution necessarily are *open-ended*, at which level of generality will we be able to characterize the contribution of paradigms to the structuration of reality? The related notions of community and of

forms of life are pertinent for an answer to such concern, and, it is at this level of generality that Kuhn and Cavell place themselves. The affirmation that paradigms are constitutive, that these are exemplary successes which contribute to shape reality, is, I shall argue, manifest straight from the community or form of life these constitute or at least help to institute. Thereby, I do not mean that the bulk of paradigms is to provide us with occasions to gather, although it can eventually happen that a gathering becomes paradigmatic, especially if we consider that some paradigms, notably some artistic paradigms, as some happenings, are not dissociable from, or distinct of, the gatherings at the occasion of which these happen or are produced. In such cases, there is no such thing as a conceivable abstraction, dissociation or separation of the constitutive element from the circumstances within which an event can come to present itself as paradigmatic: on such occasions, it is the successful realization of the event, rather than the existence of an element or sample that comes to present paradigmatic dimensions. However, such cases are rare, and are not significant of the place of paradigms as such. For our involvements with paradigms do not involve in most cases any encounter whatsoever with the members of a community or communities who nevertheless engage in similar or equivalent activities. And that the basic range of our relations or quasi-relations with paradigms can gain from such encounters but is relatively independent from those — as when we learn a technique of calculus, a grammatical form of a foreign language, or learn to appreciate abstract expressionism — is not secondary. For it is the very possibility of education and of transmission that is grounded upon such possibilities. To this extent, the pertinence of the comparison of the place of paradigms within science and art turns out to be intelligible in practical terms. It is firstly *practices* that are under-determined by paradigms. Independently from practices, only “theoretically,” it is unclear that we could even have had any idea of a paradigm whatsoever. This leaves us before what I earlier called the *relationality of paradigms*: the successfulness of works of arts and sciences manifests itself by their inherent capacity to make community, that is, to constitute or contribute to conditions that are necessary to the life of a scientific or artistic community. In the previous part, I have argued both that Cavell and Kuhn have brought out after Wittgenstein the internal character of the relations between paradigms and relevant groups. However, if it is quite trivial that

there is no such thing as a paradigm without relevant groups of persons, the opposite, that there is no such thing as relevant groups of persons without a paradigm, might seem less obvious, given that it can seem to be incompatible with the very conceivability of paradigmization. Nevertheless, this stronger realization is also involved by the thoughts of both Cavell and Kuhn, who engage with this problem in distinct yet compatible ways. Cavell addresses the issue of the constitution of human forms of life as a shared achievement unthinkable without paradigms, notably in the linguistic and grammatical sense:

In speaking of the vision of language underlying ordinary language procedures in philosophy, I had in mind something I have suggested in discussing Wittgenstein's relation of grammar and criteria to "forms of life," and in emphasizing the sense in which human convention is not arbitrary but constitutive of significant speech and activity; in which mutual understanding, and hence language, depends upon nothing more and nothing less than shared forms of life, call it our mutual attunement or agreement in our criteria.²⁶

Instead, then, of saying either that we *tell* beginners what words mean, or that we *teach* them what objects are, I will say: We initiate them, into the relevant forms of life held in language and gathered around the objects and persons of our world. For that to be possible, we must make ourselves exemplary and take responsibility for that assumption of authority; and the initiate must be able to follow us, in however rudimentary a way, *naturally* [...].²⁷

You cannot use words to do what we do with them until you are initiate of the forms of life which give those words the point and shape they have in our lives.²⁸

Kuhn addresses the issue of the collective choice of a paradigm as adequate for the life of a community that is characteristic of periods of transition:

26. Cavell, *The Claim of Reason*, 169.

27. *Ibid.*, 178.

28. *Ibid.*, 185.

The transition from a paradigm in crises to a new one from which a new tradition of normal science can emerge is far from a cumulative process, one achieved by an articulation or extension of the old paradigm. Rather it is a reconstruction of the field from new fundamentals, a reconstruction that changes some of the field's most elementary theoretical generalizations as well as many of its paradigm methods and applications. During the transition period there will be a large but never complete overlap between the problems that can be solved by the old and by the new paradigm. But there will also be a decisive difference in the modes of solution. When the transition is complete, the profession will have changed its view of the fields, its methods, and its goals.²⁹

Like the choice between two competing political institutions, that between competing paradigms proves to be a choice between incompatible modes of community life. Because it has that character, the choice is not and cannot be determined merely by the evaluative procedures characteristic of normal science, for these depend in part upon a particular paradigm, and that paradigm is at issue. When paradigms enter, as they must, into a debate about paradigm choice, their role is necessarily circular. Each group uses its own paradigm to argue in that paradigm's defense.³⁰

Both Cavell and Kuhn draw our attention to relations between *relevance* and *paradigms*, and to their individual and collective significances. In the same way that a paradigmatic use of words can relevantly be made for educative purposes during an initiation and for an individual, such that it can — for an individual — become constitutive of future uses, paradigms can relevantly be presented for institutional purposes during a debate, such that it can — for a community — become constitutive of future research. In both cases, the paradigmatic character of a use, of a usage, of a sample, of a production is rendered manifest by its ability to provide to one or several

29. Kuhn, *The Structure of Scientific Revolutions*, 85.

30. *Ibid.*, 94.

individuals possibilities, inspirations, resolutions, solutions to earlier problems, and problems of interest. Ways in which individuals can render available to individuals ways *in* forms of life and communities, and ways in which individuals independently or together can render available to communities and forms of life ways *out* of difficulties, are mutually compatible. The mutual contributions of such practices is manifest if we consider that most of our criteria of relevance are themselves paradigmatically established, that is to say, established by means of paradigms, an aspect of which at least has been internalized by us. So far, we thusly not only recovered the sense in which the limited comparison between the place of paradigms within art and science is relevant, but the sense in which its significance is vivid. Not only that the places of paradigms in arts and sciences are similar, as in both, paradigms freely at least contribute to the constitution, or even in some cases thoroughly constitute, artistic or scientific communities that are unthinkable without *some* paradigms, but also, paradigms could not have ceased to have such places in our lives due to their under-determinative places in our practices that are linguistically mediated.

II. The (Unrestrictive) Limits of the Comparison of the Place of Paradigms in Arts and Sciences

That we can affirm that paradigms are constitutive implies, I argue, that their limits necessarily (by contrast with metaphysically, with unavoidably) could not be restrictive. For, that a grammatical paradigm renders possible the forming of a proposition, that an artistic paradigm opens up a new form of life, that a scientific paradigm renders *practically* possible a new form of calculus, forecast, valuation, could not have implied the *equivalence* of *that* which is rendered thinkable and possible by different paradigms. And that one may envisage complicated and secondary cases in which restrictive uses can be made of paradigms to limit *that* which is rendered possible by another one, could not have implied that such cases could have been basic in any sense whatsoever. At stake is nothing less than the limits of the comparison between the place of paradigms in arts and sciences, points at

which analogies do not help anymore and can even become obstacles to understanding. So far, we made this comparison to affirm that paradigms are *contingent, free, and relational*, that paradigms cannot really informatively be abstracted from their places within our communities and forms of life, as — I argued — has been rendered clear and distinct in related ways both by Cavell and Kuhn, after Wittgenstein. Now, we owe to ourselves to bring out the limits of this comparison in order not to render inoperative and unintelligible its helpfulness. As remarked by Kuhn, ultimately it does only amount to a first step, eventually a first step inspired from Wittgenstein towards a better understanding of differences.³¹ I shall argue that the unrestrictive limits of the comparison of the place of paradigms in arts and sciences, the intersections from which their understanding does contribute to the explicitation of both scientific and artistic practices, are threefold. These limits lie in the autonomies, the asymmetries, and the diversities of the paradigms of arts and sciences.

1. The Autonomies of Arts and Sciences

Universalism, conjunctivist universalism or universalistic conjunctivism — as criticized by Cavell, Kuhn and Wittgenstein, should not make us forget that to affirm that autonomy is common to arts and sciences does not imply to negate their mutual and relative autonomies.³² Requirements internal to the very practices of arts and sciences, although constitutive, could not be equivalent. That is to say, that paradigms do have constitutive places within sciences and arts could not have implied the equivalence of their constitutivities: bluntly put, the homogeneity of the constraints within fields that they contribute to and shape.

This first limit has to do with the internal character of the relations between paradigms and practices.³³ To speak of requisites, of demands exerted by

31. Kuhn, *The Essential Tension*, 349.

32. Cavell, *The Claim of Reason*, 109, 180, and 186-92. Kuhn, *The Structure of Scientific Revolutions*, 43-51. Ludwig Wittgenstein, *Philosophical Investigations*, 4th ed., ed. P. M. S. Hacker and Joachim Schulte, trans. G. E. M. Anscombe, P. M. S. Hacker, and Joachim Schulte (Oxford: Blackwell, 2009). To affirm the autonomies of sciences and arts is first to account for the relative independence of practices (the practice of an art or a science is not necessarily dependent at each occasion on another practice of another art or science) which nevertheless can mutually contribute to each other (some artistic or scientific practices contribute to the realization of other artistic or scientific practices).

33. On this, see Jean-Paul Sartre, *Critique of Dialectical Reason*, vol.2, ed. Arlette Elkaim-Sartre, trans. Quintin Hoare (London: Verso, 1991), 117-18.

paradigms on practitioners and which are internal to the fields that these render partially or wholly possible could *not* have implied their indistinctness. This affirmation faces at least two opposite objections. The first is that it amounts to an all-too-obvious truism, obvious to the point that it is of no significance to recall it, that it is implicit to practices to the point that it presents no interest to be reminded of it. The second is that it amounts to an all-too-heavy claim about the nature of paradigms to expect from these to be able to be prescriptive of procedures without presenting some sort of undifferentiable commonality. However, that is a major aspect of the philosophical projects of both Cavell and Kuhn, after that of Wittgenstein: not to grant and presuppose that particularities, and with them particularism, could have pierced logical space, the space of possibilities, in a way that only universals, and with them universalism, could have been able to stitch up. That is to say, both the neglect and the overestimation of the problem of the independence of the ways in which relevance comes to be contextually learned, sometimes at its own expense, tends to prevent the intelligibility of differences. The confusion of literality with literalism, most probably, has much to do with this oscillation. Also, such differences came to be less palpable due to attempts at intertwining aspects of arts and sciences (as for example in recent controversies that arose following the success at an art concourse of a work produced by means of artificial intelligence), and considerations concerning the correction, interest, originality and successfulness of such attempts put aside. For example, that the cognitive dimension is not prevalent for artistic practices is not secondary. It is not the case that theorizing necessarily precedes the realization of a new artistic paradigm, and this much is in fact also true of sciences. Feyerabend brought out, as Kuhn, but also as Monod, that hazard, chance, can effectively contribute to the constitution of what shall turn out to be paradigmatic, and which is such even while we do not — yet — think that it is the case. It is no more secondary that, conversely, the artistic dimension is not prevalent in scientific practices.

Even if innovations, contributions to sciences did happen following experiments whose results and consequences have turned out to exceed or differ from what was then attempted and expected, internalized conceptualisations do belong to the background of such practices. And it would not be entirely wrong to affirm that

this is also what happens in the arts, for experimenting in art also can have for background past internalizations of precedent practices. At this level the thoughts of Cavell about the relation of the innovator with one's production completely hold. And to an extent, to think the relations of the innovator and one's innovations does contribute to think both the relations of the artist with one's artworks and that of the scientist with one's discoveries. However, such characterization is not, as it stands, exclusive of or incompatible with the affirmation of the indistinctness of what is delivered in the background. One could wonder whether such expectation, and such way of progressing, does not imply to ring the knell of phenomenology. Yet, when the indistinctness of what is delivered in backgrounds is thematized as such by phenomenologists and their best critics, such as Sartre, in philosophical attempts to express or word perception in its relation to our actions, indistinctness is opposed to (synthetic) unification, and their philosophical concern is first that of accounting for the possible unity of aspects of objects relatively to ends which are thematized as such, or not, by the agent. But when we think with Kuhn and Cavell after Wittgenstein, our approach really is different from any such of the mentioned: the sociological dimension of Kuhn's thought, and the linguistic — in the broad sense — dimension of Cavell's thought, does not presuppose such indistinctness, or such type of indistinctness, and this point does matter for thinking ways in which paradigms really contribute to the structuration of reality.³⁴ Neither astonishment nor revulsion before an artistic or scientific production could happen without prior internalization of paradigms. But the possibilities that paradigms shape are not *whichever*, and could not be such: some actions are rendered possible by a paradigm rather than others. The connexity of logical space does not presuppose the indistinctness of possibilities that are under-determined by paradigms.³⁵

But how is such connexion manifest within the works of Kuhn and Cavell? In Kuhn, this distinction manifests itself with the thought of the internal character of the relations between anomalies and paradigms: anomalies appear as such against the background of the past internalization of a paradigm.³⁶ Strictly speaking, without any

34. Pace the reconstructions of William James, and despite what Kuhn himself writes about these, following C. I. Lewis, *Mind and the World Order*, 320-21.

35. See Wittgenstein, "University of Iowa Tractatus Map," 2.01-2.02, <http://tractatus.lib.uiowa.edu/>.

36. Kuhn *The Structure of Scientific Revolutions*, ch. 5.

such prior internalization, there is no such thing as a conceivable anomaly. In Cavell, this distinction manifests itself with the thought of the internal character of the relations of expressions and failures of education: failures of learning happen subsequently to attempts of sharing the practical knowledge of the use of a paradigm.³⁷ Strictly speaking, without any such attempt, there is no such thing as a failure. In both cases, that a situation is apprehended as normal or abnormal presuppose — without the implication by the relation of presupposition of any ontology of the a priori whatsoever — the past interiorization of paradigms: although the connexions of events do involve only contingent elements, such connexions are nevertheless necessary.

2. The Asymmetries of Artistic and Scientific Paradigms

The first limit of the comparison of the place of paradigms in arts and sciences proceeds from the autonomies of the practices within paradigms and with which paradigms can come to have structuring places. Not only do Cavell and Kuhn agree on the fact that paradigms shape or contribute to shape practices and fields in distinct manners, but they also agree on the fact that divergences and incompatibilities among practices within the same or different fields are intelligible as such only if we acknowledge that these manners are not only distinct but mutually autonomous. Practitioners of such practices not only do not follow the same procedures and do not adopt the same means, but they also have aims, goals, objectives that could not be mutually dependent. This practically involves that the relations between paradigms, scientific or artistic, and requisites, obligations, imperatives, consequences, although all internal, are nevertheless different, differently constituted, and differently prescriptive, given the autonomies of the ends which are those of the considered fields, practices and practitioners. This point is manifest in Cavell's analysis of the ways in which some objects can see themselves provided the attention that usually is provided to persons, while in Kuhn, it is manifest in his attention to the obsolete, to obsolete paradigms which yet were not or are not inoperative, both "theoretically" and practically.³⁸ Such inversions may

37. Cavell, *The Claim of Reason*, 114-15.

38. See Kuhn, "Commensurability, Comparability, Communicability" and *The Structure of Scientific Revolutions*, ch. 5. Cavell, *Must We Mean What We Say?*, 197-98.

surprise us — for the reasons for thinking “the normal” through “the abnormal” and inversely, are not obvious as such, and especially if we were holding on to oversimplifications of art as a space devoid of conceivable rules and of science as a space devoid of conceivable freedom. But such preconceptions are two sides of similar “mental cramps,” of science as the neutral unveiling of the preestablished and of art as the engaged rejection of the (pre)established. By contrast, I argue that a pertinent analysis owes to itself to reconstitute the primacy of considered prevalent dimensions internal to considered practices. To this extent, the symmetry of the relations of the place of paradigms in arts and sciences has a philosophically relevant counterpart. The cognitive dimension that is not prevalent for the artistic practices, is prevalent for scientific practices; while the creative dimension that is not prevalent for scientific practices, is prevalent for artistic ones.³⁹ For, if we want to use the shape-background distinction both to characterize the relations of our practices and to account for the unification of practical fields according to *independent* means and goals, then we need not only to integrate the distinctness but also the *structuredness* of the dimensions that are prevalent to the considered practices. At stake is the eventuality of the relevance of a comparison among practices; for, without such eventuality, it is at best unclear that we could think of the space of practices in its relations to possibilities, *our* possibilities. For example and notably, that we can relevantly consider that a practice is more creative or innovative than its part or than another (for example, drawing a building and buying material to make a drawing) does *not* imply that *such* aspect of a practice is essential to its realization. This is a sense in which, I argue, the consideration of the dimensions of our practices does matter, if we are both to think these as instances of practices and as shaped by mutually independent procedures, criteria, samples, exemplars, and paradigms. If we are to be able to account for the internal character of relations between paradigms and consequences without thereby granting the eventual relevance of consequentialism, according to which when innovating, we could not but have to start from consequences (by contrast with taking into account consequences). A central asymmetry between artistic and scientific paradigms whose obviousness

39. To be sure, such negations could not imply that practices from different fields cannot have common dimensions. As it shall soon be considered, scientific practice can present creative dimensions, and an artistic practice can present scientific dimensions.

needs to be rendered explicit thus is that strictly speaking artistic innovations do not and are not meant to render obsolete prior forms of arts as do scientific innovations. Kuhn expresses this point as follows: “unlike art, science destroys its past.”⁴⁰ Artistic innovations strictly speaking do not render and are not meant to render obsolete previous artistic forms of art, even when their productions involve new technologies. A good example of this is that of photography, which, contrary to (past and arguably misled) expectations, neither rendered obsolete painting, nor was rendered obsolete by cinema. Retrospectively, technological innovations contributed to the autonomization of each of these arts, rather than the contrary. By contrast, scientific innovations, new scientific paradigms, do render obsolete prior ones. The inadequacy of the suppositions of the existence of elements, such as that of diaphane to account for light, or that of phlogiston to account for combustion, or that of aether to account for the applicability of Newtonian physics, were proved to be both misleading and misled by subsequent developments in physics: strictly speaking, such elements did not exist. Maintaining the claim of the existence of such elements surely did seem attractive and relevant during periods of transition. For even if a paradigm is obsolete, it can sometimes yet provide good grounds for accurate forecasts, as the Ptolemaic model did even after the Copernican revolution.⁴¹ However such a remark does not imply that successful forecasts made on the basis of obsolete paradigms were successful for relevant reasons. It only stresses that the erroneous character of some assumptions can, for practical purposes, be neglected, as long as the redevelopment of normal science with a new paradigm has not yet provided results that meet with the standards and the expectations of the practitioners of the considered field, results better than the ones which were obtained with the earlier paradigm. The consideration of such asymmetry between artistic and scientific paradigms also renders clear that responsibilities, consequences and paradigms are closely intertwined, that strictly speaking, these cannot be relevantly abstracted from each other. To be sure, fraudulence, counterfeit, scam, could not have been features of arts or sciences. But the morphology of scandals that can cross such mutually independent fields are nevertheless distinct. Involved responsibilities and their

40. Kuhn, *The Essential Tension*, 345.

41. Kuhn, *The Structure of Scientific Revolutions*, 75.

consequences also differ relatively to the considered fields and practices. This asymmetry is further rendered manifest by the fact that the claim of authorship is not a necessary condition for artistic production and for the integration of artworks into the markets of art, while on the contrary scientific innovation, or at least, applications of scientific innovations tend to be further controlled. Kuhn considers, in a way that is compatible with Cavell's approach, that such asymmetry is explainable in terms of a difference of the responses and of the relations of the public with arts and science such that "Art is an intrinsically other-directed enterprise in ways and to an extent which science is not."⁴² Indeed, if, as practices, arts and sciences whose products are shared and present collective significance are both practices that are directed to others, neither the relations of the artistic and scientific practitioners to their works, nor the relations of these works with their public could be equivalent. Peculiarly, the realization of an (artistic) happening does imply the presence of a public in a way in which the realization of a scientific discovery does not. While the success of the first sort of event is not even thinkable without the presence of a public, the same does not hold of the second sort of event.

3. The Diversities of Paradigms

How then can the constitutivity of paradigms yet be thought, now that we have exposed some central limits to the comparison of the place of paradigms within arts and sciences, so as to render manifest that the autonomy of arts and sciences among and between themselves has been much underestimated? The difficulty might seem to be resolvable by means of the consideration that dyadic relations hold between paradigms and members of communities, and can suffice both to account for the occurrences of events whose intelligibility implies the availability of given paradigms, and for the development of hexises on the basis of contextually significant acquaintances. That would hold indivisible or non-breaking relations between paradigms and persons considered in isolation could suffice to account for the constitutivity of paradigms yet without unduly renouncing to any idea of necessity whatsoever. However, such consideration would imply arguing in favor of a monadic

42. Kuhn, *The Essential Tension*, 344.

conception of necessity whose misleadingness I hope, with and after Kuhn, Cavell and Wittgenstein, to have rendered manifest. For such hypothesis would more be a restatement of the problem rather than its solution: it provides elements of an explanation of the ways in which paradigmatically structured or structuring events can occur within personal lives, but it does so only at the expense of the socially structured character of the ways in which the diversity of paradigms are available to us and of our relations with them. The difficulty is, I suggest, that of accounting for the holding of differently structured and necessary relations between necessarily contingently existing paradigms and the inherently relational character of the existences of members of communities. The problem thus can be conceived as that of the necessity of *common* mediation to providing an account for the availability of diversities of paradigms *to* us. Let us then account for the constitutivity of paradigms in a way that is truthful to the irreducibility: of arts and sciences within and among themselves, of practices among themselves, of ways in which paradigms can come to have a place and be expressive of the demands, constraints, consequences, responsibilities these paradigms may exert in mutually independent and autonomous fields. Then we both have to be able to account for the internal character of the relations of these paradigms with practical possibilities that these under-determine, and for the external character of the relations at the occasions of which we can come to be initiated into a practice or provided a way out of practical and theoretical difficulties. Now, it can seem that we almost do contradict ourselves in acknowledging these apparently mutually incompatible demands. For how could relations of paradigms with practices and us both could be internal and external at the same time? But such relations really are not simultaneously external and internal inasmuch as they are external or internal at different occasions, in different situations, in different circumstances. This is, I argue, an aspect that is common to the thoughts of Kuhn and Cavell. Relations between paradigms and us are not simultaneously both internal and external, they rather are sometimes internal sometimes external. The obviousness of this remark appears if we distinguish the contexts of the occasions at which we come to be acquainted with paradigms, and the

paradigmatic dimensions that are prevalent in each one of these.⁴³ The situations in which a beginner comes to be acquainted with a paradigm by a more advanced practitioner, the situations in which a more advanced practitioner presents the insufficiencies of a paradigm to argue in favor of a new one to the experts of a field are situations whose intelligibility do involve a different partitioning and distribution of roles, responsibilities and consequences. Such that our question ultimately amounts to the following: is the mediation by community necessary to us to account for the availability of diversities of paradigms or not? Where are we to situate necessary relations in our lives?

For in an unproblematic sense, the successfulness of the success, the autonomy of the intelligibility that a new paradigm may provide does precede its acknowledgement as such by a relevant community. The answer I want to argue for, is that neither according to Kuhn nor according to Cavell, does it make sense to suppose that the mediation by community is superfluous or secondary in order to account for the availability to us of diversities of paradigms, despite conformism. And such affirmation does not amount to downplay the differences of their approaches or to neglect traditional demands concerning intelligibility. It really does amount to a both philosophical and critical inheritance. For none of us are relations with paradigms restricted to the ways in which traditional philosophy has assumed these could be. Nor could we have had the sort of margin of action that traditional philosophy supposed we could. But this is no call to renunciation and could not be such, for, whenever required, the analyses of ordinary situations do remand to past interiorizations of paradigms so as to render intelligible the circumstantiated limits of intelligibility as such. That one can enjoy the applications of paradigms that one does not understand, while one does contribute to the development of a paradigm that a few or even no one else yet understands, is no impossible situation. The kind of tension that Kuhn called that of dislocated worlds, and that Cavell expressed as the counterpart of the cohabitation of several histories within one single and only breast, situations in which individuals come, so to speak, to have one foot outside and one foot within the unrestrictive circle of the ordinary are parts of natural history as

43. Wittgenstein, *Philosophical Investigations*, §6.

rendered explicit by Wittgenstein. It really is up to us to acknowledge the unrestrictive character of the ways in which paradigms do contribute to shape reality in mutually independent manners. Our relations, rarely with paradigms, and seldom paradigmatic, nevertheless are unthinkable without paradigms, and this much does not preclude or exclude but rather appeals to further scrutiny, so as to account for the collective significances of the diversities of paradigms.

Conclusion

With this paper I first attempted to recover both the *vividness* and the *relevance* of the limited comparison made by Cavell and Kuhn of the place of paradigms in arts and sciences. This much was required, I argued, both to render clearer the incompatibility of their thoughts with undue acknowledgement of the unmythical character of a private language, and to bring out some fundamental resemblances of the places of paradigms within these practices. For each thinker, it is not only that paradigms are *contingent* — as their nonexistence is not inconceivable, but paradigms are also *free* — as they are expressive and constitutive of freedoms, in ways that necessarily imply their *relationality* — as the ways in which they structurally contribute to our lives cannot be relevantly abstracted from our relations, and from our relations with them within our practices. I then attempted to show that although both Kuhn and Cavell drew our attention in different ways to the *unrestrictive limits* of the comparison of the place of paradigms within arts and sciences. I attempted to show that these unrestrictive intersections are at least threefold. Successful achievements not only *can*, but also *need* to become paradigmatic in mutually independent and autonomous *practices* which contribute to the availability of *diversities* of paradigms. For, not only the means and ends of these practices differ, but also the *dimensions* that are prevalent within these are mutually independent and sometimes even *asymmetrical* in mutually explicative ways. Such consideration thus, I argued, left us before the explicitation of the collective significances of the evolutive availability of *diversities* of paradigms as a task yet to be achieved.

4. A Willingness for Crisis: Cavell and Kuhn

PAUL JENNER

In one of the excerpts from memory composing his autobiography, Stanley Cavell recalls attending “an informal but extended discussion among professional philosophers” with Thomas Kuhn, then his colleague at Berkeley. It was the first such meeting the two friends had sat through together, and Cavell describes the vivid impression left on the historian of science: “As we left the scene Kuhn pressed his fingers to his forehead as if it ached. ‘I wouldn’t have believed it. You people don’t behave like academics in any other field. You treat each other as if you are all mad.’”¹ The perception, Cavell notes, “seemed right [...] but normal enough, and because normal, suddenly revelatory.”² Kuhn’s response clearly anticipates topics and arguments that would come to inform *The Structure of Scientific Revolutions*.³ Articulated within the terms of those arguments, the exasperating scene becomes one of philosophical discussion in the absence of a paradigm, unable to take place upon an assumed common ground.

The argument of this essay is that Cavell’s understanding of philosophy is informed throughout by an aversive dialogue with Kuhn’s account of scientific development and creativity and its signature ideas about paradigms, normal science, progress, and crisis. This aversiveness helps to explain some of the difficulties encountered when attempting to situate Cavell’s work in relation to paradigms. Mindful of the mutual influence between Cavell and Kuhn, Toril Moi notes that “*The Structure of*

1. Cavell, *Little Did I Know: Excerpts from Memory* (Stanford, CA: Stanford University Press, 2010), 354. Later in his narrative Cavell returns to the scene of Kuhn’s “astonishment at the angry and wide variation of value philosophers place on one another’s work.” *Ibid.*, 500. Elsewhere, the same text notes “the civilised violence in philosophical exchange, familiarly alarming to visitors to the subject.”

2. *Ibid.*, 319.

3. Thomas Kuhn, *The Structure of Scientific Revolutions*, 3rd ed. (Chicago, IL: The University of Chicago Press, 1996).

Scientific Revolutions is deeply Wittgensteinian, not to say Cavellian in spirit and argumentation.”⁴ This connection lends support to Moi’s suggestion that “Kuhn’s notions of paradigms and paradigm shifts provide the best framework for understanding” the relationship between Cavell’s ordinary language philosophy and poststructuralist theory.⁵ As Moi argues in an illuminating analysis of the different understanding of “concepts” within ordinary language philosophy and poststructuralism, the relationship between the two may be understood as an incommensurability between divergent paradigms. The salient difficulty when it comes to Cavell and paradigms, then, is that paradigmatic poststructuralist theoretical orthodoxies about “language, meaning, and interpretation,” for a time so pervasive within the humanities as to be disciplinary second nature to many literary critics, are radically at odds with Cavell’s work and so muted his reception.⁶ It is therefore “no coincidence” for Moi “that almost all the books on Cavell that have appeared since 1989 have been written by philosophers and not by literary critics.”⁷

Writing ten years after Moi’s article, Marshall Cohen struck a slightly different note about Cavell’s reception by philosophers. Cavell’s work, in Cohen’s view, “will be fruitful and multiply only when philosophers engage it critically, find it useful, and perhaps develop it further. For the most part, this has not happened.”⁸ The implication is that Cavell’s ordinary language philosophy has been no more paradigmatic for analytic philosophers than for literary theorists. My purpose in juxtaposing these two accounts is to indicate a sense of difficulty when it comes to understanding Cavell’s work in relation to Kuhn’s notion of a paradigm. As Moi argues, “Attempts to squeeze ordinary language philosophy into the poststructuralist paradigm will always fail.”⁹ My contention is that there are also reasons to hesitate before attempting to squeeze

4. Toril Moi, “They practice their trades in different worlds’: Concepts in Poststructuralism and Ordinary Language Philosophy,” *New Literary History* 40, no. 4 (2009): 805.

5. *Ibid.*, 804.

6. *Ibid.*, 802. Moi’s ground-breaking analysis identifies the relationship between the two movements not as one of straightforward opposition but as a more complex case of closeness and distance. *Ibid.*, 804.

7. *Ibid.*, 802.

8. Marshall Cohen, “Must We Mean What We Say? On the Life and Thought of Stanley Cavell,” in *Inheriting Stanley Cavell: Memories, Dreams, Reflections*, ed. David LaRocca (London: Bloomsbury, 2020), 58. Cohen’s remarks build upon but ultimately depart from Cavell’s own reflections on the reception of his work. “Some friends of mine feel that too much of the writing about my work comes from the sense [...] that if it were just explained a little more clearly, its readership would suddenly become fruitful and multiply.” Cavell, *Little Did I Know*, 514.

9. Moi, “They practice their trades in different worlds’,” 803.

Cavell's ordinary language philosophy into, as it were, the "paradigm" paradigm, and that these reasons capture a core element of Kuhn's influence upon Cavell. Cavell's reception and transfiguration of Kuhnian ideas is therefore the directional emphasis of this essay, as distinct from scholarship detailing the impact of Cavell's Wittgenstein on Kuhn.¹⁰ The reception pertains to Cavell's understanding of philosophy, placing this essay on a somewhat different path to scholarship on Cavell and Kuhn focusing on topics of artistic modernism.¹¹

Readers of *Structure* will recall that an enterprise without a paradigm may be characterised, variously, as dabbling in pre-professional, solitary meanderings, as riven by competing schools, or as undergoing an extraordinary, revolutionary time of crisis, when disagreements over disciplinary fundamentals as to method and goal become newly salient. When Kuhn and Cavell joined the philosophy department at Berkeley in 1956, they brought rumours of disciplinary crisis, of revolutionary work in gestation at odds with a residual logical positivism. Cavell characterises the Berkeley ambience at the time as "still, almost freshly, bearing the mark of Moritz Schlick's visit there for a semester in the mid-1930s."¹² In this disciplinary context, Kuhn and Cavell arrived with

enthusiastic news that, singly and jointly — grating to some, young and old — served to loosen the hold, for a fair number of graduate students, of restrictive doctrines of language and of science, of, let's say, verificationism in both realms; or, put otherwise, served to demonstrate modes of intellectual serious-

10. Vasso Kindi has argued that the influence between the two thinkers is less unidirectional than had been commonly understood, since Kuhn influenced Cavell as much as *vice versa*. Specifically, Kindi argues that Kuhn's account of revolutionary innovation helped to shape Cavell's understanding of novelty within the context of artistic modernism and that this understanding, further, raises questions of essentialism in Cavell's work. Whilst Kindi's focus is on parallels between Kuhn's and Cavell's respective ideas about tradition and novelty in science and art, my principal topic is rather Kuhn's impact upon Cavell's understanding of philosophy. (Related essentialist gestures also appear on this terrain, since Cavell receives *Structure* as an occasion to think through *differences* between philosophy, art, and science, and in particular to articulate philosophy's irreducibility to science, eventuating in a particular understanding of philosophical autonomy.) See Vasso Kindi, "Novelty and Revolution in Art and Science: The Connection between Kuhn and Cavell," *Perspectives on Science* 18, no. 3 (2010): 284-310.

11. In addition to Kindi's article just cited and to essays by Mohan and Uçan in this issue of *Conversations*, see Caroline A. Jones, "The Modernist Paradigm: The Artworld and Thomas Kuhn," *Critical Inquiry* 26, no. 3 (2000): 488-528.

12. Cavell, *Little Did I Know*, 352. Schlick was Mills Professor of Intellectual and Moral Philosophy at Berkeley for the academic year 1931-32. For an analysis of his role in "the subtle transformation of American philosophy in the early 1930s," see Sander Verhaegh, "The American Reception of Logical Positivism: First Encounters (1929-1932)," *Hopos* 10, no. 1 (2020): 106.

ness and fruitfulness that were not intimidated by, nor I think unheeding of, positivism's threats of meaninglessness and lack of rigor.¹³

The positivist doctrines Cavell describes here had aspired to deliver professional philosophy from precisely the type of dissensus observed by Kuhn. For the positivist sensibility, the persistence of schools and seemingly interminable debates over fundamentals within philosophy was symptomatic of a lack of progress, which was exactly what a scientific philosophy promised to secure. Schlick understood logical positivism as providing methods whose "resolute application" would inaugurate, to cite the title of his 1931 essay, "The Turning Point in Philosophy": "Two thousand years of experience seem to teach that efforts to put an end to the chaos of systems and to change the fate of philosophy can no longer be taken seriously. [...] I am convinced [however] that we now find ourselves at an altogether decisive turning point in philosophy, and that we are objectively justified in considering that an end has come to the fruitless conflict of systems."¹⁴

A positivist image of science as the exemplary model of disciplinary consensus and progress is of course a principal topic of *Structure*. Kuhn's answer to the *explanandum* of scientific progress was the ability of scientific practitioners during periods of "normal science" to subdue what would otherwise prove to be halting debates over fundamentals regarding method, goals, and ontology.¹⁵ Such considerations are postponed in favour of unfolding the working paradigm, until the assumptions of normal science informing that paradigm become unignorably problematic in the face of anomalies that normal science itself has functioned to define. This is the point at whi-

13. Cavell, *Little Did I Know*, 353. It is noteworthy that the news is pictured as "grating to some, young and old," as something other therefore than the onset of a homogeneous generational shift.

14. Quoted in Pinto de Oliveira, "Kuhn and Logical Positivism: on the Image of Science and the Image of Philosophy," in *Interpreting Kuhn*, ed. K. Brad Wray (Cambridge: Cambridge University Press, 2020), 69.

15. Kuhn's point of course was not that scientists possessed firmer agreement about fundamentals than their counterparts in the humanities. Cavell's recounting of his friend's perplexity at the normal madness of philosophical conversation is of a piece with (and perhaps shaped by) Kuhn's account in *Structure* of the development of his signature concept at Stanford University's Center for Advanced Studies in the Behavioural Sciences in 1958-59. "I was struck by the number and extent of the overt disagreements between social scientists about the nature of legitimate scientific problems and methods. Both history and acquaintance made me doubt that practitioners of the natural sciences possess firmer or more permanent answers to such questions than their colleagues in social science. Yet, somehow, the practice of astronomy, physics, chemistry, or biology normally fails to evoke the controversies over fundamentals that today often seems endemic among, say, psychologists or sociologists." Kuhn, *The Structure of Scientific Revolutions*, ix-x.

ch, on Kuhn's account, the puzzle solving characterising paradigm-led normal science gives way to an extraordinary, revolutionary period of crisis during which self-reflexive questions (determining what count as interesting puzzles and relevant solutions) come to the fore.

Cavell's conviction as to the revolutionary nature of ordinary language philosophy never dimmed. There are nonetheless considerations against understanding its development at his hands as the fashioning of a new paradigm. The foremost of these is that Cavell resists the philosophical equivalent of paradigm-led normal science. Returning to the anecdote with which this essay began, recall that what Cavell found "revelatory" was not so much his friend's impression of alarming philosophical dissensus, but rather an intuition that such disagreement might be "normal" to philosophy. A contrast emerges here with Kuhn's account of normal science, according to which science progresses within the apparent consensus of a paradigm through an ability for a time to bracket the tumult of disciplinary self-questioning. Kuhn's characterisation of normal science informs and helps to articulate a strand of Cavell's work whereby self-reflexive questioning is considered as normal to philosophy, rather than as needing to be overcome before philosophy can make a start or as needing to be postponed in order for philosophy to progress.¹⁶

The strand is prominent in the foreword to Cavell's first book of essays (certainly a tumult of disciplinary self-questioning) which bears the impress of the two friends' conversations quite comprehensively, taking up such recognisably Kuhnian topics as textbooks, professionalisation, popularisation and incommensurability as these pertain to differences between philosophy, science, and art.¹⁷ It can be found in Cavell's refusal of the distinction between philosophy and metaphilosophy:

16. As Cavell writes in his introduction to *This New Yet Unapproachable America* ("Work in Progress: An Introductory Report"): "On learning from the invitation by the Department of English at the University of Chicago to deliver the Carpenter Lectures not only that they did not expect to hear a completed book of lectures but instead that they hoped to respond to work in progress, I found myself wondering more consecutively than ever before what philosophical work is, and what constitutes its progress." Stanley Cavell, *This New Yet Unapproachable America: Lectures After Emerson After Wittgenstein* (Albuquerque, NM: Living Batch Press, 1989), 1-28, 1. Finding oneself wondering is of course Cavell's Thoreauvian phrase for finding oneself *by* wondering, hence Cavell can begin his lecture series just because he has become self-critical about what beginning would imply. On this logic, his report will forever be introductory, just as Kierkegaard's *Concluding Unscientific Postscript* will never be conclusive.

17. Cavell, "Foreword: An Audience for Philosophy," in *Must We Mean What We Say?: A Book of Essays* (Cambridge: Cambridge University Press, 1969), xxxi-xlii. Elements of Cavell's grammatical analysis of philosophical "audience" (as a way of mapping the general contours of philosophy) parallel Kuhn's com-

The remarks I make *about* philosophy (for example, about certain of its differences from other subjects) are, where accurate and useful, nothing more or less than philosophical remarks [...] I would regard this fact — that *philosophy is one of its own normal topics*, as in turn defining for the subject, for what I wish philosophy to do [emphasis added]. But someone who thinks philosophy is a form of science may not accept that definition, because his picture is of a difference between, say, speaking about physics and doing physics.¹⁸

The wish to hold philosophy and metaphilosophy together reflects a companion wish to hold philosophy and science somewhat apart — even as this move draws support from Kuhn’s argument fuzzing up the distinction between the two disciplines (since his notion of a paradigm articulates how ways of “speaking about” physics are not separate from ways of “doing” physics). Metaphilosophical questions, rather than needing to be dimmed so that philosophy can get going, are presented as a normal part of that getting going and as usefully at issue. What this entails is that Cavell stages philosophy (specifically his philosophical writing) as taking upon itself questions that the possession of a paradigm would function to answer as it were automatically and in advance. Within science, as Cavell contends in the context of a contrast between the different grammars of audience in philosophy, art and science, “standards of performance are institutionalised.”¹⁹ The closing sentence of the foreword turns to the performance of philosophy: “There is the audience of philosophy; but there also, while it lasts, is its performance.”²⁰ The formulation implicates the duration of the performance with a related question as to the continued existence, the autonomy, of philosophy. One shape philosophical autonomy assumes in Cavell’s work involves a contrast with paradigm-led normal science, whereby standards of performance, rather than “institutionalised,” are at stake in the performance itself. The moral is captured in Cavell’s autobiography, in a very different context, as the intuition that “no one,

ments about science and audience found in “Comment on the Relations of Science and Art,” in *The Essential Tension: Selected Studies in Scientific Tradition and Change* (Chicago, IL: The University of Chicago Press, 1977), 340-351.

18. Cavell, *Must We Mean What We Say?*, xxxii.

19. *Ibid.*, xli. The formulation suggests that Cavell’s topic is as much the professionalisation of philosophy (as facilitated by scientism) as scientism itself.

20. *Ibid.*, xlii.

and no institution, unless you allow it to, can tell you what you are meant to do, nor whether you are doing it.”²¹

One reason crisis becomes thematic for Cavell is that, in a contrast with Kuhn's pattern of scientific development according to which periods of crisis are exceptional, viewing fundamental self-criticism as normal to philosophy leaves it open to crisis. In Cavell's 1965 essay “Aesthetic Problems of Modern Philosophy,” philosophical crisis is presented in straightforwardly Kuhnian terms as intermittent: “What I have written, and I suppose the way I have written, grows from a sense that philosophy is in one of its periodic crises of method.”²² Heightening this crisis is the Kuhnian thought that “method dictates to content,” as might be seen in the way that “an intellectual commitment to analytical philosophy trains concern away from the wider, traditional problems of human culture which may have brought one to philosophy in the first place.”²³ Feeling unable to eschew either the method or the extracurricular concern, Cavell's hope is “to discover further freedoms or possibilities within the method one finds closest to oneself.”²⁴ Denying a distinction between philosophy and metaphilosophy, thereby making philosophy one of its own normal topics, is one way Cavell relates his analytic methods to the humanities. This can be seen in “The Division of Talent,” written twenty years after “Aesthetic Problems in Modern Philosophy.” Recounting his experiences at the Shakespeare Association of America meeting in 1984, Cavell considers these as symptomatic of broader controversies within the field of literary studies at the time as to the role of theory.

Such a field, I said to myself, seems to have a crisis on its hands. (The willingness for crisis may be to its credit or for its promise. It is definitive of the humanistic professions, as opposed to the scientific, to be at any time subject to the charge, or the confession, that they are in crisis — and also to be always capable of denying that charge — as if a *question* of crisis is itself normal to the humanities, when they differentiate from the sciences. [I am of course thinking here of

21. Cavell, *Little Did I Know*, 247.

22. Cavell, “Aesthetic Problems of Modern Philosophy,” in *Must We Mean What We Say?*, 74.

23. *Ibid.*, 74.

24. *Ibid.*, 74.

Thomas Kuhn's picture of scientific crises, or "revolutions," as *breaking in upon* a science's normal periods of progress.] This wants understanding. [...])²⁵

Where "Aesthetic Problems of Modern Philosophy" considered crises as periodic or extraordinary moments of disciplinary development, the later essay draws a wider circle. A question of crisis is now cast as "normal" to and constitutive of philosophy when it is understood as one of the humanities. Hence, as Cavell puts the matter in his autobiography, "philosophy's self-criticism must remain perpetual, not a thing for isolated crises."²⁶ The very denial by a humanistic discipline that it is in crisis takes the form of accepting the appearance of crisis (in the form of sustained self-criticism) as in a sense normal.

There is more to be said of how Kuhnian problematics inform responsiveness to crisis in "The Division of Talent."²⁷ The essay takes up the question of the relationship of Cavell's thought to the philosophy and deconstructive criticism of Jacques Derrida and Paul de Man. The immediate issue is not whether Cavell and his European counterparts agree or disagree but rather one of finding ground upon which agreement and disagreement might be discerned. For Cavell, "our philosophical-literary culture as it stands" is unable to provide such support, leading to a "present incommensurability," "amounting even, as for me it is seeming to do, to an intellectual crisis."²⁸ The strand of Cavell's writing I am emphasising whereby his philosophy, unlike paradigm-led normal science, is one of its own normal topics, informs the comparisons and contrasts the es-

25. Cavell, "The Division of Talent," *Critical Inquiry* 11, no. 4 (1985): 522. Cavell presented the paper "Hamlet's Burden of Proof" at the ASA in the session "Confronting Critical Cruxes."

26. Cavell, *Little Did I Know*, 500.

27. Four decades earlier in his career and at least one world away from the contexts and occasions of "The Division of Talent," in a co-authored article with Alexander Sesonske, Cavell and Sesonske made comparable reconciliatory use of the Marxist concept of the division of labour, as a way of resolving philosophical disagreement by arraying philosophies in terms of the *academic* division of labour. "The differences [between emotivists and cognitivists], thus, are those which must occur in any complex and extended enterprise; no small group of workers can hope to fully encompass the enormous area to be questioned. But a *division of labor* need be no more *divisive* here than in any other scientific project. This paper is intended as a contribution to a view which realizes that the pragmatist and the positivist can be, and, constructively interpreted, already *are*, mutually supportive." Cavell and Alexander Sesonske, "Logical Empiricism and Pragmatism in Ethics," *The Journal of Philosophy* 48, no. 1 (1948): 17. The passage somewhat evokes and anticipates Clark Kerr's notion of the multiversity as developed in his 1963 Godkin Lectures at Harvard, not to mention its critique by the radical student movement in the 1960s (in response to which Cavell struck a similarly mediating role, "keeping open what lines of communication I could among and between students and professors"). Clark Kerr, *The Uses of the University*, 5th ed. (Cambridge, MA: Harvard University Press, 2001); Cavell, *Little Did I Know*, 506.

28. Cavell, "The Division of Talent," 532 and 527.

say explores between his work and philosophical and literary deconstruction. His unsettled relationship to the paradigm of analytic philosophy is of course no less at issue here. Philosophy that does not get going (on the model of Kuhnian normal science) after guiding metaphilosophical fundamentals have been established and learned as paradigmatic, but instead pursues metaphilosophical questions along the way, understandably finds itself preoccupied with beginnings. If this “commitment to account philosophically for one’s intellectual origination” provides a sense of “kinship” between Cavell’s writing and that of Derrida and de Man, “I daresay it is the commitment that causes most bafflement about my writing and most offense taken from it among my colleagues in the profession of philosophy.”²⁹

An exchange between de Man and the philosopher Raymond Geuss forms an important node in “The Division of Talent” and provides a surprising connection to Kuhn. Cavell focuses in particular on Geuss’ critique of de Man’s deconstructive reading of Hegel. For Geuss, the reading is wilful, imposing deconstructive dynamics upon Hegel’s text rather than demonstrating their necessity and drawing them out through immanent criticism. The conciliatory response provided by de Man gives Cavell pause for thought. For de Man:

Geuss’ stance [...] is to shelter the canonical reading of what Hegel actually thought and proclaimed from readings which allow themselves [...] to tamper with the canon. Such an attitude, I hasten to add, is not only legitimate but admirable [...]. The commentator should persist as long as possible in the canonical reading and should begin to swerve away from it only when he encounters difficulties which the methodological and substantial assertions of the system are no longer able to master.³⁰

The critical approach de Man outlines here and the moment it envisages for deconstructive criticism is remarkably analogous to Kuhn’s pattern of scientific development, whereby normal science “shelters” a paradigm from criticism until anomalies are unearthed which, as Kuhn puts it, even the “reiterated onslaught” of normal sci-

29. Cavell, “The Division of Talent,” 526.

30. *Ibid.*

ence is unable to assimilate.³¹ Cavell's characterisation of his own philosophical and critical momentum as more aversive than paradigmatic in its progress is therefore now in opposition both to Kuhnian normal science and to de Man's apportioning of the normal and the revolutionary within criticism.³²

If "The Division of Talent" asks urgent questions about incommensurability between and within disciplines, it also outlines some answers, and I will continue with the topic of incommensurability before taking up related questions about professionalisation and esotericism. Cavell's concern in his reading of Wittgenstein to emphasise the depth of convention in human life helped to define Kuhnian worries over incommensurability.³³ There is, however, a faith in Cavell's philosophy that incommensurability need not have the last word, entirely in keeping with Kuhn's insistence that incommensurability need not entail the irrationality or impossibility of conversation between divergent paradigms.³⁴ Several of the essays in *Must We Mean What We Say?* develop the notion of "terms of criticism," in part to articulate a Kuhnian problematic whereby exchanges between different philosophical schools past and present will not take place on a common ground of commensurability, since each school will characterise rivals in local terms internal to its own philosophy. Such incommensurability is depicted as not in principle insurmountable, however, as can be seen in Cavell's characterisation in "Knowing and Acknowledging" of the clash between "traditional" philosophy and its "critic" in the figure of the ordinary language philosopher: "What this critic wants or needs, is possession of data and descriptions and diagnoses so clear and common that apart from them neither agreement nor disagreement would be possible — not as if the problem is for opposed positions to be reconciled, but for the halves of the mind to go back together."³⁵ The stakes might appear to have been raised here (however much they have shifted). Nonetheless, a faith is placed in descriptions and diagnoses as commonly shared rather than as hopelessly relative to isolated paradigms; and if the aspiration to locate or invite such commonality is not without "anguish," it also has its successes or "satisfactions."³⁶

31. Kuhn, *The Structure of Scientific Revolutions*, 5.

32. Cavell, "The Division of Talent," 526-27.

33. See Cavell's mention of Kuhnian paradigms as involving differences in "natural reactions" rather than in "conventions." Cavell, *The Claim of Reason*, 121.

34. Kuhn, *The Structure of Scientific Revolutions*, 198-204.

35. Cavell, *Must We Mean What We Say?*, 241.

36. *Ibid.*, 241.

Cavell's refusal in "Knowing and Acknowledging" to give up on the descriptive availability of the experiential content underlying competing intradisciplinary philosophical positions extends to a hope (or fantasy) in "The Division of Talent" of interdisciplinary conversation and commensurability. The suggestion is that there is a guiding "teaching" or experience underlying each discipline that should in principle be communicable across disciplinary boundaries.³⁷ My point here is that the disanalogies between Cavell's philosophical writing and Kuhnian normal science, whereby metaphilosophical questions are ever present rather than preparatory, informs the way his writing models this hoped for commensurability by foregrounding and making overt fundamental questions about methods and goals that, within a Kuhnian paradigm, would remain tacit among a community of practitioners.

Both the promise and the risk of this approach are especially clear when understood in relation to *Structure*. For Kuhn, a research community's possession of a paradigm, understood in its sociological sense as a "disciplinary matrix," allows its members to enjoy what he terms a "relative fulness of [...] professional communication."³⁸ In the absence of a shared paradigm, professional communication "is inevitably only partial."³⁹ Since Cavell's philosophy is not normally separate from metaphilosophy and does not find itself (or present itself as) settling in a paradigm, it follows on this logic that his work will not be guaranteed a paradigmatic fullness of professional communication; hence his perception that this aspect of his writing might baffle his analytic colleagues. Making philosophy one of its own normal topics enabled Cavell's exploration of "the limitations of the English tradition of philosophizing." Nonetheless, that tradition's "glory [made possible I suppose by its limitations] is that within it philosophy is still performable, realizable, in conversation, in mutuality."⁴⁰ If this fact about the Anglo-American tradition was in Cavell's view "definitive" for his work, he nonetheless felt himself somewhat "excluded" from the tradition's "mutuality." Although the analytic paradigm is valuable for Cavell's philosophy, then, it is as it were "valuable beyond measure," in the absence of the immediate relevance of commensurability.⁴¹

37. "I want to know what you think it is essential to know in order to do what you do." Cavell, "The Division of Talent," 532.

38. Kuhn, *The Structure of Scientific Revolutions*, 182.

39. *Ibid.*, 198.

40. James Conant, "Interview with Stanley Cavell," in *The Senses of Stanley Cavell*, ed. Richard Fleming and Michael Payne (Lewisburg, PA: Bucknell University Press, 1989), 71. Cavell's parentheses.

41. *Ibid.*, 71.

For Kuhn, the relative fullness of communication characteristic of a normal-scientific paradigm formed a condition of professional progress.⁴² Such tacit understanding came at the cost of rendering scientific practice esoteric: unintelligible or closed to a non-specialist audience. Where Cavell's aversiveness forfeits the relatively full communication that characterises a professional group's possession of a paradigm, his transfigurations invite new and unpredictable constellations of friends and strangers into conversation with his work.⁴³ The invitation trades paradigmatic fullness of communication for an understanding of philosophy as in a sense non-esoteric.⁴⁴ Recalling his transformational encounter with J. L. Austin and ordinary language philosophy, Cavell emphasised the openness of Austin's methods:

This was no longer the provision of a great result or paradigm of philosophical thought such as Russell's Theory of Definite Descriptions, building on Frege's invention of the quantifier, which we were then to apply with endless unoriginality to a thousand identical situations. The questions raised here are to be decided by us, here and now. No one knows more about what mistakes and accidents are, or heedlessness or lack of thought, than we do, whatever we think we do or do not know. It is a frightening, exhilarating prospect.⁴⁵

The non-esoteric character of Austin's procedures is explicitly contrasted with the philosophical equivalent of paradigm-led normal science, in the form of the exemplar provided by Russell's theory of definite descriptions

Having referred throughout to "Kuhnian themes" in Cavell's work, I should say a little more about thematisation itself. As Cavell observed, "given the deep variations in our training and experience, the inspiration Kuhn and I might take from each other underwent sometimes radical changes in finding a place to exist, in however revised a shape, in the other's sensibility."⁴⁶ Since Cavell and Kuhn are both notably heterodox figures, this amounts to significantly more than an adjustment for discipli-

42. Kuhn, *The Structure of Scientific Revolutions*, 24.

43. As Kuhn noted, "Art is an intrinsically other-directed enterprise in ways and to an extent which science is not." Cavell's philosophy here is closer to art than to normal science. Kuhn, *The Essential Tension*, 344.

44. Cavell, *Must We Mean What We Say?*, xlii, 239-40.

45. Cavell, "Notes After Austin," *The Yale Review* 76, no. 3 (1987): 316.

46. Cavell, *Little Did I Know*, 355.

nary differences. What is distinctive about Cavell's reception and transfiguration of Kuhnian ideas is that, although they help to configure and to sustain elements of what Cavell might prefer not to describe as his "methodology," these ideas are pursued at a thematic as well as a technical level.

A headline controversy in the wake of *Structure*, the question of whether Kuhn's Kantianism cedes scientific objectivity and realism, provides an instructive example here.⁴⁷ The Wittgensteinian and anthropological account of necessity developed by Cavell in his doctoral dissertation played a significant role in shoring up Kuhn's position, and in this sense Cavell's influence on Kuhn is a technical one within analytic philosophy.⁴⁸ Readers looking to discern Kuhnian shapes in Cavell's work, however, need to look beyond a professionally circumscribed, uniform field of philosophical problems, solutions, and argumentation, or rather consider that and how these elements are re-framed. Cavell's remarks in *The Claim of Reason* about wishing to understand philosophy not as a set of given problems but as an engagement with texts might be read as a distancing his work from the philosophical equivalent of the puzzle solving Kuhn associated with normal science. The deeper connection to Kuhn, however, is precisely the emphasis placed by Cavell on texts and the way this chimes with a seminal aspect of Kuhn's own procedures.⁴⁹ Any attempt to defend or to question the robustness of Kuhn's realism, of course, is unlikely to find immediate use for Cavell's textual reframing of philosophical controversies concerning realism, in an early essay on Emerson: "What the ground of the fixated conflict between solipsism and realism should give way to — or between subjectivity and objectivity, or the private and the public, or inner and

47. I emphasise Kantian epistemology rather than historicism (which might seem the more obvious of Kuhn's threats to realism) mindful of the significance of Cavell's transcendental interpretation of Wittgenstein's *Philosophical Investigations* for *Structure*; not of course that this iteration of Kantianism lacks a historicist dimension, hence Kuhn's self-description: "I am a Kantian with moveable categories." Aristidis Baltas et al., "A Discussion with Thomas S. Kuhn," (1997) reprinted in Thomas S. Kuhn, *The Road Since Structure: Philosophical Essays, 1970-1993, with an Autobiographical Interview*, ed. James Conant and John Haugeland (Chicago, IL: The University of Chicago Press, 2020), 264.

48. Without denying their obvious importance, Joel Isaac cautions against overstating the depth of impact of Wittgensteinian ideas on *Structure*. If those ideas were vivid for Kuhn, this is partly because they spoke to guiding elements of his thought that were already well formulated and drawn from other intellectual contexts. See Joel Isaac, "Kuhn's Education: Wittgenstein, Pedagogy, and the Road to *Structure*," in *Modern Intellectual History*, 9, 1 (2012): 89-107.

49. "I have wished to understand philosophy not as a set of problems but as a set of texts. This means to me that the contribution of a philosopher — anyway of a creative thinker — to the subject of philosophy is not to be understood as a contribution to, or of, a set of *given* problems, although both historians and non-historians of the subject are given to suppose otherwise." Cavell, *The Claim of Reason: Wittgenstein, Skepticism, Morality, and Tragedy* (New York: Oxford University Press, 1979), 3-4. Kuhn's epiphany about Aristotle's laws of motion (that they were to be understood as belonging to a coherent over-

outer — is the task of onwardness.”⁵⁰ The pertinence of Kuhn to this Emersonian horizon is nonetheless quite real, in that both Kuhn and Cavell alike privilege creative process over static results in their respective accounts of science and philosophy.

A suggestive contrast can be made between Cavell and Richard Rorty, another American philosopher greatly influenced by Kuhn’s reopening of a historicist perspective for philosophy. Rorty recalled that after reading *Structure* he “began to think of analytic philosophy as one way of doing philosophy among others, rather than as the discovery of how to set philosophy on the secure path of a science.”⁵¹ His observation that disciplines are obliged to turn to a certain kind of writing and to philosophy in revolutionary periods of crisis is in some ways consonant with the extra-paradigmatic work that writing comes to assume for Cavell.⁵² The overlaps between the two philosophers, however, obscure significant divergences of sensibility.⁵³ Rorty’s critique of *The Claim of Reason* suggested that its reframing of philosophical problems remained needlessly entangled in those problems. If Cavell regarded ordinary language philosophy as revolutionary, in Rorty’s view the revolution stalled in *The Claim of Reason*, since Cavell broke free of philosophical tradition but had yet to leave behind — to continue the Kuhnian analogy — normal science style puzzle solving.⁵⁴ The critique addresses a familiar dimension of Cavell’s reception of Kuhnian ideas, namely his portrait of revolutionary change as entered into reluctantly, out of a preservationist concern expressive of a commitment to continuity and tradition. The relationship between philosophy and its history is of course a further question borne by

all perspective rather than as mistaken physics) arose precisely from “an alternative way of reading the texts with which I had been struggling.” Kuhn, *The Essential Tension*, xi. Cavell’s textualisation of philosophical problems resembles Kuhn’s interest in texts in that the meanings of the philosophical tradition are to be recovered and reframed hermeneutically, in contrast and in response to the positivist dismissals of the tradition as absent of meaning and full of nonsense (uninteresting nonsense at that).

50. Cavell, “Thinking of Emerson,” in *Emerson’s Transcendental Etudes* (Stanford, CA: Stanford University Press, 2003), 19.

51. Richard Rorty, “Thomas Kuhn, Rocks, and the Law of Physics,” in *Philosophy and Social Hope* (Harmondsworth: Penguin, 1999), 178.

52. “Normality, in this sense, is accepting without question the stage-setting in the language which gives demonstration (scientific or ostensive) its legitimacy. Revolutionary scientists need to write, as normal scientists do not. Revolutionary politicians need to write, as parliamentary politicians do not. Dialectical philosophers like Derrida need to write, as Kantian [systematic] philosophers do not.” Richard Rorty, “Philosophy as a Kind of Writing: An Essay on Derrida,” in *Consequences of Pragmatism* (Minneapolis: University of Minnesota Press, 1982), 106.

53. For a sustained comparative analysis of Cavell and Rorty, see Áine Mahon, *The Ironist and the Romantic: Reading Richard Rorty and Stanley Cavell* (London: Bloomsbury, 2014).

54. Rorty praises the writerly fourth part of *The Claim of Reason* but is impatient with the first part’s close engagement with traditional or professional philosophical debates concerning epistemology.

Cavell's writing rather than answered by a paradigm. On Kuhn's account, the possession of a paradigm resolves and stabilises the relationship of an enterprise to its own past such that it is no longer at issue. To the extent that past scientific practice is deemed as anything other than a history of error, for example, and to the extent that it is kept in mind at all, it is codified in scientific textbooks as so many anticipations of the present paradigm. In the absence of a paradigm the philosophical tradition remains at issue in Cavell's work. The argument is that since philosophy does not without distortion relate to its past in the way a paradigm would allow, it is not best understood on the paradigm model. It is not so much then that the revolution, or "onwardness," is stalled, but that it is a "task," in part because unlike normal science, philosophy "has to manage its continuity with itself."⁵⁵

In a philosophical remark about philosophy, Cavell notes "the familiar fact that philosophers seem perpetually to be going back over something, something that most sane people would feel had already been discussed to death. A more familiar formulation is to say that philosophy does not progress. That depends on who is doing the measuring."⁵⁶ Cavell's writing aspires "to motivate both gestures of progress, both states of mind, going back and going on."⁵⁷ If this can be seen in the way *The Claim of Reason* returns to and reinterprets philosophical problems rather than leaving them behind, or in his "perpetually probing and returning to portions or slips of a work" by Wittgenstein or Thoreau or Emerson, it is also of a piece with Cavell's broader characterisation of disciplinary change (and of how philosophy in particular suffers change).⁵⁸ We can return here to the way Kuhn and Cavell brought "enthusi-

Richard Rorty, "Cavell on Skepticism," *Consequences of Pragmatism*, 176-90. In truth Rorty's work as represented for example in his four volumes of *Philosophical Papers* is no less entangled than Cavell's in this respect, and arguably it is much closer in style or form to the paradigm of professional philosophy (making it more incendiary than baffling).

55. Cavell, "Existentialism and Analytic Philosophy," in *Themes Out of School: Effects and Causes* (Chicago, IL: The Chicago University Press, 1984), 200. Cavell's introductory remarks respond to Rorty's essay review of *The Claim of Reason*. See also Cavell's description of many of his "commitments and turns" in philosophy: "concerning terms of criticism and the role of esotericism in (modern?) philosophy, and the nature of philosophical importance [... and] concerning the necessity of, or willingness for, philosophical vulnerability of unguardedness, put it as the limits in saying why what you say is interesting (like explaining why what you have said is credible, or funny). Unguardedness here, accordingly, means that there is no defence of a philosophical teaching apart from continuing with it." Cavell, "The Division of Talent," 536.

56. Cavell, *Cities of Words: Pedagogical Reflections on a Register of the Moral Life* (Cambridge, MA: Harvard University Press, 2005), 15.

57. *Ibid.*, 15.

58. Cavell, *Little Did I Know*, 474.

astic news” to Berkeley concerning what Cavell describes elsewhere as a “methodical easing” of logical positivism.⁵⁹ Cavell characterises the revolutionary aspects of their work as “not unheeding” of logical positivism and its terms of criticism. In this sense the shift away from positivism is pictured in appropriately non-positivist terms since philosophical innovation here does not involve dispensing with the philosophical past (on the model of normal science).

The movement away from positivism, then, emerges in Cavell’s account as another instance of philosophy managing its continuity with itself, and this work of mediation involves another dimension of his resistance to giving the last word to incommensurability. In his intellectual history of the development of the human sciences at Harvard, Joel Isaac identifies the unhelpful grip on the intellectual-historical imagination of a broad-brush distinction between positivist and post-positivist philosophy. Such imprecision tends to withhold “a basis for discussion across the barricade,” whereas a more fruitful perspective would allow for “a middle ground of conflict, adjustment and conceptual change,” whereby “all exchanges between rival traditions need not be zero-sum games.”⁶⁰ Cavell tends to present the work of loosening positivism’s hold on the philosophical imagination in a way that preserves such a middle ground — or at least its idea.⁶¹ His work stages itself as a “quarrel” with positivist and subsequent modes of analytic philosophy, and therefore as at once a turning toward and a turning away.⁶² It might be felt of course that his oscillation between broad subject contours and personal inflections (“defining for the subject, for what I wish philosophy to do”), his aspiration to speak for philosophy as such, entails another sort of monolithic imagination. Those contours, however, provide discursive space sufficiently broad to encompass plural derivations of philosophical conviction, dialogue, and contestation.

Cavell’s purposive sketch of *Structure* in *The Claim of Reason* frames revolutionary science, or rather the revolutionary scientist, as motivated in a sense by continuity, which is to say by commitment to a broader idea of the science in question. On

59. *Ibid.*, 458.

60. Joel Isaac, *Working Knowledge: Making the Human Sciences from Parsons to Kuhn* (Cambridge, MA: Harvard University Press, 2012), 237.

61. More generally, Cavell’s philosophy stages itself, variously, as mediating between competing philosophical positions, different generations, and opposing political persuasions.

62. Cavell, “Existentialism and Analytic Philosophy,” 32.

this recounting, it is not so much that the fruitfulness of normal science withers and more that it stops seeming like science at all:

This is how, in my illiteracy, I read Thomas Kuhn's *The Structure of Scientific Revolutions*: that only a master of a science can accept a revolutionary change as a natural extension of that science; and that he accepts it, or proposes it, in order to maintain touch with the idea of that science, with its internal canons of comprehensibility and comprehensiveness, as if against the vision that, under altered circumstances, the normal progress of explanation and exception no longer seems to him to be science. And then what he does may not seem scientific to the old master.⁶³

The passage is conspicuous for the way that normal science, which *Structure* identifies as constitutively communal, is individualised in the figure of the "old master," with her ability to perceive or to effect revolutionary change as continuity. The contention that significant disciplinary change aims to preserve a subject's broader "idea" is hardly uncontroversial. Not least, the putative idea might be intramundane, a discursive notion not prior to revolutionary schools but more a story such schools might tell to make themselves feel at home. What I mean to emphasise here is that the preservativist impulse underwrites (perhaps more than it counterbalances) significant disciplinary radicalism. If disciplinary innovation is motivated by and responds to a sense of "the inner loss [that] threatens every discipline," this becomes radicalised and thematised in the case of philosophy, "the discipline whose very existence, and importance, are to be held at risk."⁶⁴

This essay has considered Cavell's work in the light of Kuhnian ideas that Cavell himself played a role in helping to develop. I have not meant to imply that Kuhnian contexts exhaust the significance of the strands of Cavell's work I have taken up, since these strands are densely interwoven with, for example, modernist predicaments and romantic themes. Education is a major topic of *Walden* and other romantic texts, for instance, because "the quest for one's own question, and for what it takes

63. Cavell, *The Claim of Reason*, 121.

64. Cavell, "Observations on Art and Science," *Daedalus* 115, no. 3 (1986): 174.

to pose it, are entered into together. One is not the preparation for the other, the madness and the method are the same. (There is no metaphilosophy.) I gather this is not true of science, even definitively not true.”⁶⁵ My argument is that Kuhnian ideas played a formative and structuring role in Cavell’s work. In highlighting reasons why Cavell’s philosophy is more aversive than paradigmatic, my purpose has not been to celebrate or circumscribe Cavell’s work as somehow uniquely singular, for two reasons. First, Kuhn provided a vocabulary of sorts within which Cavell articulated the costs and risks of philosophy taking place without as well as within a paradigm: the uncertainties as to voice and reach, the exposure resulting from the absence of a settled and preparatory curriculum.⁶⁶ Secondly, nothing in this essay is meant to deny the obvious fact that the influence of Cavell’s work has been remarkably plural and pervasive. One way of figuring this reception in the light of the foregoing analysis is that Cavell’s disinclination to settle within a paradigm, his contention that nothing goes without saying, provides at its most effective a sense of openness and an invitation.⁶⁷

65. Cavell, *Themes Out of School*, 201.

66. Cavell does not suppose that “the technical is the only way, or the chief way, or a sure way, in which philosophy may be lost,” nor that “the technical is the only, or the main, discourse within which one can imprison oneself, or perhaps comfort oneself.” Cavell, “Existentialism and Analytic Philosophy,” 200. My comments about exposure refer to Cavell’s methodological unguardedness and his occasional asides about the cost of “conducting my continuing education in public.” Cavell, *In Quest of the Ordinary: Lines of Skepticism and Romanticism* (Chicago, IL: The Chicago University Press, 1988), x.

67. This essay is dedicated to the memory of Professor Richard King, who encouraged my interest in Cavell. I would also like to thank Rachel Malkin and my co-editor, Brad Tabas, for their perceptive comments on earlier drafts of this essay.

5. From Automatism to Autonomy

RUOCHEN BO

Introduction

When we refer to something as automatic in ordinary language, we tend to speak of it as unconscious and working by itself — machinic, repetitive, needing no intervention or control from others to move along its natural course. If a process is automatic, we regularly assume that it happens independently of the human will. What is automated, in other words, will go on until non-human physical constraints prevent it from further labor, such as when the battery is dead in the robot or when the electricity goes out as the washing machine is running its usual course, or when one of its parts is worn out and needs repair. But if the machine “decides” that it is too tired or having a moody afternoon and wants to stop working mid-way through a task, we can’t help feeling very alarmed.¹ Usually, we see automatism as precluding autonomy. Its automatic nature seems to suggest that it is, or ought to be, heteronomous in the sense that its course of action remains the same until it is told otherwise, e.g., when someone else turns the switch on or off. The contrast between the two statuses is prevalent in philosophical discourses as well, notably Descartes’ thought experiment that an automaton designed to look like an animal would be hard to distinguish from the real thing, but a machine that imitates humans would be far easier to detect, due to the latter’s language and general reasoning abilities, which reflect the fact that it is guided by immaterial mind.² But, given the etymology of the two words, we can see that both notions are more intertwined than conventional overtones reveal. Autonomy, coming from *autonomos* — the Greek roots *auto* meaning “self” and *nomos*

1. Google recently fired its engineer for contending its AI chatbot LaMDA for being sentient. See for example: Ramishah Maruf, CNN, last updated July 25, 2022, <https://www.cnn.com/2022/07/23/business/google-ai-engineer-fired-sentient/index.html>.

2. René Descartes, *Discourse on the Method and Meditations on First Philosophy* (New Haven, CT: Yale University Press, 1996), Part V.

meaning “custom” or “law” — indicates self-ruling. While automatism, coming from *automaton* and *automatos*, denotes self-acting.³ Given that the realm of the self seems to be the key site shared by both notions, we may wonder whether the two ideas as separate and irreconcilable as common sense would have it.

This paper rethinks the relationship between autonomy and automatism through close readings of Thomas Kuhn’s theories regarding scientific structure and Stanley Cavell’s writings on cinematic ontology. I argue that for both Cavell and Kuhn, in contrast to the ordinary understanding of these two concepts, envision a path from automatism to autonomy. Unpacking this enigmatic path will enrich our understanding of not only both concepts on their own, but also the nature of perception in scientific, cinematic, and ethical understanding. Given the two philosophers’ divergent primary concerns, taking their accounts together sheds light on a constellation of different aspects of both concepts. To this effect, in Part I of the paper I analyze how, on the surface, the autonomy of the “revolutionary” scientist can be read as antithetical to the heteronomy of “normal science,” but what Kuhn in fact demonstrates is the centrality of the automatic nature of normal science in paving the way for the work of autonomous revolutionary scientists. I further argue that even though the emphasis in Kuhn seems to be explicitly given to the autonomy of the scientific *subject*, his theory of the incommensurability of scientific paradigms hinges on an implicit claim in this account — the necessity of the autonomy of the scientific *object* in pushing for a paradigm change. Compared to Kuhn, Cavell’s discernment of the proximity of automatism — in cinematic apparatus and modernist art — with autonomy of the object is more explicit, though no less mysterious. It constitutes one of the three “impulses” of his in speaking of an artistic medium as an “automatism.” Part II of

3. This etymology seems to be at variance with its current usage — something which can only act when it is acted on, has no consciousness of its own, functions according to pre-coded and predetermined rules, and is at best a pale imitation of a free subject. The difficulty of drawing connections between automatism and autonomy nowadays is perhaps exacerbated by the negative connotation automatism possesses, being connected with the process of automation and Taylorism, rationalist efficiency and an extractive relationship to the world. The interconnection is further obscured by how automatism is usually associated with *techné*, whereas autonomy is usually thought of in the realm of politics and ethics. For instance, Kant — having rejected Mendelssohn’s appreciation of skillful activity as unconscious automatism, fearing that “it renders virtue mindless and unreflective” — limited the notion of autonomy to the domain of human consciousness or action. Melissa Merritt, “Mendelssohn and Kant on Virtue as a Skill,” in *The Routledge Handbook of Philosophy of Skill and Expertise* Routledge, ed. Ellen Fridland and Carlotta Pavese (London and New York: Routledge Handbooks Online, 2020), 88. For him, the notions of moral choice and freedom are rooted in reason and personhood, excluding automatic characteristics.

this paper unravels its inconspicuousness. Lastly, I will use a radically non-anthropocentric sequence from Robert Bresson's *Au Hasard Balthazar* (1967) to elaborate on the various automatisms involved — the automaticity of the film animals, the photographic automatism and the automatism of projection — and how they lead to seeing and acknowledging the autonomy of the object and the radical change in vision that is required to achieve that.⁴

Part I. Kuhn and *The Structure of Scientific Revolutions*

I.1 Normal Science vs. Extraordinary Science

As the title of Kuhn's book suggests, his project revolves around a reconceptualization of the nature and structure of scientific revolutions away from a facile understanding of it as straight-forward, cumulative, and progressive practice.⁵ He coins the terms "normal science" and "extraordinary/revolutionary science" to distinguish two different realms of scientific practices. The former denotes "the sort of practice in which all scientists are mostly, and most scientists are always, engaged."⁶ In a mature community of science, the participants agree on and are committed to a certain set of fundamentals acquired from regular scientific education and the practices that were passed down to them in their professional training. In normal science, there exists "a strong network of commitments — conceptual, theoretical, instrumental, and methodological" — which delineate the scope of scientific examination, arbitrate the legitimacy of certain research problems, and provide the rules for conducting experiments and measurements most appropriate to the goal of further articulating existing theories.⁷

4. The inclusion of the animal here is a gesture toward broadening Cavell's theory of acknowledgement to include the animals but that will not be the main focus of this paper because of different priorities and the limited scope and space. For literature on this topic, see Michael Uhall, "Creaturely Conditions: Acknowledgment and Animality in Kafka, Cavell, and Uexküll." *Configurations* 24, no. 1 (2016): 1-24; Cavell, Cora Diamond, John McDowell, Ian Hacking, and Cary Wolfe. *Philosophy and Animal Life* (New York: Columbia University Press, 2008); and Cary Wolfe and W. J. T. Mitchell, *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory* (Chicago, IL: The University of Chicago Press, 2003).

5. Kuhn, *The Structure of Scientific Revolutions: 50th Anniversary Edition* (Chicago, IL: The University of Chicago Press, 2012). Or *SSR*.

6. Kuhn, "The Historical Structure of Scientific Discovery," in *The Essential Tension: Selected Studies in Scientific Tradition and Change* (Chicago, IL: The University of Chicago Press, 1977), 177.

7. Kuhn, *The Structure of Scientific Revolutions*, 42.

On the other hand, “extraordinary science” refers to significant moments such as the Copernican revolution, Lavoisier’s “discovery” of oxygen or Einstein’s theory of relativity.⁸ These moments designate transitions from an older paradigm in crisis towards a new one, and the process is “far from a cumulative process, one achieved by an articulation or extension of the old paradigm. Rather it involves a reconstruction of the field from new fundamentals, a reconstruction that changes some of the field’s most elementary theoretical generalizations as well as many of its paradigm methods and applications.”⁹ The fact that the emergence of Newtonian physics and of relativity and quantum mechanics both were preceded and accompanied by *philosophical* analyses of the fundamentals of scientific research methods or goals buttresses this observation. From this judgment of how scientific changes are non-continuous, it seems natural to perceive normal and extraordinary science as separate and drastically different dualities. The former is associated with the enterprise of “individually heteronomous activity,” since it follows and obeys existing paradigms instead of intending to bring out new paradigms; the latter paints the image of scientists acting autonomously.¹⁰

Kuhn’s descriptions of the scientists participating in extraordinary research reflects self-determination. “He will *push* the rules of normal science harder than ever to see, in the area of difficulty, just where and how far they can be made to work. Simultaneously he will *seek* for ways of magnifying the breakdown, of making it more striking and perhaps also more suggestive than it had been when displayed in experiments the outcome of which was thought to be known in advance.”¹¹ The active verbs used here, which highlight the agency and creativity of the individual scientist, serve as a clear contrast to the descriptions of normal science as essentially akin to “puzzle-solving,” a highly determined activity. By emphasizing the fact that “there must also be rules that limit both the nature of acceptable solutions and the steps by which they are to be obtained,” normal science, in comparison, can be understood as

8. Of course, the term and the stage need not only refer to world-changing or ground-breaking moments in the history of scientific development, but could also refer to “somewhat smaller, because more exclusively professional” (*SSR*, 67) changes in paradigm. The scare quotes are used in the spirit of Kuhn’s analysis of the complex nature of the discovery of oxygen, or *seeing* the element as oxygen, instead of dephlogisticated air.

9. Kuhn, *The Structure of Scientific Revolutions*, 85.

10. Jeremy T. Burman, “On Kuhn’s Case, and Piaget’s: A Critical Two-Sited Hauntology (or, on Impact without Reference),” *History of the Human Sciences* 33, nos. 3-4 (2020): 142.

11. Kuhn, *The Structure of Scientific Revolutions*, 87 (emphasis added).

intrinsically dependent on external and established preconceptions, rules and standards.¹² However, this conventional and schematic understanding of the duality masks an important connection between the two as they are embedded in Kuhn's account. In a recent study analyzing the structure of normal science, William Goodwin rightly contends: "Representing science with one vanishing point — be it normal science or extraordinary science — obscures the details necessary to appreciate its distinctive developmental pattern."¹³ An exclusive focus on normal science leads to the mistaken understanding of science as cumulative; whereas when undivided attention is given to extraordinary science/scientists, "the sort of rigid reasoning required by the normal mode" is neglected.¹⁴ Building on this sentiment, a closer look at Kuhn's descriptions of normal science could lead us to see it as providing *a necessary though insufficient condition* for the revolutionary moment.

I.2 Normal Science Leading to Extraordinary Science

When explaining the nature of normal science, Kuhn consistently emphasizes how normal science remains instrumental to revolutionary science, but this is easily overlooked given the exciting and seemingly completely autonomous traits extraordinary science exhibits. The importance of normal science is rooted in the indispensability, or in Kuhn's words, the "priority," of the paradigm: "To reject one paradigm without simultaneously substituting another is to reject science itself."¹⁵ The three types of work in which the normal scientist can be engaged include "(i) fact gathering, (ii) enhancing the contact between theoretical approach and the world, and (iii) articulation of the approach," all together contribute to "the scope and precision with which a paradigm can be applied."¹⁶ Existing paradigms in scientific communities — the consolidation and further articulation of which is the primary task of normal science — serve as a constitutive vehicle for scientific theory building by providing scientists not only with a map regarding the entities that can be observed in nature, or how these entities behave, "but also with some of the directions essential for map-making," viz.

12. Ibid., 38.

13. William Goodwin, "Mop-Up Work," in *Interpreting Kuhn: Critical Essays*, (New York: Cambridge University Press, 2021), 103.

14. Ibid., 86.

15. Kuhn, *The Structure of Scientific Revolutions*, 79.

16. Goodwin, "Mop-up Work," 93. Kuhn, *The Structure of Scientific Revolutions*, 36.

the theory, methods and standards through which these entities are determined and further examined.¹⁷

The professionalization of the scientific community through its unquestionable adoption of certain paradigms, naturally leads to the rigid restriction of scientific vision as well as a resistance to paradigm changes. But that is not the whole story. Given how the paradigm directs the attention and focus of scientific practices, normal science “leads to a detail of information and to a precision of the observation-theory match that could be achieved in no other way.”¹⁸ The refinement of observational techniques, the development of a special apparatus that caters to more nuanced and sophisticated experiments and observations, and the cumulation of useful data are all indispensable in creating the conditions for profound and far-reaching discoveries. This is why “pre-paradigm periods” feature numerous competing schools of thought, but since every school must carry out experiments and theoretical thinking from ground up for the lack of paradigmatic rules, the research accomplished remains rudimentary. In Kuhn’s words, “And even when the apparatus exists, novelty ordinarily emerges only for the man who, knowing *with precision* what he should expect, is able to recognize that something has gone wrong. Anomaly appears only against the background provided by the paradigm. The more precise and far-reaching that paradigm is, the more sensitive an indicator it provides of anomaly and hence of an occasion for paradigm change.”¹⁹ Contrary to prevailing understandings of scientific endeavor, it is important to note that even the revolutionary scientist is not “inventing” anything *ex nihilo*. The emergence or perception of an anomaly or novelty in science requires a precise vision. These are constituted by both the field’s existing establishment and advancement in its scientific observation and method, as well as via the data it provides. Significantly, these pre-established structures and the ocean of documented information serve as a necessary backdrop for the anomaly to show itself as something *different*, demanding attention and possibly new rules. The automatic continuation of the theories, rules, or the paradigm, therefore, provides an indispensable condition, which potentially paves the way for the autonomous scientists to perform their tasks.

17. *Ibid.*, 109.

18. *Ibid.*, 64-65.

19. *Ibid.*, 65 (emphasis in original).

The path from automatism to autonomy is also embedded in another aspect of the priority of the paradigm, exemplified by Kuhn's theory of perception. Going against what he deemed a long tradition of Western scientific and epistemological assumptions regarding the separation of the neutral and objective brute facts from interpretations of the facts, Kuhn sees "a world already perceptually and conceptually subdivided in a certain way."²⁰ Building on N. R. Hanson's thesis that all observations are theory-laden, Kuhn insists (in his early writings) that there is no fixed or neutral sensory experience.²¹ A paradigm and the theories implied in it are prerequisite to perception itself, which means that a "strong form" of observational incommensurability exists when there is a shift of paradigm.²² William Devlin defines the strong form as holding "that observation is a cognitive achievement as background beliefs influence the process of observation; that is, they influence background beliefs so strongly that it determines our perception that something is, or is not, the case."²³ Looking at a swinging stone, an Aristotelian *sees* a constrained fall while Galileo *sees* the motion of a pendulum; it is *not* that they perceive the same rope with a weighted entity at the end going through a specific trajectory, and then give different *interpre-*

20. Kuhn, *The Structure of Scientific Revolutions*, 129.

21. Quoted in Kuhn, *The Structure of Scientific Revolutions*, 113; Norwood Russell Hanson, *Patterns of Discovery* (Cambridge: Cambridge University Press, 1958).

22. This strong form of incommensurability, I believe, is central to Kuhn's earlier writings, especially *The Structure*, which is the main text that my analysis here builds on. It may seem to contradict Kuhn's later writings. For instance, he discusses "natural kinds" in the following way: "To say that members of natural kinds are given is to say that their properties can be established by direct observation, independent of beliefs or theories about the causes of those properties and independent also of personal or social interest in their determination [...] two people confronting the same creature or material can always — supposing they have normal sensory apparatus and speak the same language — reach agreement about its observational properties." Kuhn and Bojana Mladenović, *The Last Writings of Thomas S. Kuhn: Incommensurability in Science* (Chicago, IL: The University of Chicago Press, 2022), 236-237. However, the "contradiction" is nuanced if we consider the fact that the primary examples used in *SSR* — the physical phenomena observed such as the swinging stone — do not fall neatly into the category of "natural kind" and are more complex. Furthermore, Kuhn's immediate qualification of his own description is telling: "Which properties are in fact observed and how closely the results of observation are subjected to critical scrutiny will, of course, be deeply influenced by interest and belief, and these are correspondingly important determinants of the rate and direction of cognitive development." *Ibid.*, 236. The sentiment conveyed here is much closer to that of in his earlier writings. It seems that Kuhn's later writings take a pragmatic turn to focus on the solidarity of a language/culture community and how generalizations about certain properties ought to be agreed upon. Whereas in the earlier writings, the importance (and the productive shock) in encountering a different (or historical) scientific system and culture is more prominent. The "strong form" of observational incommensurability in *SSR* compels one to examine the prejudices or beliefs in one's own time and to take seriously the claim that historical sciences and cultures, e.g., Ancient Greek science and their way of life, could have something to teach us moderns.

23. William J. Devlin, "Kuhn and the Varieties of Incommensurability," in *Interpreting Kuhn: Critical Essays*, ed. K. Brad Wray (Cambridge and New York: Cambridge University Press, 2021), 108.

tations, which will be the weak form of the observational incommensurability.²⁴ The context of background theories and beliefs condition *how* we see things and *what* we see. Therefore, for perception to be possible in the first place, the “automatic” process of being in the world and acquiring experience in a paradigm-dependent world is decisive. Similar in spirit to Hans Georg Gadamer’s view of prejudice as central to his hermeneutics, both function as a set of tacit beliefs, assumptions or fore-judgements that are required to make a claim of knowledge.²⁵ Prejudice-free knowledge or paradigm-free observation is neither desirable nor possible.

In both instances analyzed above — the dependence of the revolutionary scientist on normal science in perceiving scientific anomalies and the reliance on established theories and beliefs in general perception — we see that automatism does not preclude the possibility of autonomy, but in fact plays a crucial role in preparing for something that is more autonomous to come along. But for obvious reasons the two cannot be simply equated and the activity of mere rule-following alone is certainly not going to lead to revolutionary changes. People around Galileo’s time, unlike Galileo, didn’t naturally perceive “pendulums” instead of stones. What, then, is the missing link or the ultimate driving force?

1.3 Kuhn’s Insight on Perception

If we look carefully at Kuhn’s description of the paradigm’s indispensability to perception itself, subtle clues emerge. “What a man sees depends both upon what he looks at and also upon what his previous visual-conceptual experience has taught him to see. In the absence of such training there can only be, in William James’s phrase, “a bloomin’ buzzin’ confusion.”²⁶ In establishing the autonomy of the scientific *subject*, Kuhn points to a compound condition. The relationship between the two necessary parts deserves further scrutiny. The very possibility of paradigm change suggests that the scientific object and the paradigm that seeks to define, describe, and explain it are in dynamic tension.

24. Certain slippages of the term’s (incommensurability) use might exist in Kuhn, See for instance Nelson W. Polsby’s analysis, “Social Science and Scientific Change: A Note on Thomas S. Kuhn’s Contribution,” *Annual Review of Political Science* 1, no. 1 (1998): 204.

25. Hans-Georg Gadamer, *Truth and Method*, 2nd revised ed. (New York: Continuum, 2004), Part II, 272.

26. Kuhn, *The Structure of Scientific Revolutions*, 113.

Importantly, any single paradigm must be open-ended and cannot possibly exhaust all facets of nature that it seeks to categorize and rationalize. The scientist will inevitably run into resistance when she tries to exhaust all possible implications of the paradigm against nature. This feeds into the evolutionary view of scientific development that Kuhn outlines, which means that “the sciences are bound to diversify, not unify; to become more fragmented, and not more integrated.”²⁷ Furthermore, the tension demonstrates the inadequacy of any paradigm; its inevitability encapsulates an important condition often overshadowed by the autonomy of the creative scientist — the autonomy of the scientific *object*.

If nature were completely malleable to and could be exhausted by scientists’ theories, then there would be no need for radical rejection of the well-used, well-recognized paradigms. The fact that from time to time, parts of nature seem unruly and resistant to established theory or arbitrary revision shows the impossibility of its complete heteronomy. The psychological and practical difficulties a scientist goes through during periods of crisis while recognizing the need for new theories suggests a breakdown between the existing paradigm and the nature that it seeks to describe — the process may be inconvenient, costly or despair-eliciting.²⁸ The push for change must come from a necessity, when the scientific and scholarly conscience can no longer appease the discrepancy between the existing theoretical account and the external events through accounts of margins of error or accident. Adjustments must be made; new vision and action are called for. In other words, positing meaningful incommensurability between different paradigms implies that theories cannot be purely constructed subjectively or willy-nilly; they must correspond to real-existing entities even though the latter elude full articulation through propositions or language. The way that a scientific object exerts its existence is at times mysterious, subtle, and amorphous, but always real.

27. Jouni-Matti Kuukkanen, “Truth, Incoherence, and the Evolution of Science,” in *Interpreting Kuhn: Critical Essays*, ed. K. Brad Wray (Cambridge and New York: Cambridge University Press, 2021), 202.

28. See for instance: “Wolfgang Pauli, in the months before Heisenberg’s paper on matrix mechanics [...] wrote to a friend, ‘At the moment physics is again terribly confused. In any case, it is too difficult for me and I wish I had been a movie comedian or something of the sort and had never heard of physics.’” Quoted in *SSR*, 84.

I.4 Incommensurability's Implication

In Ruth Ronen's realist interpretation of Kuhn's notion of incommensurability between theories, she insists that "When one remains on the level of signifiers, incommensurability is in fact just a difference in meaning and can always be translated away. Incommensurability emerges when one acknowledges the representational aims of a language."²⁹ For incommensurability to be real and substantial, it is necessary to move beyond the realm of mere signifiers. The signifier must butt heads with the signified — the autonomy of the object, or the thing "out there," is palpable and fundamental in pushing for paradigm change. Therefore, the autonomous act of perception in the scientific subject is, on the one hand, *dependent* on the automatic immersion in the paradigm, and on the other, *inseparable* from the autonomy of the scientific object — the pendulum, in some sense, exerts itself as different from a swinging stone. However, recognizing and acknowledging the scientific object's claim on us is no easy task; becoming aware of anomalies is difficult given both the highly determining character of traditional or established practices and the inaccessibility of nature as it is. Kuhn's post-Darwinian Kantianism, made more explicit in his later writings, concedes a realm "like Kant's *Ding an sich* [...] ineffable, undescribable, undiscussable."³⁰ How, then, does one come to see glimpses of the object's autonomy, or hear its silent murmurs?

As Kuhn highlights, the transition from the paradigm in crisis to a new one is not continuous in nature. It is emphatically not the case that scientists simply build on or modify the existing paradigmatic descriptions of nature. Nor do they just offer different *readings* of the same observed facts. "No ordinary sense of the term 'interpretation' fits these flashes of intuition through which a new paradigm is born."³¹ Like a revelation, the change is akin to a gestalt switch — it takes a specific kind of vision and viewing something as specifically different. We must take Kuhn seriously when he hesitates to liken gestalt switch completely with the recognition of anomaly and crisis or seeing under a different paradigm.³² Not only does the metaphor of a gestalt switch fail to do justice to the idea that the scientist does not see something *as something*, but simply

29. Ruth Ronen, "Incommensurability and Representation," *Applied Semiotics* 2, no. 5 (1998): 183.

30. Kuhn, "The Road since Structure," in *The Road since Structure: Philosophical Essays, 1970–1993, with an Autobiographical Interview*, 2nd ed., ed. James Conant and John Haugeland (Chicago, IL: The Chicago University Press, 2000), 104.

31. Kuhn, *The Structure of Scientific Revolutions*, 122.

32. "That parallel can be misleading." *Ibid.*, 85.

sees it, or to the fact that the scientists do not have a choice or freedom in choosing which object they are seeing (duck or rabbit); importantly, I believe, the metaphor does not make explicit the autonomy of the object that is crucial in setting scientists up to achieve a new perception.³³ It is not entirely up to us, whether we are students of nature or masters of the scientific discipline, to dictate laws or regulate ways of action for the object. What needs to be highlighted is the sense of agency or dignity in the object; the fact of its separation and independence from us remains to be emphasized.

Meanwhile, a different but related account, also sensitive to the interconnections between automatism and autonomy, could help us see more clearly how the acknowledgment of the autonomous object — though “ineffable, undescribable, undiscussable” — is arrived at. When discussing the “impulses” for his speaking of an artistic medium as an “automatism” in *The World Viewed*, Stanley Cavell mentions that the effort of this thinking is “to free the object from me, to give new ground for its *autonomy*.”³⁴ What kinds of automatism is he referring to? The autonomy of which objects? And how is this achieved? I now turn to Cavell’s reflections on automatism in art and more specifically, film, to see how this might ultimately help us better understand the path from automatism to autonomy and find an alternative visual example to the gestalt switch for describing the revolutionary process of seeing and acknowledging difference.

Part II. Cavell and *The World Viewed*

II.1 Automatism: A Brief Overview

Cavell’s use of the term automatism, in Sean Keller’s words, “is complicated, perhaps irredeemably so, encompassing within it the mechanical automation of the motion-picture camera, the material techniques of painting and music, and the working methods of artists generally.”³⁵ To this list we might also add: “a way of situating novel instances, thereby allowing them to be viewed as seemingly ‘happening on their own,’” a way of re-conceptualizing the notion of medium, the style and genres, the

33. Ibid.

34. Cavell, *The World Viewed: Reflections on the Ontology of Film*, enlarged ed. (Cambridge, MA: Harvard University Press, 1979), 108.

35. Sean Keller, *Automatic Architecture: Motivating Form after Modernism* (Chicago, IL: The University of Chicago Press, 2018), 151.

works of art themselves, and possibly, the objects that the artworks and artists seek to represent or express.³⁶

Cavell borrows the term “from surrealism and deploys [it] in new senses,” and his other two impulses for speaking of automatism at the end of the titular chapter (ch.14) give us a glimpse of the complexity and breadth of the use.³⁷ The first intuition of automatism is that the medium is self-generating — once discovered, it compels new instances of this medium. In other words, the medium can be understood as automatism because the work, independent of the artist’s will or presence, continues to effect other instances, even though, in some sense, it will always be the same instance. The medium of painting, drama, or film, for instance, serves as an ever-replenishing source of inspiration that pushes contemporary and future artists to continually experiment with its existing and potential forms — in painting there could be works in the style of Leonardo da Vinci but also those of Jackson Pollock. The second impulse “codes the experience of the work of art as ‘happening of itself.’”³⁸ Similar in spirit to Gadamer’s description of a genuine poem and its autonomy, the work “does not stand before us as a thing that someone employs to tell us something. It stands there equally independent of both reader and poet.”³⁹

Despite the richness in the variety of its use, there are two major senses of automatism that *The World Viewed* delineates. First, there is the peculiar mode of artistic representation in cinema, different but in continuation with photographic automatism. What we conventionally refer to, when speaking of photographic automatism, is the mechanical manner in which an image of the world, or reality, is being reproduced. This is also what Cavell’s use of automatism starts with in *The World Viewed*.⁴⁰ In line with André Bazin’s ontology of film, Cavell points out the significance in photography’s possibility of overcoming human interference: “Photography overcame subjectivity in a way undreamed of by painting [...] by *automatism*, by removing the human agent from the task of reproduction.”⁴¹ The automa-

36. Martin Shuster “The Ordinariness and Absence of the World: Cavell’s Ontology of the Screen — Reading *The World Viewed*,” *MLN* 130, no. 5 (2015): 1085.

37. Keller, *Automatic Architecture*, 151.

38. Cavell, *The World Viewed*, 107.

39. Gadamer, “On the Contribution of Poetry to the Search for Truth,” in *The Relevance of the Beautiful and Other Essays* (Cambridge: Cambridge University Press, 1986), 107.

40. The concept is covered in Cavell, *The World Viewed*, ch. 2, 4, 11, and 14.

41. Cavell, *The World Viewed*, 23.

tism exercised in photography is inherited and incorporated into film.⁴² For the sake of clarity, let's refer to the first kind as "cinematic automatism," and the second kind "general automatism," which is formal and possibly subtends to every instance of art.⁴³

"General automatism," related to the first but different because of film's specificity as a medium, is a broadened use of the concept to apply to artistic media in general, but especially modernist art.⁴⁴ The second kind of automatism induces from the medium what Cavell refers to as "presentness." The aesthetic achievement of modernist art lies in the creation of not just new works, but new media, as if, in R.M. Berry's words, "the meaning of painting or theatre *as such* were happening here and now."⁴⁵ Modernist art emphatically discovers the powers and constraints that its medium offers, which were given as if automatically.

II.2 Convention, Automatism and Modernist Art

Immediately following the exposition of these "intuitions" in *The World Viewed* is a chapter titled "Excursus: Some Modernist Painting." This chapter, though in no way explicitly related to the ontology of film, nonetheless provides a crucial commentary and supplementary understanding to the mysterious impulses the previous chapter ends with. Harking back to Cavell's reflections on aesthetic modernism and modernist literariness in his earlier essays such as "Music Discomposed," "A Matter of Meaning It," and "A Reading of Beckett's *Endgame*," this chapter is central to analyzing modernist aesthetic media at large. Specifically, tending to this chapter carefully has implications for our conception of convention and nature, the discussion of which in *The Claim of Reason* brings in Kuhn as an explicit interlocuter.⁴⁶

42. Siegfried Kracauer, *Theory of Film: The Redemption of Physical Reality* (Princeton, NJ: Princeton University Press, 1997), 28. When discussing film's properties, Kracauer claims that "[t]he basic properties are identical with the properties of photography. Film, in other words, is uniquely equipped to record and reveal physical reality and, thence, gravitates toward it."

43. Lisa Trahair prioritizes cinema's "primary automatism," therefore names general automatism as "secondary automatism" which "while ontically distinct are ontologically the same as the automatism of other arts." See Trahair, "Serious Film: Cavell, Automatism and Michael Haneke's *Caché*," *Screening the Past* 38 (2013), <http://www.screeningthepast.com/issue-38-cinematic-thinking/serious-film-cavell-automatism-and-michael-haneke%E2%80%99s-cache/>.

44. Cavell, *The World Viewed*, ch.14 "Automatism" and ch.15 "Excursus."

45. R. M. Berry, "Stanley Cavell's Modernism," in *Stanley Cavell: Philosophy, Literature, Criticism*, ed. James Loxley (Manchester: Manchester University Press, 2012), 41.

46. This will be explicated in more detail below. Cavell, *The Claim of Reason: Wittgenstein, Skepticism, Morality, and Tragedy*. (Oxford and New York: Oxford University Press, 1979), see ch. 5 "Natural and Conventional."

Consider the work of Jackson Pollock. Similar to scientific revolutions such as Lavoisier's "discovery" of oxygen, Pollock's revolutionary contribution to painting is not cumulative — not simply another instance of the same kind of painting as before, but a total rethinking of the medium. Gombrich describes Pollock as effectuating the triumph of modernism writing:

Becoming impatient of conventional methods, he put his canvas on the floor and dripped, poured or threw his paint to form surprising configurations [...]. The resulting tangle of lines satisfies two opposing standards of twentieth-century art: the longing for childlike simplicity and spontaneity [...] and [...] the sophisticated interest in the problems of "pure painting."⁴⁷

With a work like *One*, its sheer size, the spontaneous outburst and apparent lack of premeditation all suggest a radical response to tradition and a new vision of the material of paint and canvas. His practice, or creation, is not a re-interpretation of the established rules or facts; instead, in Cavell's analysis, "the mode is revelation."⁴⁸ The revelation brought forth is closely connected to acknowledgment in the sense that responding to modernist art requires the form of accepting or rejecting it as painting.

In pointing out the inadequacy of calling Pollock's work "action painting," Cavell speaks to Pollock's "discovery" or "automatism." What he finds remarkable is Pollock's discovery of a fact of painting — its "total thereness" — that fact that it is "wholly open to you, absolutely in front of your senses, of your eyes, as no other form of art is."⁴⁹ The dripped dots and lines, like Beckett's words in his dramas, "strew obscurities across our path and seem willfully to thwart comprehension; and then time after time we discover that their meaning has been missed only because it was so utterly bare — totally, therefore unnoticeably, in view."⁵⁰ Missing the meaning that was right there, or has been there all along due to willful ignorance or insatiable demand for other meaning, shows us that it is *we* who had been recalci-

47. E. H. Gombrich, *The Story of Art*, 6th ed. revised, expanded and redesigned (London and New York: Phaidon Press, 1995), 602-4.

48. Cavell, *The World Viewed*, 109.

49. Ibid.

50. Cavell, *Must We Mean What We Say?: A Book of Essays*, updated ed. (Cambridge and New York: Cambridge University Press, 2002), 111.

trant, blind and uncomprehending. Acknowledging the condition of painting, or modernist literariness, as “total thereness,” “presentness,” or “hidden literality” is, for Cavell, also to accept *our* presentness to it and its world. In the process of discovering this automatism, something entirely new of the medium itself *and* its relationship to the world is revealed to the artist. The revolutionary transformation that the artists have brought to the field, or to the medium they work with, makes it *seem* like their break with the discipline is so radical that it departs completely from the past, or that their works have single-handedly created a world that was non-existent before. But just like how normal science provides the methods and standards and the scope of the questions to be asked for science to function, there are, in art as well, explicit and implicit rules governing artistic genres and conventions that artists necessarily abide by or rebel against. In Keller’s words, “It is crucial that with an automatism the artist establishes a form of practice that, to some extent, *proceeds on its own, independently of the artist*, that the artist creates a process in which he or she is then caught up.”⁵¹ Indeed, there are constitutional similarities in how autonomous artists’ or scientists’ revolutionary endeavors depend on the automaticity in the established rules and paradigm.

By describing the task of the modern artist — “creating not a new instance of his art but a new medium in it” — as “the task of establishing a new automatism,” Cavell does not mean that the artistic products will be automatically assured excellence, but that “in mastering a tradition one masters a range of automatisms upon which the tradition maintains itself, and in deploying them one’s work is assured of a place in that tradition.”⁵² The sense of “mastering” here is nuanced. Instead of being understood as domineering, what is required of the artist, in terms of mastery, is that one must *pay attention to* and *give respect* not only the medium’s tradition and history, the circumstances or rules that make the medium possible and sustainable, but also the idea of the medium itself — its inherent conditions and possibilities.

The ambiguity in “mastering” and its paradoxical proximity to “succumbing” becomes even more poignant when Cavell discusses the intimate relationship between nature and convention in *The Claim of Reason*. Building on Wittgenstein’s

51. Keller, *Automatic Architecture*, 152 (emphasis added).

52. Cavell, *The World Viewed*, 104.

notion of culture, which “does not fight against nature but brings it into being,” Cavell establishes that nature, or quasi-nature, is acquired in the process of socialization.⁵³ That is to say, in contrast to Freudian insistence on the innate drives of sexuality and aggression which meet, resist, get incorporated into or altered by civilization, Cavell reads Wittgenstein as emphasizing the priority of forms of life, such as human speech, values, and cultural practices, in rendering nature visible, and in responding to its claims. The simple bifurcation of nature and culture is no longer viable, which requires higher attentiveness to each of them *and* their interrelatedness. Perhaps one does not necessarily stand opposed to the other: conventionality is not something that human beings decide upon *completely* arbitrarily or deliberately, but in its immediacy derives from nature’s demands. In Cavell’s words, “Only masters of a game, perfect slaves to that project, are in a position to establish conventions which better serve its essence.”⁵⁴ In this light, we see that if mastering denotes an autonomous action, its subjugation to external rules and circumstances is in fact indispensable. The master-as-slave persona is the one that Cavell deems the person who brings about deep revolutionary changes—be it in philosophy, art or science. It is in this context that Cavell gives a reading of Kuhn’s *The Structure of Scientific Revolutions*:

that only a master of the science can accept a revolutionary change as a natural extension of that science; and that he accepts it, or proposes it, in order to maintain touch with the idea of that science, with its internal canons of comprehensibility and comprehensiveness, as if against the vision that, under altered circumstances, the normal progress of explanation and exception no longer seem to him to be science.⁵⁵

What we can learn from these revolutionary moments, on Cavell’s account, seems to be two-fold. First, conventions, rules or established and agreed-upon criteria are vital for the possibility of expanding or changing them. Cavell elaborates that if the task of

53. Ursula Göricke, “Custom Is Our Nature: Cavell and Wittgenstein versus Freud,” in *From Virgin Land to Disney World: Nature and Its Discontents in the USA of Yesterday and Today*, ed. Bernd Herzogenrath (Leiden: Brill, 2001), 71.

54. Cavell, *The Claim of Reason*, 121.

55. *Ibid.*

the modernist artist is to show that we have no *a priori* knowledge regarding what counts as an instance of their art, then this task, “or fate, would be incomprehensible, or unexercisable, apart from the existence of objects which, prior to any new effort, we do count as such instances as a matter of course; apart from there being conditions which our criteria take to define such objects.”⁵⁶ “A matter of course” suggests the habitual and automatic nature of our dependence on the established conventions, thereby rendering them requisite for any ground-breaking changes.

Second, revolutions come about because these thinkers, artists and scientists have a devotion to the idea of that discipline and wanted to guard it from lapsing into falseness, insincerity, or indolence. Importantly for Cavell, that idea, or ideal, is not limited to the discipline *per se*; it must have similar bearings on the self, the world, or the relation between the two.⁵⁷ Even though Cavell starts by referring to the autonomy of the *art object* in the “Excursus” — be it in the sense that the work is completed, “done, given over, the object declared separate from its maker, autonomous,” or the sense that it is the canvas and paint and idea realizing itself (such as in Pollock or Louis’s *Unfurleds*) — he eventually arrives at autonomy in a different dimension, the autonomy of nature:⁵⁸

But to speak of an automatism which admits a sometimes overpowering beauty is a way of characterizing nature. The works of Pollock, Louis, Noland, and Olitski achieve in unforeseen paths an old wish of romanticism—to imitate not the *look* of nature, but its conditions, the possibilities of knowing nature at all and of locating ourselves in a world...For the work of the modernists I have in mind, the conditions present themselves as nature’s autonomy, self-sufficiency, laws unto themselves.⁵⁹

56. Similar comments can be found in Cavell, “A Matter of Meaning It,” in *Must We Mean What We Say*, 219, and *The World Viewed*, 106, where the modernist painting proves to us that “we do not know a priori what painting has to do or be faithful to in order to remain painting,” and that “what a painter or poet or composer has to achieve in his painting or poetry or music is not a landscape or sonnet or fugue, but the idea of his art as such.” Cavell, *The Claim of Reason*, 123.

57. See for instance Cavell’s claim in *The World Viewed*, 22: “Apart from the wish for selfhood (hence the always simultaneous granting of otherness as well), I do not understand the value of art. Apart from this wish and its achievement, art is exhibition.”

58. Cavell, *The World Viewed*, 111.

59. *Ibid.*, 113 (emphasis in original).

In inventing new automatisms, the modernists faced head-on the crisis of no longer knowing which forms worked or how to sustain the tradition in which they found themselves. For Cavell, the modernists' autonomous search for new criteria — so as to stay faithful to the *idea* of the art — does not necessitate a departure from Romantic metaphysics, despite the fact that Modernist artists and Romantic poets understand and express nature differently. Specifically, the modernists' art lets nature's autonomy shine forth — “not a return *to* nature but the return *of* it,” highlighting the reality and the weight of nature rather than that of us.⁶⁰ Paradoxically, through human art, the sense of nature can be perceived as what Keekok Lee formulates as the “ontological contrast to human artifacts.”⁶¹ We realize that nature's self-sustaining and self-generating quality constitutes its autonomy by being made co-present with nature.

How is this achieved? How does automatism in art give us “the release of nature from our private holds” and therefore the autonomy of the natural object?⁶² Examining Cavell's conception of cinematic automatism, which he discusses in detail, sheds light on this question. Numerous other important thinkers have devoted parts of their investigations of cinema to understand the power of automatism. However, as Lisa Trahair points out, Cavell, along with others — Benjamin, Bazin, Deleuze and Rancière — is “the one who most explicitly takes it [automatism] on and makes it the fulcrum on which his entire argument about the ontology of cinema pivots.”⁶³ What needs to be emphasized, but is often overlooked, is that within cinematic automatism, there are *two* separate yet connected automatisms — the automatism of photography and that of projection. These two substrates together constitute the material mechanism of *filmmaking* and *film-viewing*, and exercise automatism's power in cultivating a more sensitive vision that recognizes the object's autonomy.

II.3 Cinematic Automatism: Photography and Projection

The first form of automatism (of photography) within cinematic automatism is explicit and widely discussed. Bazinian realism, a starting point for Cavell, values the art

60. Ibid.

61. Keekok Lee, “Is Nature Autonomous?,” in *Recognizing the Autonomy of Nature: Theory and Practice*, ed. Thomas Heyd (New York: Columbia University Press, 2005), 59.

62. Cavell, *The World Viewed*, 114.

63. Trahair, “Being on the Outside: Cinematic Automatism in Stanley Cavell's *The World Viewed*,” *Film-Philosophy* 18, no. 1 (2014): 128.

of photography because of its automatic mechanism. Due to the absence of the intervening human hands in the reproductions of the world, the process of representation is rendered automatic. In indexically recording the pro-filmic world through a mechanical device in photographic images, this process promises a (seemingly) direct, faithful and unmediated recording of things and people in the world, the being of which is — as modern philosophy told us — “metaphysically beyond our reach.”⁶⁴

But the complexity of the automatism involved here is definitive for Cavell; it cannot be reduced to photographic realism: “The depth of the automatism of photography is to be read not alone in its mechanical production of an image of reality, but in its mechanical defeat of our presence to that reality.”⁶⁵ The sense of “defeat” can fully unravel only when we acknowledge the spectator’s view. The behind-the-camera position of the photographer, or the filmmaker, renders her both outside the pro-filmic reality but also in literal continuation with the same space. It is the audience who is truly denied that reality — a space-time continuum that is in the past. Much like the first-time theater goer in Jean-Luc Godard’s *Les Carabiniers* (1963), no matter how hard one tries to climb into the scene, the showering lady on the screen remains at a distance, screened from the viewer, resists being touched or possessed. Reality as presence is done, over, sealed, and projected.⁶⁶ The automatism associated with projection, an essential part of cinematic apparatus in addition to photographic mechanism, is subtle but crucial.

When Cavell says that “The material basis of the media of movies [...] is [...] a succession of automatic world projections,” his own elaboration on this ontological claim remains ambiguous.⁶⁷ Even though semantically, the adjective “automatic” could be applied to the noun “projection,” he seems to delimit the use of “automatic” to the conventional understanding of it in terms of photographic automatism: “Automatic’ emphasizes the mechanical fact of photography, in particular the absence of the human hand in forming these objects and the absence of its creatures in their

64. Cavell, *The World Viewed*, 102.

65. *Ibid.*, 25.

66. This has intimate connection with skepticism. In Shuster’s words: “In this way, film, in general terms, perfectly mimics the experience of philosophical skepticism: the viewer experiences herself sealed off from the world.” “The Ordinarity and Absence of the World,” 1077. Skepticism, or film’s overcoming of it, is a major concern to Cavell, but my discussion here, though related to it, is not centered on unpacking this notion.

67. Cavell, *The World Viewed*, 72 (emphasis in original).

screening.”⁶⁸ However, the quick, additional inclusion of the nature of *screening* belies a simmering thought that he doesn’t fully develop until later chapters (“Automatism” and “Excursus”). There is something exceptional in how cinema automatically *projects* the filmed world for us to view, while keeping us at a distance from it, and this specific automatism most resembles how Cavell conceptualizes automatism in modernist art. In order to see the connection, we have to appreciate the “magic” of film: “How do movies reproduce the world magically? Not by literally presenting us with the world, but by permitting us to view it *unseen*.”⁶⁹ The key concept of “unseen-ness,” mentioned here, is crucial to our understanding of the power of film’s automatism (in projection), and it is easily overlooked.⁷⁰

II.4 Unseen-ness and Invisibility

Our wish for invisibility has a long history, Cavell points out. The almighty invisible ring alone finds its recounts in Plato, Wagner, Tolkien, and others. What underlies this desire constitutes an ethical problem regarding justice — would we act justly even when we do not have to be held responsible for the consequences of our actions? If by chance we found a ring that could make us invisible, would we, like Gyges, immediately contrive to seduce the queen, slay the king, and take the kingdom?⁷¹ The desire for invisibility seems to take a different shape now in the modern age, as Cavell suggests: “this is not a wish for power over creation [...] but a wish not to need power, not to have to bear its burdens.”⁷² Our relationship with the world has taken on a more contemplative and theoretical stance, leading to inaction enveloped in anxiety. The voyeuristic activity in cinema speaks to our desire for privacy and anonymity. It is not that we want the power of invisibility to do

68. *Ibid.*, 73.

69. *Ibid.*, 40 (emphasis added).

70. Both Trahair’s main explication on Cavell’s four “meditations” of automatism and Shuster’s article offer helpful and excellent analyses of the concept, but they give the idea of “unseen” marginal attention, and both highlight the importance of “the world” instead of the fact, nature, and form of *projection* within cinema.

71. See Plato, *The Republic*, trans. Allan Bloom (New York: Basic Books, 1991), 38. Glaucon, in telling the story, intends to prove Socrates wrong, who insists that it is to our advantage to be just and disadvantage to be unjust, no matter what the circumstances are. But Glaucon makes the case that no one is just willingly, and once laws and conventions do not apply, or when fear of punishment is out of the question, people will go about and do wrong to others when it is of advantage to themselves. And if a man were to take hold of such a ring and “were never willing to do any injustice and didn’t lay his hands on what belongs to others, he would seem most wretched to those who were aware of it [...] and most foolish too.”

72. Cavell, *The World Viewed*, 40.

active injustice, but more so that we can “do nothing in the face of tragedy, or [...] laugh at the follies of others.”⁷³

As Cavell elaborates later in *WV*, “Our condition has become one in which our natural mode of perception is to view, feeling unseen. We do not so much look at the world as look *out* at it, from behind the self. It is our fantasies, now all but completely thwarted and out of hand, which are unseen and must be kept unseen. As if we could no longer hope that anyone might share them.”⁷⁴ The isolation of the self and the fear of the impossibility of interpersonal communication shape this new form of “feeling unseen.” Herein lies the crux of our desire for invisibility: to be invisible is not to be absent, but present and not *seen*. To be *unseen* assumes an *other*, to which/whom I appear and matter. It implies that there is always someone who *could* see me or might want to see me. And it goes reciprocally: wanting to be “unseen” is to deprive, or avoid, the possibility of this interaction, this impact. The desire to be invisible believes a desire not to bear responsibility, to avoid consequences or judgment. David Foster Wallace’s description of TV watching is kindred in its spirit:

For the television screen affords access only one-way. A psychic ball-check valve. We can see Them; They can’t see Us. We can relax, unobserved, as we ogle. I happen to believe this is why television also appeals so much to lonely people [...]. Lonely people tend, rather, to be lonely because they decline to bear the psychic costs of being around other humans.⁷⁵

The spectator’s distance from the projected world is similar to the outsided-ness of the camera to the (pro-filmic) world, but more deeply felt. The poignant separation between us and the filmed world is embodied in the film screen — “a barrier.”⁷⁶ The world we see is nothing if not real, yet absent. Whereas we are nothing but present, yet invisible. It is the separation and barrier between each other that arouses loneliness; it is the skeptic conclusion, viz. an “inability to know” — I of the world and the

73. *Ibid.*, 26.

74. *Ibid.*, 102.

75. Wallace, “E Unibus Pluram: Television and U.S. Fiction,” in *A Supposedly Fun Thing I’ll Never Do Again* (New York, Boston, and London: Back Bay Books and Little, Brown and Company, 1998), 22. Later in the essay Wallace cites Cavell directly. The influence seems indeed direct.

76. Cavell, *The World Viewed*, 24.

world of me — that fosters pessimism in our relationship with the world and with each other. We get cozy in the darkness of our subjectivity by keeping our fantasies to ourselves out of fear that others won't understand them or might use them to exploit our vulnerability. Our unseen-ness in front of the theater screen is like wearing a ring of Gyges rendered dull.

But this separation does not warrant a tragic ending at the outset. In highlighting, embracing, and acknowledging this condition of separateness, cinematic automatism uncannily — “magically” — helps to overcome the anxiety engendered by the ineliminable distance. Through film, nature is now “found,” not created. Cavell, in delineating the medium specificity of the photographic method, goes on to say that “To maintain conviction in our connection with reality, to maintain our presentness, painting accepts the recession of the world. Photography maintains the presentness of the world by accepting our absence from it.”⁷⁷ The automatism in photography has a different mode of establishing conviction or encouraging our faith in the external reality, compared to other art forms — put crudely, if “presentness” shows traces of agency and freedom, then painting (especially traditional painting) preserves *our* autonomy, while photography presents the *world's*. We see the world's independence, the validity of which needs no categories of a Kantian subject.

Film continues this project of foregrounding the givenness of the world, initiated by photographic automatism, and furthers it by helping us test, resist, and rethink this givenness through *projecting* the world *automatically* to us in moving images. The world's existence on the screen reminds us that its reality is not subjectively created through our mind or out of our words; moreover, its mystery and out-of-reach-ness instruct us that to read its autonomy adequately is no easier task than understanding or achieving our own autonomy. Film's education and redemptive power lies in a re-examination of distance and separation, which does not necessarily lead to an epistemological impossibility, inducing either despair or a vengeful desire to dominate and manipulate, although it may be likely to do so.

The distance that cannot be bridged between us and the filmed world in fact grounds the possibility of genuine viewing, which receives, processes, words, and acts on the claims that whatever being within our view makes upon us. Only at a certain

77. Ibid., 23.

distance can we put the object and the ground it stands on fully in view without cropping out its head or toe. Our ethical relationship to the world is not fundamentally a matter of knowing; our separation should not be an excuse that further fosters our moral stupidity and obtuseness. The automatism that is possible in film's world-projection is akin to what modernist art is capable of for Cavell, which "reasserts that however we may choose to parcel or not to parcel nature among ourselves, nature is held — we are held by it — only in common. *Its declaration of my absence and of nature's survival of me* puts me in mind of origins, and shows me that I am astray."⁷⁸ Viewing it, without "altering it illegitimately, against itself," can establish our connection with the world and others.⁷⁹

Notably, the world on screen does not (usually) look back at us, but it always could. The automatic display of our being denied to the filmic world while longing to be part of it gives rise to a renewed perception of separateness, which does not excuse callousness or cruelty but lets us see that the objects in front of our eyes can be freed from our grip. Putting the world at a distance inspires in us the realization that we can see the world passing as it is, or let it happen of its own accord. The world was there without us present, and it will continue to be when we are not. It survives and outlasts us.

A specific cinematic example might be helpful here to show how this is achieved. The scene selected below unveils the essential profundity in how various automatisms — the mechanical reproduction in the photographic automatism, the automatism in projecting and viewing the world, and the "automaticity" in animals — could re-orient our sight and lead us to see that our blindness to the beings in front of us translates into violence, leading to their pain and suffering, and that distance between us does not hinder but even contributes to understanding them as autonomous.

Section III. Bresson's Balthazar

Robert Bresson famously deemed automatism the essence of the natural mode of existence. He terms his actors "models," who are the performers who lay bare their

78. *Ibid.*, 114 (emphasis added).

79. *Ibid.*, 102.

soul in front of the camera: “Models who have become automatic [...] their relations with the objects and persons around them will be right, because they will not be thought.”⁸⁰ Bresson’s models, importantly, are neither “actors” nor “parts” — they need neither “staging” nor “directing” and are “BEING instead of SEEMING.”⁸¹ His diligence in cultivating automaticity in his models naturally extends to involving animals, who, one assumes, by nature cannot act to the same degree as human beings but more simply *be*. *Au Hasard, Balthazar* (1967) follows the titular character’s entire life from birth to death. Almost at random, the donkey Balthazar is given to one owner after another, escorted to one setting and escapes another; but no master plan is explained, he is at one moment baptized, caressed, worshipped, and praised as a genius, at others mocked, beaten, labored or considered a nuisance.

Situated at the diegetic midpoint of this dramatic piece is a striking series of shot/reverse-shots portraying the donkey Balthazar exchanging looks with four other fellow circus animals. Its temporal centrality buttresses its symbolic significance for understanding the film, though this silent section defies immediate comprehension. In this radically non-anthropocentric sequence, the technique that is often used to depict human conversation — a fundamentally linguistic form of communication — is used to give us one minute of absence of verbal speech, or explicit human perspective. This sequence of shot/reverse-shot of the animals’ looking shatters the human/animal binary and transcends it from within, since usually in shot/reverse-shots we see humans looking at each other or at other animals. Laura McMahon, evoking Derrida, observes that in this scene that “Certainly something *wholly other* appears to be at stake” — that we encounter a shared finitude that we can never own, and the sense of commonality arrived at refers to but exceeds frameworks of human understanding.⁸² The triangulation between the camera’s eye, Balthazar’s eyes and the fellow animals’ eyes compels us to take on a visual education.

This sequence opens with a medium-long shot of Balthazar standing still, while the circus worker loads more hay on top of its back cart. A tinge of resistance from Balthazar can already be sensed when the worker leads him to the next position. The

80. Robert Bresson, *Notes on Cinematography*, trans. Jonathan Griffin (New York and London: Urizen Books, 1977), n. 32.

81. *Ibid.*, n. 1 (capitalized in original).

82. Laura McMahon, *Cinema and Contact: The Withdrawal of Touch in Nancy, Bresson, Duras and Denis* (London: Legenda, 2012), 56.

exchange of looks starts with the circus worker's leaving the frame as we hear roaring of a tiger. Balthazar diverts his eyes slightly (fig. 1), and the scene cuts to a tiger, lying on his belly in an iron cage, with chains dangling in the air (fig. 2). The shadows of the iron bars dissolve and merge with his beautiful furry stripes. One of the iron bars blocks exactly his left eye. He looks at Balthazar, paws in front, mouth slightly open, sits absolutely still save the breathing motion in the chest. The shot/reverse-shot is repeated and this exchange between them is shown to us twice. Similarly, Balthazar looks at a polar bear (fig. 3), an ape, an elephant, in their respective cages, silent or raucous. But only the first two exchanges have two reverse-shots while the last two were given *one* reverse-shot. What marks the difference between the last two and the first? What type of progression is suggested by this subtle numerical change?



Fig. 1: Balthazar looks at the circus animals.



Fig. 2: First exchange – tiger.

“There is a logic here, but what is it?” Brian Price in his analysis continues to observe about the ordering and structure of the shots, “What might be passing through that structure is a recognition: the coming together of beings united in suffering.”⁸³ How the recognition is arrived at and how this *togetherness* is portrayed are of the utmost importance. When we get to the ape (in the third exchange) — the only animal in the sequence that makes sounds upon seeing Balthazar — we see the dangling chain foregrounded. This highlights a double imprisonment since he is already *within* the cage — as if his expressiveness is a threat, his likeness to us a menace. This exchange contains a quick and subtle gesture: the ape looks directly into the camera, however briefly (fig. 4). We realize the conventional shot/reverse-shots established in

83. Brian Price, *Neither God nor Master: Robert Bresson and Radical Politics*, new ed. (Minneapolis: University of Minnesota Press, 2011), 82.

the first two exchanges have been possibly replaced by a point-of-view shot of Balthazar. Before, we assume and understand that Balthazar and the circus animals are looking at each other; now, we view the scene as Balthazar views it.



Fig. 3: Second exchange – polar bear.



Fig. 4: Third exchange – ape looking into the camera.

The last exchange confirms the subtle but mysterious shift in perception and remains the most striking. If this were taken as a shot/reverse-shot, it would have broken the 180-rule — we see indeed both Balthazar's and the elephant's left eye (fig. 5 and 6). Both the camera position and the fact that the elephant looks directly into the camera suggests that, again, we are taking up Balthazar's point-of-view. The ape's expressiveness is replaced with complete silence on the elephant's part; its indecipherability is absolute. It is the most extreme close-up so far — for both Balthazar and the elephant. In fact, what we have are two eyes, *tout court*. The close-up of the elephant's eye, with its surrounding area, looks like a wrinkled old human's eye: a circus animal now appears almost indistinguishable from us. Its head fills up almost the entirety of the frame; no trace of its imprisonment is visible on the screen.



Fig. 5: Fourth exchange – Close-up on Balthazar's left eye.



Fig. 6: Fourth exchange – Close-up on the elephant's left eye.

We feel astonished by the sequence because, as Arnaud puts it, “the reciprocity of looks constitutes for us an indecipherable abutment: that they have an exchange, a recognition that testifies to the thoughtfulness or the screams of animals, is perceptible but always inaccessible.”⁸⁴ This astonishment can also be understood as resulting from a shift in vision, however (un)conscious we are of it. Looking at the fellow caged animals through Balthazar’s perspective — a specific vision that is grounded in the animal’s world — gives us a world *observationally incommensurable* to the one seen through human eyes. We now see what we couldn’t before — that these animals have a life of their own, and their dignity is untainted by human manipulation or use. In foregrounding the animal’s point-of-view, it reminds us of our blindness and crudity, an illiteracy in reading living beings’ bodies or souls. It leads us to see the world differently, or in Kuhn’s theorization, a different world.

The possibility/mechanism of this shift of vision, where the autonomy of the other becomes primary, can be further illuminated by Cavell’s reading of the revolutionary moment described by Kuhn.⁸⁵ Cavell highlights, on the one hand, the importance of the scientist/artist’s intellectual “conscience” in realizing the idea and possibility of the discipline/medium, and on the other, the inherent autonomy of the depicted object. In this case, Bresson’s innovation in staging the camera-eye to assume a non-human animal’s vision, however subtle, is guided by, and underscores, the inadequacy of how the animals have been viewed. The sequence teaches us the indispensability of, in Christine Korsgaard’s words, “getting animals in view” and getting *others* in view, in the sense of not only seeing what they are, but also realizing that other beings’ lives are as just important to them as ours is to us.⁸⁶ Through Balthazar’s active looking, we see the animals and recognize their condition. They appear as different from mere tools for people’s merry-making or money-making; instead, they are inscrutable, dignified, putting our manipulation and cruelty to shame.

Furthermore, the way Balthazar is brought to look at the four animals resembles how film audience looks at “a succession of automatic world projections.” A ge-

84. Philippe Arnaud, *Robert Bresson* (Paris: Cahiers du Cinéma, 1986), 62.

85. See II.2 above.

86. Christine Korsgaard, “Getting Animals in View,” *Point Magazine* 6 (2022), <https://thepointmag.com/examined-life/getting-animals-view/>.

nuine recognition of the distance between the onlooker and the object that *could* look back is one of the most crucial lessons we can learn from Balthazar and his fellow companions. These animals occupy different sides and separate frames, yet their unity of a shared suffering is realized despite the barriers of the cages or the discreteness of the shots or cuts. This sequence, significantly, ends with *seeing* as such — a speechless vision that perceives each other’s confinement. It makes palpable the apparatus and essential condition of film-viewing — explicated in Cavell’s account — being given views of the world on screen but kept at a distance from it. A true acknowledgement of that distance revises how we habitually receive the phenomenological separateness in the self-other or human-animal distinction. What we historically take as a necessity in the said distinction or hierarchy, manifested in the cruelty or callousness in inter-personal ethical understanding, or the captivity of the non-human animals in a human society, might be tested and resisted. An alternative can be imagined. “A relation of co-exposure and finitude — ungraspably shared with animals” becomes palpable.⁸⁷

Exuding an uncanniness that is strange, *other*, difficult to interpret, this sequence shows us, as Kuhn points out, that learning to adjust to a different paradigm can be demanding and takes time.⁸⁸ The perceived otherness expresses autonomy, which is precarious, easily subjugated to contingent or overpowering forces. It can be inaccessible but remains real and recognizable. The shift of vision, given to us through what McMahon terms as the “patient, durational aesthetic of the film,” cultivates “a mode of ethical responsiveness, which attends [...] to a life lived rather than displayed and to the unfolding of an intimate history rather than a public spectacle.”⁸⁹ To see the “unfolding” requires radical perspective shifts, which cinematic automatism materializes; the reassessment of the condition and meaning of our separateness helps us notice, even at a distance, or precisely because of that distance, the object’s suffering, no matter how quiet it is.

87. McMahon, *Cinema and Contact*, 59.

88. For instance, see Kuhn, *SSR*, 53, that having awareness of anomalies is difficult; and 150-51, both Darwin and Planck’s comments suggest the difficulty of their new theories being accepted by older generation, and that there is often life-long resistance to new paradigms.

89. McMahon, “Dead Funny: Laughter, Life, and Death in Philibert’s *Nénette* and *Un animal, des animaux*,” in *The Zoo and Screen Media: Images of Exhibition and Encounter* (New York: Palgrave, 2016), 257.

Conclusion

Cavell and Kuhn share a similar commitment to the path from automatism to autonomy. Underlying both accounts of the co-presence and inter-relatedness of automatism and autonomy is an emphasis on seeing plurality and difference in scientific, aesthetic, and ethical encounters. To be able to perceive anomalies and scientific crises, the “narrow and rigid” textbook-based scientific education *alone* is inadequate.⁹⁰ In “truncating the scientist’s sense of his discipline’s history and then proceeding to supply a substitute for what they have eliminated,” this education makes it difficult for students of science — or of philosophy, understood as “the education of grownups” — to understand historical scientific theories or discoveries on their own terms.^{91,92} Of course, this is not to suggest a major overhaul of the conventional and established scientific training or its progressivist understanding, which provides students with “tools of the profession, both conceptual and instrumental,” and “supplies community members with a past which is not foreign but domestic, which can be assimilated directly, and which can serve as a platform from which to move ahead.”⁹³ As this paper shows, the automatism present in these practices is in fact crucial to the autonomous “discoveries” of the revolutionary moments. But these discoveries cannot be divorced from a vision sensitive to the observed object — its agency, independence, autonomy, and how it might be different from how it has been seen. This vision, essential in both science and ethics, requires genuine historical consciousness. It can also be honed by reading/viewing works of art and giving ourselves to them. As Cavell puts it, “we are at the mercy of what the medium captures of us, and of what it chooses, or refuses, to hold for us.”⁹⁴ Film, specifically, satisfies our desire to be unseen by the world by projecting it at a distance from us; but instead of exonerating our responsibilities for the viewed world, film restores our sense of obligation to it by presenting the other as *other*, as autonomous. We realize that it has its own laws that might be inscrutable to us, that we cannot know it as it knows itself, but it nonetheless needs acknowledgement, attention, interpretation, and action from us. The can-

90. Kuhn, *The Structure of Scientific Revolutions*, 165.

91. *Ibid.*, 137.

92. Cavell, *The Claim of Reason*, 125.

93. Kuhn, *The Last Writings*, 88. I am grateful to Brad Tabas for pointing me to this passage.

94. Cavell, *The World Viewed*, 126.

didness of the camera and the automatism in projection constitute possibilities of the medium and teach us to “let the world happen, to let its parts draw attention to themselves according to their natural weight.”⁹⁵

95. *Ibid.*, 25. I would like to thank Brian Price for his incredibly helpful comments at earlier drafts of this paper. Special thanks are due to Luke Lea for the productive conversations on Kuhn and various editorial suggestions. I am also deeply grateful to Brad Tabas and Paul Jenner for their patience and kindness in all the constructive criticism, edits, and feedback.

6. The Claim of Reason in a Planetary Age: Martian Objects and Ordinary Language

BRAD TABAS

Naming appears as a queer connection of a word with an object.
— And you really get such a queer connection when the philosopher tries to bring out the relation between name and thing by staring at an object in front of him and repeating a name or even the word “this” innumerable times. For philosophical problems arise when language goes on holiday.¹

WITTGENSTEIN, *Philosophical Investigations*

I take this evanescence and lubricity of all objects, which lets them slip through our fingers then when we clutch hardest, to be the most unhandsome part of our condition.²

RALPH WALDO EMERSON, *Essays & Lectures*

Geology was called a descriptive science, and with its pitted outwash plains and drowned rivers, its hanging tributaries and starved coastlines, it was nothing if not descriptive. It was a fountain of metaphor — of isostatic adjustments and degraded channels, of angular unconformities and shifting divides, of rootless mountains and bitter lakes.³

JOHN MCPHEE, *Basin and Range*

1. Ludwig Wittgenstein, *Philosophical Investigations*, ed. G. E. M. Anscombe (Malden, MA: Blackwell 2003), 24.

2. Ralph Waldo Emerson, *Essays & Lectures*, ed. Joel Porte (New York: Viking, 1983), 473.

3. John McPhee, *Basin and Range* (New York: Farrar, Straus, and Giroux, 1981), 25.

1) After Kuhn After Cavell

This essay is a creative inheritance destined for a volume celebrating the ongoing relevance of Thomas Kuhn and Stanley Cavell. But if it is inspired by, and converses with them, it is neither a reconstruction of their conversations nor a textual exegesis, but an attempt to reflect critically on the rationality of Earthlings in the Anthropocene while drawing orientation from Kuhn and Cavell. Arguably, such philosophical modernism is in spirit intensely Cavellian. Pursuing Emersonian self-reliance, this paper aims to make “philosophy yet another kind of problem for itself.”⁴ Therefore, this text is not Kuhnian. It couldn’t be — Kuhn claimed that his “vocation” was to be a “historian of science,” a member of the “American Historical, not the American Philosophical, Association.”⁵ But in its concern with science and history, and above all in its acceptance that our current historical context, the Anthropocene, cannot be thought outside of paradigmatic shifts within the history of science, notably the development of planetary science as a comparative and thus inter-planetary model for understanding our own terrestrial condition, what follows is Kuhnian.⁶

More concretely, this paper is about screened objects on Mars and their standing in ordinary language. It is about the scope and reach of everyday words in an age in which technoscience has enabled us to view worlds that are not our world. Our ordinary language is to an almost unsounded degree planetary. It is a deep expression of our terrestrial forms of life. As Cavell once put it: “whether or not there is a man in the moon, and whether or not there is life, or we put life, on the moon, it is analytically true that men do not inhabit the moon.”⁷ But if what we are inclined to call reason in ordinary language is the reason of Earthlings, that does not mean that we are

4. Cavell, *Must We Mean What We Say?: A Book of Essays* (Cambridge and New York: Cambridge University Press, 1976), 74.

5. Thomas S. Kuhn, *The Essential Tension: Selected Studies in Scientific Tradition and Change* (Chicago, IL: The University of Chicago Press, 1977), 3. His posture on this point comes across slightly differently in his just-published posthumous work, though even there, where he more prominently presents himself as doing philosophy, he remains deeply wedded to history, writing that his concern is “primarily philosophical” but then immediately clarifying that what interests him in philosophy is “the nature of the historical process or the nature of human knowledge.” Kuhn, *The Last Writings of Thomas S. Kuhn: Incommensurability in Science*, ed. Bojana Mladenović (Chicago, IL: The University of Chicago Press, 2022), 87.

6. The clearest articulation of the connection between our planetary age and the interplanetary dimension of Earth System Science is found in Dipesh Chakrabarty, *The Climate of History in a Planetary Age* (Chicago, IL: The University of Chicago Press, 2021).

7. Cavell, *The World Viewed: Reflections on the Ontology of Film* (New York: Viking Press, 1971), 105.

condemned to silence or blindness when confronted with objects on the Moon or Mars, nor that we can make no pretensions to universality within our expressive rationality. Only that these zones of univocity across planets are linguistically local: there is simply more of Earth in our language and in our thought than we might acknowledge before submitting the world in our words to critique.⁸ Doing that, performing a critique of the place of the planet in our expressive reason, is what will occupy us in the following.

Returning to Cavell, this essay is about viewing Mars televisually. It emerges from a strange reading of *The World Viewed*. This discussion of Martian objects is about what happens when we screen a world. But Mars is not a Hollywood star. The screening of Mars is mostly done for planetary scientists. That world screened is not the world that Cavell meant when he wrote about movies. To classify and make sense of what is screened in terms of the geological history of Mars is a question for science, and yet thinking reflectively about the ethics of using everyday terrestrial words in this practice is a philosophical concern. It is in this space of tension between historical practices of making sense of the planetary system and making sense of the linguistic means by which we are making sense of that planet, and so are conditioning how we imagine and project our future selves with respect to that planet using our language, that ethical concerns with alterity arise. For Mars is a world viewed, but it is not our world viewed. When we view it, we project presence, we think that what is there exists in ontologically the same way as tables and chairs, and thus sometimes feel as if we can talk about being there as if that were equivalent to being here. But at what cost?

8. One of the attractions of this particular and paradigmatic case is the ways in which it allows a defense and clarification of recognizably Cavellian and Kuhnian postures, in particular with respect to realism and the epistemic justifications of truth claims, that seem to stand outside of the norms of science and technology studies, film studies, and (to be honest) normative practice in the humanities and interpretative social sciences. So far as I can tell Cavell did not address these questions head-on, though his students, for example William Rothman and Toril Moi, have done an excellent job of tracing out the fault lines. Kuhn, on the other hand, wrote extensively against what he mostly called the strong program and the identification of his own work with the strong program, though it is not clear, given the direction but also the unfinished state of his last work, that he himself felt that he had found the right arguments to defend his posture. Though this is a war that will mostly here be waged only implicitly or in the footnotes, I would hope that readers will understand this text as illustrating a form of scholarly practice very much at odds with the current anti-realist norms. For helpful critiques of those norms within the humanities, see: William Rothman, Marian Keane, and Cavell, *Reading Cavell's The World Viewed: A Philosophical Perspective on Film* (Detroit, MI: Wayne State University Press, 2000); Toril Moi, *Revolution of the Ordinary: Literary Studies After Wittgenstein, Austin, and Cavell* (Chicago, IL: The University of Chicago Press, 2017).

2) Extraordinary Ordinary Language Philosophy

“Philosophical problems arise when language *goes on holiday*,” when language *feiert*, celebrates, goes on vacation, ceases working.

It is easy to take Wittgenstein as saying philosophers ought to police extraordinary uses of language. From which it might follow that philosophical problems are nothing but “houses of cards,” “plain nonsense,” “bumps that the understanding has got by running up against the limits of language,” and the “bewitchment of our understanding by means of our language.”⁹ Thus this observation about words going on holiday resonates with the quietism of the *Tractatus*, and Carnap’s critique of Heidegger, with his reproach to metaphysicians that they build philosophical problems out of “meaningless terms” (*bedeutungslosen Wörter*), ordinarily (*gewöhnlich*) words taken in metaphorical senses.¹⁰ The cure for philosophical problems would thus be silence or positivism.

But there are other readings of this phrase. Following Cavell, we could take what the tradition has ordinarily called philosophy, with its explorations into the epistemic concerns arising from “generic objects,” which are improbable situations expressed in vacationing words, as missing out on the real depth of philosophical problems.¹¹ Leading (*führen*) words back from metaphysical to ordinary use (*alltägliche Verwendung*) would then not abolish philosophy and its problems, it would only rid it of its alienated avatars.¹² It would bring philosophy closer to “our lives.”¹³ Within the philosophy of philosophy, ordinary language philosophy thus appears as “second order philosophy,” a gestalt shift within what we call doing philosophy, but one which finally follows the same aversive regularity that has always characterized philosophy.¹⁴ But this new philosophy, in a way announced by Emerson, would indeed be re-oriented:

9. Wittgenstein, *Philosophical Investigations*, 52 and 54.

10. Rudolf Carnap, *Scheinprobleme in der Philosophie und andere metaphysikkritische Schriften*, ed. Thomas Mormann (Hamburg: Felix Meiner, 2004), 95.

11. For example, Cavell, *The Claim of Reason: Wittgenstein, Skepticism, Morality, and Tragedy* (Oxford and New York: Oxford University Press, 1999), 56 and 141.

12. Wittgenstein, *Philosophical Investigations*, 55.

13. Cavell, *Must We Mean What We Say?: A Book of Essays*, 167.

14. Wittgenstein, *Philosophical Investigations*, 53-54.

I ask not for the great, the remote, the romantic; what is doing in Italy or Arabia; what is Greek art, or Provençal minstrelsy; I embrace the common, I explore and sit at the feet of the familiar, the low. Give me insight into to-day, and you may have the antique and future worlds. What would we really know the meaning of?¹⁵

Within the horizon of this turn towards the ordinary, another reading of language going on holiday becomes possible. What happens when ordinary language goes on what we would ordinarily call a holiday? What happens when a terrestrial language goes to another planet? What happens to language, to a philosophy rooted in what we ordinarily say and mean in one world or planet, whose words we have learned and taught in “certain contexts,” and based on the expectation, and our expectation of others, to be able to project those words “into further contexts,” when we find that we have strangely gotten ahead of ourselves in feeling that we have encompassed our world in our words, encountering a context which in its estrangement from the normal course of our historical experience prompts us to ask, with the skeptic, whether in this alien context we really do or ought to acknowledge that we have a right to say what would ordinarily say?¹⁶

Let us take our words on such a journey. This picture was taken on Feb. 24, 2022 by the Mars Curiosity Rover:



Nasa Curiosity Rover Photo.

15. Emerson, *Essays & Lectures*, 68.

16. Cavell, *Must We Mean What We Say?*, 52.

I take it that everyone, and not only professional students of Mars, sees things in this picture. I take it that this is only minimally a function of our gaze being theoretically enriched or informed by the special conceptual knowledge that Janet Vertesi calls “professional vision.”¹⁷ Which is not to say that there is nothing “theoretical,” nothing tied to philosophy of mind in our being able to pick out that there are things in this photo rather than nothing. But it is to say, with the last Kuhn, but also with Tyler Burge, and with a great deal of work in the empirical psychology of vision, that discerning objects in an image (including this one) is something different from having explicit propositional knowledge about what is seen, is separable from the state of engaged conviction that Vertesi describes, using language borrowed from phenomenology, as “seeing as.”¹⁸ Accepting that we see something, and maybe don’t see it as anything analogous to the items in our past experience, what are we inclined to say about what we see? Which words are warranted? What authorities, experiences, feelings, warrant that our ordinary criteria for wording this image, say if it wasn’t an image of Mars, or was a fabrication, are applicable? How should we orient ourselves within the skeptical recital, when should we seek words to express doubts, to highlight self-awareness relative to the planetary impoverishment of our language, its terrestrial limits, its biases, its seductive ways of inducing misstatements based on se-

17. Janet Vertesi, *Seeing Like a Rover: How Robots, Teams, and Images Craft Knowledge of Mars* (Chicago, IL: The University of Chicago Press, 2015), 205.

18. *Ibid.*, 3069. Her usage of “seeing as” is derived from Merleau Ponty via Hans Radder, who she quotes as claiming: “Any observational process is always materially realized and conceptually interpreted right from the start.” The issue with this claim, which entangles percepts with concepts, is that it risks over-intellectualizing perception and particularly its entanglement with language. The late Kuhn calls our ability to perceive something the “basic-object concept” suggesting that such perception is available to both “human infants and nonhuman animals,” i.e. to beings that do not yet use language or do not necessarily have human linguistic concepts. The work of Tyler Burge has enormously enriched this direction in the late Kuhn by bringing the philosophical discussion on the psychology of perception into dialogue with the enormous empirical literature on human and non-human perceptual capacities. The point is not that perception is not in a certain manner of speaking theory-involving, but the ways in which it is so risks courting confusions when we align that theory with concepts and language. As Burge explains: “perceptual groupings and categorizations depend more on ways individuals are physically and functionally related to specific types of entities in the environment than on individuals’ ability to describe or know something about what they perceive.” One might in this context suppose that there is a degree of agreement in judgments with respect to the first forms of perception that is not reflected in later predicative judgments expressed in ordinary (or scientific) language bearing on the meaning or contents of these more primitive “first forms” of mind. To be fair, Vertesi’s book, and I will return to this later, is concerned with the manipulation of alien data to produce images that produce events of perception, so her concern is not with the philosophy of mind, but rather the philosophy of robotic image capture. Kuhn, *The Last Writings of Thomas S. Kuhn*, 199; Hans Radder, *The World Observed, the World Conceived* (Pittsburgh, PA: University of Pittsburgh Press, 2006). Tyler Burge, *Origins of Objectivity* (Oxford and New York: Oxford University Press, 2010), 208. Burge, *Perception: First Form of Mind* (Oxford and New York: Oxford University Press, 2022).

ductive similarities, and when should we, despite it all, swallow our inclination to skepticism and acknowledge the claim that we can simply say what we ordinarily would? It may seem that all answers involve science or nihilism.

In one way these are metaphysical questions, but metaphysical in a way that has nothing to do with what we would ordinarily call metaphysics. They are metaphysical insofar as they involve going beyond what we would, in the terrestrial light of everyday language, be in the habit of calling *φύσις*:: nature.¹⁹ For if science is relevant to what we should say about Mars, most (but not all) of what we call nature and natural, say as nature it is evoked in Emerson's *Nature* as the "floods of life [that] stream around and through us," just is terrestrial nature.²⁰ Terrestrial nature is the one, the flowers and the forests and the fields, that poetry or *Dictung* brings to expression.²¹ Terrestrial nature just was nature before Mars was screenable. In looking at the wording of that which lies beyond nature, extraordinary ordinary philosophy might seem merely a poetics of science fiction, an exploration of what poetry, as opposed natural science, might make from that world. But that may also be no catastrophe. Bringing philosophy close to literature and to science, particularly to poetry as understood by a Hölderlin-inspired Heidegger, who claimed that poets found "*Was bleibet*," call it a concern with what might remain, may not imply alienating it from itself, but rather remaining faithful to the spirit of philosophical inquiry voiced in the last line of *The Claim of Reason*: can "philosophy become literature and still know itself?"²²

19. Extraordinary ordinary situations involve encounters with realities that, from the point of view of the historically acquired resources of our ordinary language may seem to pose metaphysical questions, to the extent that these extraordinary contexts may present us with entities that have no existing place within the lexicons of physical objects contained in what we would ordinarily call nature. Thus, extraordinary ordinary language philosophy dialectically returns to metaphysics beyond the turn to the ordinary (as Martin Heidegger wrote in his *Einführung in die Metaphysik*, "*Philosophieren ist Fragen nach dem Ausser-ordentlichen*"). But here the extraordinary is only so on ordinary grounds, and so too the metaphysical is located within the physical and within the tensions of how we use language, resituated on the very threshold of ordinary experience and within our form of life and linguistic practices. If we were to go back to the roots of the term metaphysics, μετά, meaning beyond or after, and φύσις which approximately expresses "nature" in Greek (Heidegger glosses it as the "*das von sich aus Aufgehende*," something like the auto-emergent or auto-poetic), it seems clear enough that our ordinary languages, and the words for nature that articulate it, which is to say our understanding of what we would ordinarily call nature, or how things are, are terrestrial. So this metaphysics of the extraordinary ordinary, this focus on what we can do within ordinary language to confront that which seems to lie beyond the ordinary but is within what we would ordinarily call nature or the world, and not even as a speculation or a science fiction scenario but as what (I think we can agree) may be called ordinary reality, is different from what we normally call metaphysics. Heidegger, *Einführung in die Metaphysik* (Tübingen: Niemeyer, 1966), 10-11.

20. Emerson, *Essays & Lectures*, 7.

21. Angus Fletcher, *A New Theory for American Poetry: Democracy, the Environment, and the Future of Imagination* (Cambridge, MA: Harvard University Press, 2004).

22. Cavell, *The Claim of Reason*, 496.

3) On Ordinary Estrangements and the Limits of Language

Extraordinary situations, contexts in which one acknowledges one does not know how to go on, or feels dissatisfied with the words at hand, are (in a sense) ordinary situations, and so performances for dealing with the alien exist in ordinary language.

We have all imagined and rehearsed encounters with alien “its.” Works of what Lovecraft called supernatural horror are full of exempla:

“God! If you could see what I am seeing!”

I could not answer. Speechless, I could only wait. Then came the frenzied tones again:

“Carter, it’s terrible — monstrous — unbelievable!”

This time my voice did not fail me, and I poured into the transmitter a flood of excited questions. Terrified, I continued to repeat, “Warren, what is it? What is it?”

Once more came the voice of my friend, still hoarse with fear, and now apparently tinged with despair: “I can’t tell you, Carter! It’s too utterly beyond thought — I dare not tell you — no man could know it and live — Great God! I never dreamed of this!”²³

But we are not always speechless or oath-full when we come face to face with alien facts. We spin variations in the subjective register associated with encountering sublime objects. In a less sublime (and less xenophobic) register, we have the excuses, the circumlocutions, and the forms of pidgin. These are in the language of the traveler. We say things like “Sorry but I don’t know how to say” — or perhaps express divergences from the ordinary “We say this, however.” We have a rich grammar of pointing and gesturing (but that is hard to talk about).

Aside from these strategies, our vocabulary, viewed historically, bears the marks of struggles to overcome the bewilderments afflicting travelers and settlers. The American English of every child with the least curiosity about their world is rich

23. From H. P. Lovecraft’s “The Statement of Randolph Carter,” in *Necronomicon: The Best Weird Tales of H. P. Lovecraft* (London: Gollancz, 2008), 13.

with words gifted by first nations peoples. Raccoon comes from a Powhattan word, *arahkunem*, meaning “he who scratches with his hands,” while opossum comes from the Virginia Algonquian words **wa. p-*, meaning “white,” and **-aʔθemw-*, meaning “dog, small animal.” Obviously, these deep roots are alienated from most speakers, but to those who speak attentively, the strangeness of the phonemes betrays debts. The production of extraordinary ordinary language has historically been part of discovering the world, or of discovering worlds, though in terrestrial cases, these discoveries were rarely encounters with natures radically unknown to all humankind and to language as such, but rather, as in the case above, cases where one lexicon is enriched from another already existing one whose world is different, but in a far less extreme sense than the one that concerns us.

4) On Scientific Revolutions as Extraordinary Ordinary Contexts

Scientific language is possibly more fertile ground for studying language coined ex nihilo and with respect to absolutely alien conditions, not least because modern science has so often been characterized by a movement away from what Husserl called the lifeworld (*Lebenswelt*) towards what Kuhn, in his late work, characterizes as “artificial” objects, entities that only exist for us because of technology, and so stand exterior to any historically pre-existing “natural” linguistic kinds.²⁴ Because of this, the history of science would amount to a treasure chest of extraordinary situations in which ordinary scientific language users encountered a novel situations and recorded these meetings by generating new ordinary scientific languages and kind terms. Kuhn, in *Structure*, explains revolutions in precisely this way, writing that in them, it is as if “the professional community had been suddenly transported to another planet where familiar objects are seen in a different light and are joined by unfamiliar ones as well.”²⁵ Wording alien objects on Mars thus falls within a historical norm that is reflective of what happens in periods of revolutionary scientific

24. Edmund Husserl, *Die Krisis der europäischen Wissenschaften und die transzendente Phänomenologie: eine Einleitung in die phänomenologische Philosophie*, ed. Elisabeth Ströker (Hamburg: Felix Meiner Verlag, 2012), 238. Kuhn, *The Last Writings of Thomas S. Kuhn*, 20.

25. Kuhn, *The Structure of Scientific Revolutions*, ed. Ian Hacking (Chicago, IL: The University of Chicago Press, 2012), 111.

change, with the exception that scientific language as we usually think of it begins outside of everyday usage and ends outside of ordinary usage (albeit while borrowing figures and metaphors from ordinary language along the way), while in the specific case of Mars, technological artifice has brought something that was distant from everyday terrestrial experience within the range of ordinary words that may seem to apply in the ordinary way.²⁶ Which is to say that in the ordinary language of science, we have less inclination to suppose that ordinary language might apply, or when it applies, it does so only metaphorically and in light of grounding metaphors, presenting an analogy between an ordinary thing and some abstract and seemingly unnamable equivalent.

Most of the revolutions studied by Kuhn involve theory-caused shifts in the meaning of existing terms. Duck/rabbit-like, an existing word takes on a new aspect, with this new meaning encouraging the scientist and their peers to find and name other new and theoretically and observationally derived terms.²⁷ Lexically, these new terms are often exported from existing non-scientific lexicons (the term quark famously comes from Joyce's *Finnegans Wake*), or from paleonymic or patronymic naming procedures (the official Mars topological nomenclature as voted by the AAU is comprised of Latin terrain terms, while the Higgs boson is named after Peter Higgs).²⁸ Kuhn, as a historian, did not arrogate the right to dictate the use of words in

26. Hans Blumenberg, *Paradigmen zu einer Metaphorologie*, ed. Anselm Haverkamp, Dirk Mende, and Mariele Nientied (Frankfurt am Main: Suhrkamp, 2013).

27. Kuhn explains this point by explaining how the discovery that Earth was a planet with the moon rotating around it inspired other scientists to discover other moons rotating around other planets, with these additional observations deriving from the increased attentiveness to the relationship between moons and planets that emerged as a result of the Copernican revolution.

28. It is important to emphasize the degree to which the basic logic guiding this process is epistemically contested terrain. Strong program thinkers would tend to suggest that this entire process occurs totally at the level of language and theory, with "reality" (however this is understood) playing no role. Kuhn opposed this reading of his work. He insisted that making theory choice depend only on collective judgment (agreement *in verbis*) without assuming some progressive improvement in the parsing of reality did indeed make scientific theory choice "a matter for mob psychology." Yet he also acknowledged the impossibility (or at least the extreme difficulty) of grounding science on reference rather than on linguistic practice. One of his strategies to avoid the slippage towards strong program constructionism was an insistence on the specialness of scientific language as opposed to ordinary language. He even insisted that students in science should be taught Whig history as opposed to historical history of science as a kind of "noble lie," meaning that he wanted to shield scientific practitioners from the knowledge that scientific language could function in ways alien to contemporary theories, and likewise to maximally separate scientific language practices from ordinary language practices. In practice, this attempt to cordon off the language of science from other ways of using words seems unlikely to succeed, not because Kuhn is not right about the general difference between ordinary words and the terms as they are employed in scientific languages, but because there is frequently a degree of promiscuity with

science, precisely opposing those who would justify doing so as illegitimately politicizing of science.²⁹ More staidly, Kuhn considered the practice of the historian of science to consist in documenting (against more idealizing narratives of a continuous Whig history of science), the linguistic variability marking extraordinary ordinary events (revolutions) as indexed by the existence of ruptures or anomalies within the ordinarily stable senses attributed to scientific words. Within the hermeneutic posture taken by the Kuhnian historian of science, these symptoms of linguistic rupture appear as homophonous but not quite homologous terms located within revolutionary texts. Grasping the “alienated” aspect of these terms, the historian embarks on an epistemic and ontological “reeducation” in the alien reference worlds of “older lexicons” which permits an inter-terrestrial voyage into a linguistic world from science’s past.³⁰ Once alienated, the historian then engages in a textually mediated dialogue with the ghosts of past scientists. As Kuhn writes: “the past of science should be

respect to the frontiers between both domains, such that terms like “carbon” which clearly belongs to the abstract language of science become profoundly loaded in ordinary language, just as (in particular) figures and metaphors from ordinary language can play roles in theory development within scientific language. One way of putting this is to suggest that while Kuhn is doubtless basically right that scientific theory choice follows rules that are different from the (call them mob rule) logics governing the development of ordinary languages, he (despite his critique of idealism in the history of science) is too idealistic about the separability of these two lexicons. That said, one interesting feature of Mars is that it is a case in which the gap between scientific and ordinary language is relatively clear: a-priori all scientific language already applies to Mars abstractly, while a-priori all ordinary, call it presence-level language doesn’t, since all of that language, at least so far as natural kinds go, comes from our natural history on our planet, and so need not automatically apply to what we find on Mars. Kuhn, *The Essential Tension*, 88; Kuhn, *The Last Writings of Thomas S. Kuhn*.

29. Obviously, some version of this kind of politicization of science, and scientization of political discourse has been critical to the work of thinkers like Bruno Latour and his constructionist followers. As I have indicated in the note above, Kuhn is clearly right to resist this politicization, but he is doubtless himself too idealistic with respect to the boundaries and frontiers between science and politics. Performatively, the interest of the Martian objects case, and, let us say extraordinary ordinary language philosophy in general, is that it on the one hand remains true to Kuhn’s intuition that scientific language is not necessarily political in scientific contexts while acknowledging that the boundaries between contexts and employments of science terms are porous, and that there is clearly a role for philosophy within the negotiations associated with the ethical and political implications of these shifting frontiers. In the following, for example, which deals with a language that may seem to belong exclusively to science, specifically Martian geomorphology, we will suggest that it is only in the case of certain infelicitous lexical choices by scientists, above all cases in which they employ ordinary language lexical items in a recognizably everyday sense that their science becomes political. Note that this is a far cry from claiming that all scientific theory choice and language is political, for that argument can only be arrived at thanks to a far more transcendental argument linking all truth claims to politics via empirically hard to cash, but also sophistically hard to disprove, claims regarding how they ideologically lend support to the hegemonic political order (i.e. capitalism). See Bruno Latour, *Les Microbes: guerre et paix, suivi de Irréductions* (Paris: La découverte, 1984). Also, and with particular reference to capitalism and ideology, see Mark Fisher, *Capitalist Realism* (London: Zero, 2009).

30. Kuhn, *The Road Since Structure: Philosophical Essays, 1970-1993, with an Autobiographical Interview*, ed. James Conant and John Haugeland (Chicago, IL: The University of Chicago Press, 2000), 86.

approached as an alien culture, one that the historian strives first to enter and then to make accessible to others.”³¹

Yet if the historian only learns and reports on how scientists used words, he does something philosophically different when writing history. Kuhn was not a “text-book” historian of science precisely because he invented a novel kind of historical language.³² This was not the ahistorical language of the present, but a historically alienated writing. It derived from an exercise of expressive judgment (reflections on whether and how one means what one says) aimed at somehow squaring the circle of bringing out (on the one hand) the incommensurability of past scientific languages, *and* (on the other) of remaining scrutable to contemporary readers. With careful exegesis, one could make explicit how Kuhn goes about doing this, deriving from Kuhn’s historiographical practices a Kuhnian extraordinary ordinary language philosophy or “theory of translation.”³³ But I will not pursue that project. Translation matters less than invention here. On Mars there are no alien informants, and Kuhn’s practice presupposes the existence of historically alien textual witnesses writing on a common planet. Likewise, Kuhn’s animating concern was epistemic accuracy (whether that accuracy was found in natural science or historical hermeneutics), and this, to put it bluntly, might seem to need no philosophical justification. But what will matter most

31. Kuhn, *Black-Body Theory and the Quantum Discontinuity, 1894-1912* (Chicago, IL: The University of Chicago Press, 1987), 368.

32. “History, if viewed as a repository for more than anecdote or chronology, could produce a decisive transformation in the image of science by which we are now possessed. That image has previously been drawn, even by scientists themselves, mainly from the study of finished scientific achievements as these are recorded in the classics and, more recently, in the textbooks from which each new scientific generation learns to practice its trade.” Significantly enough, the late Kuhn consistently defended the pedagogical utility of textbook science writing, which he calls a “noble” lie is given that attempts at a properly historical history of science are “at best a slow and inefficient way” of teaching science and its norms. Kuhn, *The Structure of Scientific Revolutions*, 1. Kuhn, *The Last Writings of Thomas S. Kuhn*, 88.

33. To offer a bit of an example, Kuhn often mentions but does not use terms, as he illustrates in this passage, from *The Road Since Structure*, which bears on Quine’s reflections on translation and translatability in *Word and Object*: “Why is translation, whether between theories or languages, so difficult? Because, as has often been remarked, languages cut up the world in different ways, and we have no access to a neural sublinguistic means of reporting. Quine points out that, though the linguist engaged in radical translation can readily discover that his native informant utters “Gavagai” because he has seen a rabbit, it is more difficult to discover how “Gavagai” should be translated. Should the linguist render it as “rabbit,” “rabbit-kind,” “rabbit-part,” “rabbit-occurrence,” or by some other phrase he may not even have thought to formulate? I extend the example by supposing that, in the community under examination, rabbits change color, length of hair, characteristic gait, and so on during the rainy season, and that their appearance then elicits the term “Bavagai.” Should “Bavagai” be translated “wet rabbit,” “shaggy rabbit,” “limping rabbit,” all of these together, or should the linguist conclude that the native community has not recognized that “Bavagai” and “Gavagai” refer to the same animal? [...] These examples suggest that a translation manual inevitably embodies a theory [...]. To me they also suggest that the class of translators includes both the historian of science and the scientist trying to com-

in what follows are the ethical and even the aesthetic dimensions of what we say, thus, we turn to Cavell.

5) The World Viewed or A World Viewed

We relate to Martian objects through screens, so Cavell's question "What happens to reality when it is projected and screened?" raises its head here.³⁴ But in shifting the context from Hollywood films to objects on Mars there is a shift in the grammar of the word "reality." When Cavell talks about reality, prompting resistance in his critics and sometimes embarrassment in his defenders, he is making a pitch for something that is hard to accept philosophically because of the narrow entanglement of skepticism and epistemology, but which is also hard to deny with respect to how we use the word "reality" in ordinary language.³⁵ Stated somewhat flatly, when Cavell says that film shows us reality, do we feel we don't understand him? More to the point: what else would we call it? Isn't that just how we use the word, "reality," for example, in the context of comparing a photo to a painting of a similar object? But if this is so, Mars forms an interesting case. Unlike on Earth, where we may be satisfied that we know the reality of ordinary things independently from their projections on screens and thus feel that we can identify realism in painting and reality in photos, we realistically lack criteria for judging the realism of what we see on Mars. With respect to the reality of Mars in the photo, our justification is heavily based on our faith in photography

municate with a colleague who embraces a different theory." What Kuhn seems to be saying here is that writing the history of science implicitly demands producing a theory of translation which is, (in other words), an extraordinary ordinary language philosophy, but that this historian, insofar as they are doing the work of the historian (and not the work of the ordinary language philosopher) does this implicitly, without voicing justifications (as does the ordinary language philosopher in their very practice of doing philosophy, why we say what we say in the way that we say it). Historians just do it. (Kuhn, and I am supposing this expresses a judgment about himself derived from his multiple conversations with Cavell, explicitly claims that he wasn't good at doing it, saying that he lacks "the skills of an ordinary language philosopher.") Kuhn, *The Road Since Structure: Philosophical Essays, 1970-1993, with an Autobiographical Interview*, 165. The second citation is from Kuhn, *The Essential Tension: Selected Studies in Scientific Tradition and Change*, 336. See also W. V. Quine, *Word and Object* (Cambridge, MA: The MIT Press, 2013).

34. Cavell, *The World Viewed*, 38.

35. This point has been brought out marvelously by Markus Gabriel in his work on the place of skepticism within the "epistemic economy" of the theory of knowledge. Markus Gabriel, *An den Grenzen der Erkenntnistheorie : die notwendige Endlichkeit des objektiven Wissens als Lektion des Skeptizismus*, Originalausg. ed., Alber Philosophie (Freiburg: Alber, 2008).

itself, our belief in what Cavell calls its “automatism,” and our belief, though wholly ungrounded in concrete experience, that Mars is like the Earth.

Martian things in photographs viewed on Earth, seem, by automatism, to have a familiar relationship with terrestrial things in photographs.³⁶ This seems true even if the things the photos show are alien, strange to us and our common terrestrial experience because they are products of Martian, and not terrestrial history. That means that what we see in images of Mars is not what we would, at least not ordinarily, call the natural world, but we also hesitate to say that what we see is neither really the world nor natural. Maybe we can say that we do not know where to place objects on Mars because we have not yet been present on Mars and so come to know, in practice, hypothetical reality as real. Are they within or without of our world? Maybe we want to say that what we see is real, but that we really don’t know what we really are seeing. So, they are alien, but not completely, since they are, in another way, just ordinary things.

But more proximately, objects in images of Mars pose ontological questions that are also questions of grammar. Of movies, Cavell writes: “Photography maintains the presentness of the world by accepting our absence from it. The reality in a photograph is present to me while I am not present to it; and a world I know, and see, but to which I am nevertheless not present (through no fault of my subjectivity), is a world past.”³⁷ Much of this fits when it is Mars that is viewed, but in the case of Mars presentness is not maintained but somehow discovered or affectively created through the photo, generated as a future promise via our belief in the reality of the pasts present in the photo by automatism, a presentness that is factually, at least for Earthlings, a fiction, for we have

36. I take this to hold true even and despite the fact that we can know, thanks to the work of Vertesi, that images such as this one have been digitally manipulated so as to make the data render something visible. This is so to the extent that I also know that images on Earth can be digitally manipulated, or that the development and processing of images can in normal cases count as such manipulation. Thus, even if I know that the image is a product of processing, I feel inclined to doubt that this processing is deeply disanalogous from what occurs ordinarily with photographs, and likewise disinclined to believe that the manipulations of the scientists amount to something akin to the efforts, on the part of Earthlings, to dupe us into believing what is not. Put otherwise, even in full knowledge that photographs are constructed, I am not inclined to believe that we are in a Reality + type scenario with respect to these photos, even if (as a point of fact) I couldn’t tell from the images whether they were not (for example) the result of Martians hacking the image to make us Earthlings think that Mars was a dead planet so as to keep us distant. Put somewhat otherwise, the evidence that she offers regarding the institutional construction of the image precisely offers up, within the overall epistemic economy bearing on the interpretation of these images, justifications for believing that what one thinks one sees — Mars — is, within the horizons of ordinary epistemic uncertainty, what one sees. On the idea of a Reality + scenario, see the David John Chalmers, *Reality+: Virtual Worlds and the Problems of Philosophy* (New York: W. W. Norton, 2022).

37. Cavell, *The World Viewed*, 45.

never, in fact, been present on Mars. But somehow, and thanks to our ordinary sense of the relation between presence and photos that constitutes something of the essence of their reality for us, we find it almost impossible to deny that Mars viewed is anything but reality, or at least a reality, viewed. Nevertheless, rather than seeing, as with film, a world past, we seem more inclined to imagine and describe what we see on Mars (even if it is, as is automatically the case in all photos, a world past) a future world, maybe our future world, at least insofar as we are speaking about it in ordinary language. That is perhaps a concession to the fact that the presence glimpsed on Mars in photos is precisely a projection of telepresence, a technological avatar of our being there. Which means that when we express the judgement that the photo of Mars shows reality, and reality in the normal sense, we are not saying the same thing as saying that a photo of our world shows reality. If anything, our claim about the reality in the Martian photo expresses our faith in the effectiveness of what we might call realist magic of photography: our belief in the reality of technology's capacity to automatically capture reality.

We acknowledge that things are present on Mars, but we know that this is an analogy, but one that seems to resonate with the ways in which we use the words real and really. This a question of grammar, a question of where we stand relative to what we are ready to call reality within an ordinary discourse that makes everyday sense which differentiates Cavell's world viewed from the Martian world viewed, and ought to be taken as orienting the claims being made in the sections that follow.

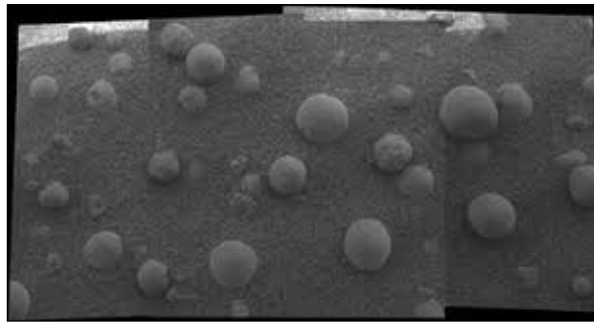
6) On Words and Things on Mars

It may seem that our best bet for naming Martian objects and articulating Martian reality are the procedures of natural science. Describing Mars is the job of planetary geomorphologists. Victor Baker, perhaps the most philosophically inclined of them all, describes his work as a "reality-dominated" as opposed to "theory-dominated" science.³⁸ It moves not from concrete to abstract, but employs the abstract to make sense of the concrete, with the concrete here referring to the reality screened. To this

38. Victor Baker, "Extraterrestrial Geomorphology: Science and Philosophy of Earthlike Planetary Landscapes," *Geomorphology* 7 (1993): 21.

extent, we could understand Martian geomorphology as the historical science of naming remotely sensed things on Mars via science-driven explanations of how these things came into being over the course the planet's history. Yet even if Martian geomorphologists and experimental science employing Mars analogues offer special insight into naming, there is still space for philosophy, for the question of which word to choose, and the mere question as to whether there is a question, which is also a question regarding the inevitable degree to which we ourselves as Earthlings are the problem and the source of our skepticism, attests to the truth of skepticism.

In extremis, science does not resolve borderline cases so much as discover them.³⁹ Yet before passing to a challenging case, let us consider a few normal cases.



Nasa Opportunity Rover Photo.

Take the round things in this picture from the Mars Opportunity rover. The rover has many sensors other than an optical camera, and their data offers insight. From abstract analyses, scientists know that in their chemical composition is not absolutely alien.⁴⁰ They are made of hematite. We might wonder if a terrestrial equivalent exists.

39. It may seem that the choice of the specific lexical terms and their origins makes no difference. For example, we might imagine that the sense of the word comes from their function within the sentences, much as it may seem—following an argument made by Gustafsson, that the actual material of chess pieces matters not for playing the game of chess (that it would be the same game, for example, if it were played with other than standard pieces). However, this seems at most partly true, not so much with respect to the playing of the game (in this case science) but with respect to the interpretation of the game (here moving back to chess). For example, given that the characters in chess are political figures, we are inclined to call it a strategy game. But if the queen was a rat, and the pawns were diseases, perhaps we would say that is a game about how the devil, or at least badness, uses cleverness to destroy the world. The difference is not nothing. Martin Gustafsson, “Wittgenstein on Using Language and Playing Chess: The Breakdown of an Analogy and Its Consequences” in Sofia Miguens, *The Logical Alien: Conant and his Critics* (Cambridge, MA: Harvard University Press, 2020).

40. The sensors included on Opportunity include: 1. Panoramic Mast Assembly a. panoramic cameras (Pancam) b. navigation cameras (Navcam) c. miniature thermal emission spectrometer (Mini-TES) 2. Mössbauer spectrometer (MB) 3. alpha particle x-ray spectrometer (APXS) 4. magnets (to collect dust particles) 5. microscopic imager (MI) 6. rock abrasion tool (RAT). Data from Asif A. Siddiqi, *Deep Space Chronicle: A Chronology of Deep Space and Planetary Probes, 1958-2000* (Washington, DC: NASA, 2002), 125.

In the language of the literature, it doesn't: they are called "Martian blueberries" (sometimes with, sometimes without the scare quotes). This expresses some aspect of what we are inclined to say. They look like blueberries, and (at the same time), they are not what we would ordinarily call blueberries. Ironically, the familiar word keeps the object alien while allowing us to speak about it. Now consider the implications of calling them marbles. Now in a certain sense marble could fit. But it would also generate confusions: marble already exists as a semi-technical term for certain terrestrial things. Below are moqui marbles, round hematite balls found in the Utah desert:



Moki Hill – HITTR, Grand Staircase.

If blueberries were "marbles," that would articulate a strong analogy inducing an expectation that there exist "marbling" processes on both Earth and Mars. But "blueberries" holds in abeyance this grammatically elicited process. When we speak of blueberries, and to quote Cavell: "the paths of action, the paths of words, are blocked," or rather, they are opened and shut at simultaneously.⁴¹ Thus, our hematite spheres remain alien until more data can be acquired and or new words imagined. That is not a tragedy. Should we wish to unblock marbling as a multi-planetary phenomenon, we could do more research.

Sometimes that will liberate our desire to project our words into other worlds, and so dispel skepticism, other times it won't, and skepticism towards our own expressive capacities will have proven an epistemic virtue. One question debated among the first generation of geomorphologists was whether there were "canyons" on Mars.

41. Cavell, *The Claim of Reason*, 125.

Many assumed that there were, because they saw familiar shapes in the images from the Mariner and Viking missions. However, as Robert Sharp argued in a 1973 article, those features could be “closed depressions” or “fretted troughs.” Even if they looked like “the deeply dissected high plateaus of the western United States” there was no evidence that they “compose a normally integrated trunk and tributary system” nor that they owed their genesis to “running water.”⁴² Sharp was wrong: there was once abundant liquid water on Mars, so scientists now speak of there being canyons. But he was right to provisionally seek out ways of alienating that world, for in the absence of cultivated alienation whole lines of questioning are closed.

Our examples stand inside scientific practice, as if the only thing that matters with respect how we use our words is the cultivation of epistemic virtues such as curiosity and skepticism. Yet not all word choices only bear on scientific practice. Some bear on the future of humanity and the planet. Deciding whether there is “soil” on Mars is one such case.

7) Soil or Regolith?

When looking at the previous images many may fancy having seen soil. This is a proof, in a way, that soil belongs to the lexicon of everyday language. The alternative term, regolith, is neither ordinary nor richly invested in cultural practice. People use soil all the time, and more to the point, soil is a word that plays a deep role in how we imagine the world and the nature of nature. We use soil, in a general way, to express what the ground is. But in this way soil often plays a grounding role in how we imagine the structure of the historical logic of nature. In Walt Whitman’s poem, “Song of Myself,” soil articulates metonymically the matrix from which the entelechy of life itself springs:

I celebrate myself, and sing myself,
 And what I assume you shall assume
 For every atom belonging to me as good belongs to you.
 I loafe and invite my soul,
 I lean and loafe at my ease observing a spear of summer grass.

42. Robert Sharp, “Mars: Troughed Terrain,” *Journal of Geophysical Research* 78, no. 20 (1973): 4063.

My tongue, every atom of my blood, form'd from this soil, this air,
 Born here of parents born here from parents the same, and their parents the
 same,
 I, now thirty-seven years old in perfect health begin,
 Hoping to cease not till death.
 Creeds and schools in abeyance,
 Retiring back a while sufficed at what they are, but never forgotten,
 I harbor for good or bad, I permit to speak at every hazard,
 Nature without check with original energy.⁴³

Soil here is the fount and foundation of American being, that from which springs, poetically, the nation, since Whitman, in these lines, is finding and founding the republic in verse, composing that democratic hymn for and from the American land: *Leaves of Grass*. We use soil, also ordinarily, to speak about things that are soiled, things that are ruined. Elsewhere in *Leaves*, this double sense of soil is spun into a kind of metaphysical paradox making the word encompass the mystery of terrestrial life itself, such that the sense of soil involves an entity that brings contraries together within a paradoxical composting union:

Now I am terrified at the Earth, it is that calm and patient,
 It grows such sweet things out of such corruptions,
 It turns harmless and stainless on its axis, with such endless successions of diseases'd corpses,
 It distills such exquisite winds out of such infused fetor,
 It renews with such unwitting looks its prodigal, annual, sumptuous crops,
 It gives such divine materials to men, and accepts such leavings from them at last.⁴⁴

To speak like an astrobiologist, soil in Whitman is the ordinary language answer to the Fermi paradox's question regarding why we are alone in our solar system: on Earth alone there is soil, elsewhere there is mere regolith. I invoke Whitman here not because

43. Walt Whitman, *Leaves of Grass, and Selected Prose* (New York: Modern Library, 1950), 18.

44. *Ibid.*, 221.

we all use soil as he does, only to suggest that there is more culture and Earth built into soil than we might imagine. That said, my reference to Whitman is not totally arbitrary. As Jed Rasula's fine study *This Compost* shows, Whitman's soil fertilized a rich crop of subsequent American poetry, such that the modernist poetic idiom of the United States might be said, with little exaggeration, to bloom from recompositions and decompositions of Whitman's discovery of the poetic power of American soil.⁴⁵ In sum, for earthlings, and for American earthlings in particular, soil is not just any word.⁴⁶

Thus, to say that there is soil on Mars, and to say so as a scientist, is to say that others can project, with all the epistemic confidence encouraged by science, this ordinary but grounding word, out beyond our soil, out into space, out into the terrain of the future. If the scientific data showed that Martian surface matter just was identical to terrestrial surface matter, there would obviously be soil on Mars, and so there would be no space for philosophy. But therein lies the rub. Terrestrial soil and Martian regolith are not chemically identical. Saying that there is soil on Mars not like saying there is hematite. Until 2017 there were institutional conventions which forbid anyone from claiming that there was soil on Mars. Soil, according to the SSSA (Soil Science Society of America) Glossary of Soil Science Terms, was defined as follows: "The unconsolidated mineral or organic material on the immediate surface of *the earth* that serves as a natural medium for the growth of *land plants*."⁴⁷ But now, thanks to lobbying by planetary scientists, it reads: "The layer(s) of generally loose mineral and/or organic material that are affected by physical, chemical, and/or biological processes at or near the planetary surface and usually hold liquids, gases, and biota and support plants."⁴⁸ This redefinition of soil did not result from a new discovery or confirmation: only from a desire

45. Jed Rasula, *This Compost: Ecological Imperatives in American Poetry* (Athens, GA: The University of Georgia Press, 2012).

46. This claim can of course be extended to nearly every culture, though in raising the question of the soil, and in claiming it as universal, it would seem immediately to demand that we attend to differences and incommensurabilities, the senses in which *sol*, or *terre*, or *boden*, or *Erde* or even just ground are or are not soil, and that is only to speak of the words used in the languages in which I myself most frequently sojourn.

47. The full definition reads as follows: (i) The unconsolidated mineral or organic material on the immediate surface of the earth that serves as a natural medium for the growth of land plants; (ii) The unconsolidated mineral or organic matter on the surface of the earth that has been subjected to and shows effects of genetic and environmental factors of: climate (including water and temperature effects) and macro- and microorganisms, conditioned by relief, acting on parent material over a period of time. A product-soil differs from the material from which it is derived in many physical, chemical, biological, and morphological properties and characteristics. See Harold van Es, "A New Definition of Soil," *CSA News* 62, no. 20 (2017).

48. *Ibid.*

to institutionalize and so justify the practice of projecting that ordinary terrestrial word into alien contexts. As J. F. Bell et al. explained in a paper published in *The Journal of Geophysical Research*, the term typically being used to talk about what they were petitioning to call soil was “regolith,” but as they were inclined to use it, regolith seemed to refer to “the thick, jumbled-up layer of rocks and debris created on an ancient planetary surface like the Moon or Mars,” but didn’t seem to properly describe the “fine-grained, porous, uppermost layers” of the Martian surface, while they felt that soil did.⁴⁹ In other words, what they felt was the right word wasn’t available. But rather than coin a new one, as Bell explains elsewhere (in a popular history of the discovery of Mars written with William Sheehan), they simply wanted to employ “plain old ‘soil’” as opposed to some monstrous term like “fine-grain regolith,” judging the latter “too cumbersome” and too “jargonistic.”⁵⁰ This is a kind of ordinary language argument, but one that rather than wrangling with the salutary skepticism that is raised by monstrous terms, seeks to repress it, and so to treat the extraordinary as a mere extension of the ordinary by fiat. In doing this, Bell et al. fail to acknowledge the weight of moral responsibility implicit in making claims “to be speaking with a universal voice.”⁵¹ In the stead of a way of wording that retains fidelity to the alien and so throws us back upon our faculties, our limits, and so also alerts us to our responsibilities towards others whose alterity we acknowledge, we find, in the transportation of the ordinary word “soil” onto that alien world, a failure to wrangle seriously with the consequences of setting conventional precedents with respect to what we say, all pitched, so it seems, in the name of convenience.

8) Soiling Astrofuturist Dreams

But is convenience all that is at stake? In saying there is just plain old soil on Mars, we also affirm we don’t need education. We eliminate the fear and even the respect

49. J. Bell et al., “Mineralogic and compositional properties of Martian soil and dust: Results from Mars Pathfinder,” *Journal of Geophysical Research*, v. 105, 1721-1755 105 (2000): 1722, <https://doi.org/10.1029/1999JE001060>.

50. William Sheehan and Jim Bell, *Discovering Mars: A History of Observation and Exploration of the Red Planet* (Tucson: University of Arizona Press, 2021), 322.

51. Cavell, *Conditions Handsome and Unhandsome: The Constitution of Emersonian Perfectionism* (Chicago, IL: The University of Chicago Press, 1990), 118.

for the alien that is so manifestly present in horror fiction writing such as the passage from Lovecraft that I have cited above. In such writing the initial impetus comes from the acknowledgement of the truth of skepticism, the recognition of the insufficiency of our criteria, what Lovecraft once described as “the inability of the human mind to correlate all its contents.”⁵² But science (or rather shallow scientism), often arises out of a refusal of skepticism and the cognitive and localizing limits that it brings to light, and one way in which it does this is by repressing all trace of the alterity of the alien by translating it and metaphysically naturalizing it into the everyday language of Earth. What this does in turn is breed space colonization fantasies. But these are dangerous fantasies predicated on a lack of respect for the difference of the Martian biosphere, a lack of care towards that wild planet, and a lack of attention to the tight webs of debt and dependency entangling our human forms of life and imagination with the fertile soil of our home planet.

Consider with critical intent how Martian soil functions in the thinking of Robert Zubrin, the president and founder of the Mars Society. Zubrin’s *Case for Mars* is a vitalist pitch for settling space. He sees the need for a Martian settlement in terms of Frederick Jackson Turner’s frontier thesis.⁵³ More specifically, he follows Turner in believing that the growth of America “resulted primarily from the great frontier,” and he asserts that the closure of their frontier has generated an existential crisis for American identity, a crisis that can only be averted if the frontier is opened again, starting with Mars.⁵⁴ For “without a frontier from which to breathe new life, the spirit that gave rise to the progressive humanistic culture that America has represented for the past two centuries is fading.”⁵⁵ But re-rooting the frontier spirit on Mars requires vigorous soil, or at least something that has the paradoxical properties of making life spring from death that Whitman associates with the American ground. Yet if we do know anything about Martian regolith it is that it appears biologically dead. Nevertheless, for Zubrin, who rigorously applies the paradoxical speculative logic of soil with its (to quote Eliot’s *Wasteland*) quality of breeding “Lilacs out of the dead land” and growing life “Out of this stony rubbish,” this apparent deadness must hide a double potency: “on the

52. Lovecraft, *Necronomicon*, 201.

53. Frederick Jackson Turner, *The Frontier in American History* (Norwalk, CT: Easton Press, 1989).

54. Robert Zubrin, *The Case for Mars: The Plan to Settle the Red Planet and Why We Must* (New York: Free Press, 2011), 324.

55. *Ibid.*, 325.

basis of what we know now, Martian soil is likely to prove an excellent medium for crop growth, considerably better than most land on Earth, in fact.”⁵⁶ Is this accurate? Must we acknowledge this is what we too would say? As an expression of terrestrial faith in the vitalist world building power of the word soil it is totally on pitch. But are these statements right about Mars or only about the planet in our language, only expressions giving witness to what we learned when we learned the world “soil”?

One response is to say that we don’t know, and won’t, until we go. Another is to say that we have reasons for doubt. No, more strongly: science may well claim that the logic of terrestrial soil is inverted with respect to the surface matter on Mars. Most Martian surface regolith is, as Simon Morden has pointed out, “contaminated with chlorine-rich compounds called perchlorates at a level that is lethal to humans.”⁵⁷ If this is right, then Martian regolith would need to be artificially de-soiled before even having a hope of becoming soil, which would make it have exactly the opposite essence compared to terrestrial soil, which soils naturally, and brings life forth from soil. This alternate logic, call it (Martian “soil” = –(“soil”)) might actually better reflect what we know about the historical telos or, to employ astrophysicist Adam Frank’s term, “the fate” of Mars.⁵⁸ It would explain its trajectory from the Noachian to the Hesperian to the Amazonian, from a planet that had surface water and possibly life to one that by and large seems to no longer host it or be capable of hosting it. That is not to be taken as a scientific claim about Mars, but one bearing only on language, it is an application of the aversive, dialectical reasoning rooted in skepticism as a guide to thinking about the ethics of what we might say.

Talk of Martian soil seems to consistently breed monsters. It promotes blind astrofuturist optimism, an epistemic stance might be better replaced by one of humility or even the cultivated estrangement that emerges when passing one’s time reflecting on the screening of reality. Let us look now at Andy Weir’s book (and the film) *The Martian*. Both have been celebrated, for example by the literary critic Michael Gormley, for a “well-researched approach to Mars missions” and the “realistic, hy-

56. T. S. Eliot, *Collected Poems, 1909-1962* (Franklin Center, PA: Franklin Library, 1976), 53. Zubrin, *The Case for Mars*, 212.

57. Simon Morden, *The Red Planet: A Natural History of Mars* (London: Eliot and Thompson, 2021), 204. The same point is made in Sylvia Ekström and Javier G. Nombela, *Nous ne vivrons pas sur Mars, ni ailleurs* (Lausanne: Editions Favre, 2020), 137.

58. Adam Frank, *Light of the Stars: Alien Worlds and the Fate of the Earth* (New York: W. W. Norton & Company, 2018).

pothetical status” of the narrative.⁵⁹ For Earthlings enthusiastic about the virtues of Martian soil, *The Martian* is thus a work of realism, a valid projection and screening of a possible state of being present on Mars. Yet this belief rests on the shaky logic of Martian soil. Consider the ex-alienating work done by soil in this key passage, an explanation of how Watney, Weir’s hero, “colonizes” Mars by soiling its soil, thus making life bloom on that stony ground:

Once I get some Martian soil in here, I can mix in the shit and spread it out. Then I can sprinkle the Earth soil on top. You might not think that would be an important step, but it is. There are dozens of species of bacteria living in Earth soil, and they’re critical to plant growth. They’ll spread out and breed like ... well, like a bacterial infection. People have been using human waste as fertilizer for centuries. It’s even got a pleasant name: “night soil.” Normally, it’s not an ideal way to grow crops, because it spreads disease: Human waste has pathogens in it that, you guessed it, infect humans. But it’s not a problem for me. The only pathogens in this waste are the ones I already have. Within a week, the Martian soil will be ready for plants to germinate in. But I won’t plant yet. I’ll bring in more lifeless soil from outside and spread some of the live soil over it. It’ll “infect” the new soil and I’ll have double what I started with. After another week, I’ll double it again. And so on. Of course, all the while, I’ll be adding all new manure to the effort.⁶⁰

Weir gets Whitman’s (or America’s) usage of “soil” right. Which presumably means that these words feel right to us, even if the Martian regolith as seen by science can’t support the narrative’s weight. Which implies that Weir’s realism derives from our planet and is indebted to our own narrow experience. Rather than reading this passage as suggesting that that re-rooting our future on Mars is a realistic proposition, we ought to read it as precisely demonstrating the deep terrestriality of our language and so also the Earth’s profound claims upon what we are inclined to imagine as reasonable or realistic.

59. Michael Gormley, *The End of the Anthropocene: Ecocriticism, the Universal Ecosystem, and the Astropocene* (Lanham, MD: Lexington Books, 2021), 71.

60. Andy Weir, *The Martian* (New York: Broadway Books, 2016), 14.

In *The Claim of Reason*, Cavell remarked that “psychophobia” can mean “both ‘fear of one’s inner life’ and ‘fear of ghosts,’” explaining that “it can motivate intellectuality as well as anti-intellectuality.” He goes on to clarify that “philosophy can be the fruit, or work in the root, of either.”⁶¹ Shifting the language here a bit, we can say that philosophy can be motivated not only by ghosts but also aliens, and that philosophy explores the fear of encountering the planetarity of the self when confronting the alien. Accepting that there is soil on Mars conceals the alien, and in so doing denies skepticism and philosophy. The inclination towards skepticism is not to be understood as claiming Mars is unapproachable by the intellect, but rather as acknowledging that “the limitation of certainty” can also be seen as a kind of “knowledge.”⁶² Self-limitation matters here, because Mars on screen seems so available, so banal and present, that we may need to make poetical or philosophical efforts to remind ourselves that it is alien. Clark Ashton Smith, in a stellar example of weird place writing, described a pastoral scene in which a bizarre and literally metaphysical doubling of the ordinary objects in their presence becomes manifest, summoning up before his narrator’s eyes a landscape that is a “wraith-like projection of itself, the actual landscape leered with the same infernal and vampirish air which it had worn by day. But it seemed now that the place was no longer still—that it seethed with a malignant secret life.”⁶³ Such writing opens the alien in the familiar, just as becoming aware of the screen, and our words as screen, helps us to see Mars with a haunting kind of doubleness. But then again what is needed for wording Mars is *not* what is being done here. Ashton Smith’s alienation bears on what is indeed familiar, while we are not trying to render Mars alien as to keep it at its proper distance, given that the seeming reality of Mars is, for all intents and purposes, far less apparently horrifying than could have been imagined. Thus, wordings of that world need not embrace the language of dark fantasy, but they should in strategic cases heighten our sense of alienation. How to bring this about, and what this might provoke, are in Cavell’s words “philosophical investigations of the fact that we are earthlings.”⁶⁴

61. Cavell, *The Claim of Reason*, 21.

62. *Ibid.*, 86.

63. Clark Ashton Smith, *The Dark Eidolon and other fantasies*, ed. S. T. Joshi (New York: Penguin Books, 2014), 165.

64. Cavell, *The Claim of Reason*, 32.

9) *Les Fleurs de Mars*

“A statue, a stone, is something whose existence is fundamentally open to the ocular proof. A human being is not. The two bodies lying together form an emblem of this fact, the truth of skepticism.”⁶⁵ One could say that everything in the preceding runs contrary to the first part of Cavell’s claim, at least to the extent that seeing screened stones on Mars may not necessarily justify the rightness of our inclinations to say what we would ordinarily say they are. Thus, and for this reason, Martian stones can become emblems of the truth of skepticism, of the fragile but also rich relationship between human reasoning in ordinary language and our limited but not lacking capacity to make and acknowledge judgments about alien worlds.

Let us embellish our stony emblem. The unnamed thing we glimpsed at the beginning of this essay is called a “Martian flower” by scientists. That figure is felicitous, a fine antidote to Martian “soil.” As the planetary scientist William Hartman once wrote, the first images of Mars nearly convinced researchers that a world that once was believed to be “teeming with life from pole to pole” was possibly a “geologically dead planet,” while subsequent images revealed that this was not a place in which “nothing ever happens” but rather one teeming with lithic history.⁶⁶ Against this background of the happening of history without evidence of biological life the very idea that Mars brings forth flowers of stone has a kind of poetic justice. Consider that the flower has long been a figure for rhetorical flourishes in our terrestrial tongues, for example in L’Infortune’s *Le Jardin de Plaisance et fleur de rhétorique* (Paris, 1500), or in this line from Voiture, an explanation of precisely how to use verbal flowers in the art of seduction: “*j’employerais pour l’une d’elles, toutes les fleurs et toutes les graces de la rhétorique; et luy escrirais dès cette heure une lettre d’amour, si galante, qu’elle serait disposée, de m’escouter à mon retour.*”⁶⁷ The fact that the Martian flower is at once a figure and *le mot juste* brings emblematic satisfaction: it paradigmatically reflects a proper way of speaking of the alien, figuring our desire relative to the alien as fostering potentially self-deceptive language, and even offering

65. Ibid., 496.

66. William K. Hartmann, *A Traveler’s Guide to Mars* (New York: Workman 2003), 1 and 23.

67. Vincent Voiture, *Lettres* (1648), quoted in Danielle Bouverot, “La rhétorique à travers les siècles chez les écrivains de FRANTEXT,” *Verbum* XVI (1993): 9.

indices with respect to how we might want to orient our judgment towards Martian objects as Earthlings: with a gaze that is aesthetic, disinterested, curious. With respect to this point, let us note that Kant, writing of terrestrial flowers in his *Critique of the Power of Judgment*, claimed that to the cultivated judge they are “are free natural beauties” appreciated for themselves and not for what they might contribute to knowledge or utility:

Hardly anyone other than the botanist knows what sort of thing a flower is supposed to be; and even the botanist, who recognizes in it the reproductive organ of the plant, pays no attention to this natural end if he judges the flower by means of taste. Thus, this judgment is not grounded on any kind of perfection, any internal purposiveness to which the composition of the manifold is related.⁶⁸

The term Martian flower, then, seen as a verbal projection of what we as terrestrials ordinarily call flowers onto the alien surface, can be said to orient us away from a teleological relationship to the objects on the planet in which all is valued for its availability to settlement or economic exploitation towards an attunement that is contemplative and appreciative, saying more and less than it appears to say. Martian flowers are a wonder and a beauty, and not just because we are able to see them on Mars viewed, but also for what they reveal to us about ourselves as Earthlings and the planarity of our language, starting with the debt, the soil, we owe to the planet for how and what we imagine to be the meaning of life.

10) Astroculture for Growingups

There is a much-quoted phrase from the Russian rocket scientist Konstantin Tsiolkovsky: “Earth is the cradle of humanity, but one cannot live in a cradle forever.”⁶⁹ To

68. Immanuel Kant, *Critique of the Power of Judgment*, trans. Paul Guyer (Cambridge and New York: Cambridge University Press, 2000), 114.

69. Quoted in Dave Williams and Elizabeth Howell, *Why am I Taller?: What Happens to an Astronaut's Body in Space* (Toronto: ECW, 2002).

space colonization enthusiasts the above may seem to run contrary to this prediction. But that is to misread me. I am making no predictions about any possible future on Mars, nor am I claiming that Mars is ghoulish and ought ever to be described as such. My claim is that part of growing up into an age in which we can understand ourselves in terms of what lies beyond the planet is discovering how to deal with the new worlds on our screens, and part of this involves also thinking about the degree to which we ourselves, and our languages and the lines of argument that they elicit, are not universal but planetary.

This essay is only a fragment from what would be a critique of planetary reason. But I doubt that one could do more than make local headway on a broader critique at present. The “of” here joining “critique” and “planetary” needs to be understood as articulating what Hans Blumenberg called the “subtle paradox” of the subjective and the objective genitive, the fact that at present, any critique that we might make of the planetarity of our reason as it is expressed in ordinary language is carried out within and by that same and ambiguously limited planetary reason and language.⁷⁰ For Earthlings on Earth there is no escaping the occasional planetary provincialism of our ordinary language, there is at best a carefully reflected acknowledgement of this fact and a careful practice of probing the limits of our projective capacities. Planetizing our reason, becoming aware of the degree to which our own senses of what makes sense keep us from appreciating alien worlds and even our own planet, amounts to finding ways of cultivating our distance from alien worlds even as we come closer and closer to being present on at least some of them.

Writing when he did, not in the age of Space 2.0 but in the post-Apollo moment, Cavell lacked a sense of the urgency of self-alienation. “The fact that we are in a given place on Earth is as utterly contingent as the fact that we are on Earth. The fact that we are in one place at any given time is as necessary as the fact that, once on Earth, we are until the end earthling.”⁷¹ But the question arises as to whether in an age when Mars is screened, we can feel content to think we understand the meaning of being an Earthling without a deep engagement with what is not of the Earth. More to the point, it is increasingly clear that achieving an understanding of what it means

70. Hans Blumenberg, *Phänomenologische Schriften 1981-1988*, ed. Nicola Zambon (Berlin: Suhrkamp, 2018), 15.

71. Cavell, *The World Viewed*, 180.

to be on the Earth, and to be an Earthling, matters politically and ethically. Insofar as we live in the Anthropocene, in what Dipesh Chakrabarty has described as our planetary age, our understanding of our own planet and its plight is deeply entangled with our understanding of other planets and other planetary systems, with grasping the differences and similarities between the planetary telos that fostered our soil that which yielded Martian regolith. In light of the weight of this planetary comparative on our understanding of ourselves as historical subjects, we now see the future of life on this planet as menaced, and so some are dreaming, and acting on the dream, of becoming multi-planetary. By 2030 astronauts will have returned to the moon, this time with plans to build a permanent base. Space entrepreneurs such as Elon Musk claim we will be landing on Mars by 2050. Expressing their appreciation for the value of these projects, William MacAskill and other Long-Termist philosophers argue we are morally obligated to invest in colonizing Mars and the solar system.⁷² This is serious talk, it bears on how we inhabit the Earth and how we act relative to other earthlings. But as talk, as moral philosophy expressed in ordinary language, it ought to be evaluated via a critical account of the planetarity of that same ordinary language.

Whether we will be earthlings to the end remains an enigma, but we can now, by exploring the projections of ordinary language into alien contexts, identify bewitchments cast on our thinking by the terrestrial bias of language as it encounters alien worlds. Carrying out this critique, discovering the ways in which our expansion beyond the limits of the Earth can throw us back on our criteria and so demand that we grow and cultivate ourselves and our language in its planetary and extra-planetary dimensions, coming to know where it is universal, where it is terrestrial, and also where it requires reformulation into a sometimes alienating tongue, can help to orient us towards not only possible futures but towards a keener awareness of our limits and dependencies, our debts and oversights, our reality as simultaneously self-reliant and other-enwhirled. This extraordinary ordinary task seems to fit perfectly within philosophy, or as Cavell called it: “the education of grownups.”⁷³ Or perhaps better, the education of growing ups, for if we have, at least with respect to the horizon across which we can felicitously or infelicitously project our ordinary words, left our

72. William MacAskill, *What We Owe the Future* (New York: Hachette, 2022).

73. Cavell, *The Claim of Reason*, 125.

cradle behind, we have not achieved maturity, but only found ourselves within a new circle, a new and enigmatic occasion for posing a question asked by Emerson and taken up by Nietzsche and Cavell: “Where do we find ourselves?”⁷⁴

74. Emerson, *Essays & Lectures*, 342.