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Wittgenstein on Non-Mediative Causality

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IN THE LATE AUTUMN OF 1947 Wittgenstein dictated a selection of manuscript material to a typist¹ that contains some remarks so striking that they merit extensive quotation:

903. No supposition seems to me more natural than that there is no process in the brain correlated with associating or with thinking; so that it would be impossible to read off thought-processes from brain-processes. I mean this: if I talk or write there is, I assume, a system of impulses going out from my brain and correlated with my spoken or written thoughts. But why should the *system* continue further in the direction of the centre? Why should this order not proceed, so to speak, out of chaos? The case would be like the following—certain kinds of plants multiply by seed, so that a seed always produces a plant of the same kind as that from which it was produced—but *nothing* in the seed corresponds to the plant which comes from it; so that it is impossible to infer the properties or structure of the plant from those of the seed that it comes out of—this can only be done from the *history* of the seed. So an organism might come into being even out of something quite amorphous, as it were causelessly; and there is no reason why this should not really hold for our thoughts, and hence for our talking and writing. (*Zettel* 608)

904. It is thus perfectly possible that certain psychological phenomena *cannot* be investigated physiologically, because physiologically nothing corresponds to them. (Z 609)

905. I saw this man years ago; now I have seen him again, I recognize him, I remember his name. And why does there have to be a cause of this remembering in my nervous system? Why must something or other, whatever it may be, be stored-up there *in any form*? Why *must* a trace have been left behind? Why should there not be a psychological regularity to which *no* physiological regularity corresponds? If this upsets our concepts of causality, then it is high time they were upset. (Z 610)

¹TS 229 (dictated in late autumn 1947, from manuscript MS 134, remarks dated April 4, 1947), posthumously published as *Remarks on the Philosophy of Psychology*, vol. 1, trans. G. E. M. Anscombe (Chicago: University of Chicago Press, 1980), abbreviated as *RPP/I* in what follows. I have changed the translation of the last word in §906, and the last word in §909.

906. The prejudice in favor of psycho-physical parallelism is also a fruit of the primitive conception of grammar. For when one admits a causality between psychological phenomena, which is not mediated physiologically, one fancies that in doing so one is making an admission of the existence of a soul *alongside* the body, a ghostly soul-nature. (cf. Z 611)

909. Why should not the initial and terminal states of a system be connected by a natural law, which does not cover the intermediary state? (Only don't think of *efficacy/influence* [*Wirkung!*]) (Z 613)

918. . . . Well—but now that the structure of the eye is known—*how does it come about* that we act, react, in this way? But must there be a physiological explanation here? Why don't we just leave explaining alone?—But you would never talk like that, if you were examining the behavior of a machine!—Well, who says that a living creature, an animal body, is a machine in this sense?— (Z 614)

Lest you think, or hope, these ideas were just a passing fancy of Wittgenstein's, it is worth noting that these passages were among the ones that he cut from this typescript to save in a box and rearrange and perhaps revise for future use. They were published posthumously as *Zettel*.²

What are we to make of these striking ideas? Do they hint at “mystical vitalism”? Is there an intellectual trajectory along which they can be located and appreciated, even if perhaps ultimately rejected? Or is he simply making a “natural” objection to reductionism about memory?³

In an earlier publication I briefly offered a motivation for these views,⁴ but I now have more to say and wish to try again. Earlier I saw these passages primarily in relation to Wittgenstein's other views about mental phenomena, but I now think something can be gained by seeing them in relation to his views about causality. Unfortunately causality is not a topic about which Wittgenstein had a lot to say, and, consequently, his views on causality have not been much discussed in the scholarly literature.

By far the largest number of comments Wittgenstein makes about “cause” are intended to distinguish between the causal antecedents of a phenomenon (such as aesthetic appreciation, or an action) and its reasons, grounds, or motives. In these cases Wittgenstein's point is that he is not interested in the former—the cause—but in the latter. It is somewhat surprising, then, to find him making claims about what is usually, from his point of view, irrelevant. In

² *Zettel*, trans. G. E. M. Anscombe (Berkeley: University of California Press, 1967). Abbreviated as *Z* in what follows. Anscombe's translations in *Zettel* are sometimes different from her translations in *RPP/I*.

³ Stephen Stich accuses Wittgenstein of mystical vitalism in his review of *RPP/I* in the *Times Literary Supplement*, April 3, 1981, 374. Peter Hacker characterizes the remarks as completely natural in *Wittgenstein: Mind and Will*, vol. 4 of *An Analytical Commentary on the “Philosophical Investigations”* (Cambridge, MA: Basil Blackwell, 1996), 502n.

⁴ “Wittgenstein and Neuroscience,” *Synthese* 78 (1989): §5

such cases one can imagine him claiming, for example, that for all we know, or for all he cares, things *could* be as he suggests in these passages—for it matters not at all how they are for the purposes of our ordinary talk about memory, the mind, etc. On this view, he has no reason to doubt the existence or possibility of causal explanations, he is only rejecting their relevance to philosophical issues.

In fact Colin McGinn, in an admirable attempt to make some sense of these passages,⁵ construes them in accordance with this approach. McGinn says that Wittgenstein makes the mistake of inferring a metaphysical possibility (things could be this way) from an epistemic possibility (for all we know, and so far as our ordinary practices go, things could be this way).

But Wittgenstein is not asserting a mere possibility in which he is not, in any case, very interested. He is asserting something stronger, and he is taking a direct interest in it.

What exactly is Wittgenstein asserting (and not asserting) in these passages? In keeping with his typical style he asks many questions. Of the 21 sentences I have quoted, ten are questions. Admittedly, nearly all of them seem rhetorical—in the sense that he seems to have a certain answer in mind. But still, he is not explicitly asserting that answer. Of the remaining indicative sentences, the central ones are all couched in a non-assertoric mood: “No supposition seems to me more natural than . . .”, “The case would be like the following . . .”, “. . . might . . .”, “It is thus perfectly possible that . . .”. So caution is advised. Nevertheless, the tone of the passages is unmistakable: Wittgenstein apparently commits himself to certain possibilities, sees them even as likely,⁶ and, most strikingly, seems to hope they are actualized.

Next, notice that Wittgenstein mentions three different realms in which causality is operative. One is the realm of the brain and its connection or relevance to mental phenomena (associating, thinking, remembering, and behavior, talking, writing). A second realm is that of plants and their propagation from seeds. Third, in the last remark he mentions machines. In that last remark it is clear that he wants to say different things about these different realms, since he contrasts a machine with “a living creature, an animal body.”

So what differences does Wittgenstein think there are between the realms, so far as causality is concerned?

In my opinion Wittgenstein is here making no claim about how things are, or might be, with plants. I think he is not using plants as another example of what he is claiming about brains. Rather, I think he is here using the case only

⁵ *Wittgenstein on Meaning* (Oxford: Basil Blackwell, 1984), 114–5.

⁶ Cf. also *Last Writings on the Philosophy of Psychology*, vol. 1 (Chicago: University of Chicago Press, 1982) §504. The generally hypothetical tone of his remarks, however, fits well with the strategy of loosening the grip of a picture on us. As will become clear, that, I believe, is his main concern.

to *illustrate* what he is claiming (is possible) for brains. We will come back to the case of plants, however, when we consider the development of Wittgenstein's views on causality. The final quoted remark suggests that Wittgenstein is making no special claims about causality at all as it relates to the realm of machines.

What then is Wittgenstein saying about causality in the realm of the brain? The first thing to say is that Wittgenstein is not questioning the existence of causality in the realm of mental phenomena ("... when one admits a causality between psychological phenomena..." *RPP/I* §906). And he is not claiming there is in the self anything like a causeless originator of action.⁷

Next, Wittgenstein is dismissing the need for a correlation between brain processes and thoughts. What exactly Wittgenstein means by this sort of "correlation" will require further investigation. But the logically weakest reading of it is that thoughts needn't be *reducible* to brain processes.

That Wittgenstein intends nothing more than this logically weak reading is perhaps suggested by the following passage, found between some of those quoted earlier:

908. Imagine the following phenomenon. If I want someone to take note of a text that I recite to him, so that he can repeat it to me later, I have to give him pencil and paper; while I am speaking he makes lines, marks, on the paper; if he has to reproduce the text later he follows those marks with his eyes and recites the text. But I assume that what he has jotted down is not *writing*, it is not connected by rules with the words of the text; yet without these jottings he is unable to reproduce the text; and if anything in it is altered, if part of it is destroyed, he gets stuck in his 'reading' or recites the text uncertainly or carelessly, or cannot find the words at all.—This *can* be imagined!—What I call jottings would not be a *rendering* of the text, not a translation, so to speak, in another symbolism. The text would not be *stored up* in the jottings. And why should it be stored up in our nervous system? (Z 612)

Two recent interpreters, Michel ter Hark and Peter Hacker, have taken non-reducibility to be the quite limited point that Wittgenstein is making.⁸ They have interpreted Wittgenstein's comments as having the limited aim of attacking Wolfgang Köhler's particular views concerning the trace theory of memory. Köhler maintains that:

all sound theories of memory . . . will be hypotheses about physiological traces. Furthermore, each of these theories will have to assume that the properties of the traces correspond more or less to those of the processes by which they were produced.⁹

⁷He is no advocate of agent-causation. In fact Smythies' notes of Wittgenstein's "Lectures on Freedom of the Will," *Philosophical Occasions: 1912-1951*, Klagge and Nordmann, eds. (Indianapolis: Hackett, 1993) suggest he is a compatibilist.

⁸Michel ter Hark, "Electric Brain Fields and Memory Traces: Wittgenstein and Gestalt Psychology," *Philosophical Investigation* 18 (1995); and Hacker, *Wittgenstein: Mind and Will*, vol.4, 496-503. Ter Hark refers to reduction as "isomorphic correlation."

⁹W. Köhler, *Gestalt Psychology* (New York: Liveright, 1930), 210.

And Köhler goes on to assume that this trace must not only be an isomorphic reduction of the experience that produced it, but that it must endure within the brain to account for the memory it ultimately leads to:

Some authors seem to think that we need not assume an entity which survives during the interval as a representative of that previous experience, and which becomes effective when present circumstances are favorable. They ought to realize what this view implies: a first event would influence a second event, even though between the two there is an empty period, no connection and no continuity. . . . I should hesitate to adopt this notion which is so strikingly at odds with all our fundamental ideas of functional interdependence or causation.¹⁰

That Wittgenstein is responding to Köhler is suggested by some similarity of phraseology and by the fact that in the original handwritten manuscript, between the typed remarks now numbered 908 and 909, there was a passage not included in the typescript that read:

The Gestalt psychologists have served psychology well by demonstrating the unlikelihood of certain hypotheses concerning psychological connections, but they have formulated other worthless hypotheses.¹¹

While some of Wittgenstein's remarks are clearly directed against the need for an isomorphic correlation, the interesting question is whether he goes further than that.

Section 908 (Z 612) may be read as suggesting that he does *not* wish to go further than that. The jottings, which are not in isomorphic (reductive) correlation with the recitation, are sufficient and also, in this case, necessary for the reproduction.¹²

Is he also arguing against the need for *any* kind of correlation at all? Some of the language already quoted suggests so: ". . . physiologically nothing corresponds to them" (904); and "Why must something or other, whatever it may be, be stored-up there *in any form?*" (905). And the discussion of seeds also

¹⁰ W. Köhler, *The Place of Value in a World of Facts* (New York: Liveright, 1938), 234–5. The last-quoted sentence could well be what Wittgenstein is echoing in *RPP/I*, 905 (Z 610), last sentence.

¹¹ MS 134, 106, quoted by ter Hark, 114. What significance is there in the fact that Wittgenstein did *not* include this remark in the typescript? Could it be that he wished to construe his remarks more broadly than the specific target he began with? Surely if meaning is use, then the meaning of the remarks in the *typescript* is not constrained by the more specific context in which they may have been originally composed in the manuscript.

¹² There are two problems with using this passage to support the acceptance of mediation with the rejection of reduction: 1) Though we are asked to imagine the situation as one in which the jottings (and hence mediative mechanisms) are necessary, we can as easily imagine a situation in which they were not necessary. Indeed, the seeds are offered as just such an alternate possibility. 2) While the jottings themselves do not constitute a reduction or isomorphic correlation, one who wished to defend the need for isomorphic correlation could continue to insist that the relevant isomorphic correlation still does exist in the brain, and the jottings are merely a marker for them.

suggests this more radical view. This more radical view could be called the denial of supervenience—viz., that there could be a difference in memories, or resulting plants, without any difference in brains, or seeds.¹³ Or, in other terminology, it could be called the denial of the need for a mediative account of causality—not only that causality need be mediated by something from which (and by itself) the origin or result could be discerned, but that the causality need be mediated by anything, any difference, at all. In the second passage from Köhler quoted above it is this more radical position that Köhler is concerned with. Wittgenstein's disagreement with Köhler takes him beyond merely rejecting the reductive trace theory of memory.

A very common and central strategy of Wittgenstein's is to argue against certain seemingly natural assumptions that we make, or pictures that hold us captive. That seems to be what he is doing here. The issue however is, exactly which picture is he arguing against? Hacker and ter Hark think it is the reductive picture. I think that it is, more radically, the mediative or mechanistic picture (which encompasses the reductive picture as well). That the mechanistic picture does hold us captive is well illustrated by Quine and Ullian when they write:

The physicist Lord Kelvin said a century ago that he never felt he had fully explained a process until he had explained it in terms of impacts; and most of us still feel that this is explanation at its best.¹⁴

And in a passage that Wittgenstein would have been quite familiar with, Oswald Spengler remarks:

Helmholtz observed, in a lecture of 1869 that has become famous, that "the final aim of Natural Science is to discover the motions underlying all changes, and the motive forces thereof, that is, to resolve itself into Mechanics." . . . The specific tendency of all Western mechanics is towards an intellectual *conquest by measurement*, and it is therefore obliged to look for the essence of the phenomenon in a system of constant elements that are susceptible of full and inclusive appreciation by measurement, of which Helmholtz distinguishes *motion* (using the word in its everyday sense) as the most important.

¹³ Ter Hark refers to this more radical position, which he does not attribute to Wittgenstein, as a denial of ter Hark's "first sense" of correlation (122–3). It seems to me that one of the motivations of both ter Hark and Hacker is to find an interpretation of Wittgenstein that is palatable to our ordinary sensibilities. Yet it is clear to me that Wittgenstein sees himself as taking quite striking positions here. I think he sees our ordinary beliefs as soaked with implicit philosophical requirements that he will not accept. We must allow Wittgenstein to be radical in his views, even when they take him beyond what we might find to be palatable. The principle of charity only operates once one's interpretation is consistent with the rest of the evidence. I see ter Hark and Hacker as operating under a principle of misplaced charity.

¹⁴ *Web of Belief*, 2d ed. (New York: Random House, 1978), 114.

Spengler then goes on to comment in a way that Wittgenstein himself could have written:

To the physicist this definition appears unambiguous and exhaustive, but to the sceptic who has followed out the history of this scientific conviction, it is very far from being either. To the physicist, present-day mechanics is a logical system of clear, uniquely significant concepts and of simple, necessary relations, while to the other (the sceptic) it is a *picture* distinctive of the structure of the Western European spirit, though he admits that the picture is consistent in the highest degree and most impressively convincing. It is self-evident that no *practical* results and discoveries can prove anything as to the "truth" of the *theory*, the *picture*.¹⁵

That Wittgenstein's concern is as radical as rejecting this picture is confirmed by written remarks of his not included in the typescript quoted above:

Nothing is more important in explanations of thought and brain processes than throwing away all the old prejudices about causality. This seems to me by far the most important step.¹⁶

We can gain a fuller understanding of Wittgenstein's puzzling remarks by examining some of his earlier ideas about causality. The main remarks of interest occur in late September of 1937, when Wittgenstein was writing his first-draft thoughts in the manuscript-book he numbered XV.¹⁷ These ideas were later elaborated by Wittgenstein in lectures at Cambridge in the Lent term of 1938. This material (written, as well as remarks made in lectures) is directly relevant to understanding the puzzling remarks with which I opened this paper because it is specifically about the two kinds of plants propagated by the indiscernible seeds.

An interesting fact about these earlier passages is that they make no reference or allusion to the brain or mental phenomena at all. They are solely about plants and seeds, and they then go on to consider the possible consequences for causality in general. Like the later passages however, these earlier passages are in a non-assertoric mood. Wittgenstein is not claiming there are plants and seeds like this. He is asking us to imagine there are, and then considering the consequences ensuing. His main interest is in uncovering our assumptions and

¹⁵ Oswald Spengler, *The Decline of the West*, vol. 1, revised ed., trans. C.F. Atkinson (New York: Alfred Knopf, 1926), 377 (abridged one volume edition, 188). For a fuller discussion of Spengler's influence on Wittgenstein, see my paper "Wittgenstein in Exile," to be presented at the Claremont Philosophy of Religion conference: "Religion and Wittgenstein's Legacy," Claremont, California, February, 2000.

¹⁶ MS 134, 104-5, quoted by ter Hark on p. 128—originally appearing between *RPP/I*, 906 and 908.

¹⁷ MS 119, later published in edited form by Rush Rhees as "Cause and Effect: Intuitive Awareness," reprinted in *Philosophical Occasions: 1912-1951*, 368-426; including lecture notes by Rhees that comprise a portion of Appendix A, on 407-411.

pictures by considering how we would react in these cases. Here is the most poignant passage from Rush Rhees's notes of the 1938 lectures:

There is something like action at a distance here—which shocks people. The idea would revolutionize science. . . .

Today, in case we actually discovered two seeds which we could not distinguish, but one produced a poppy and the other a rose, we should look frantically for a difference.—But in other circumstances we might give this up—give up looking for a difference. This would be a tremendous thing to do—as great as recognizing indeterminacy. We would no longer *look* for the difference, and so we would no longer say there *must* be a difference. *Now* (today) we have every reason to say there must be a difference. But we could imagine circumstances where we would break this tradition. (411)

If Wittgenstein was simply rejecting the need for reducibility or isomorphic correlation, it is doubtful that he would consider the resulting position to be as “tremendous . . . as recognizing indeterminacy.” To return to Köhler's ideas, Wittgenstein is differing from him not only in his requirement for isomorphic correlation, but also in his requirement of mediative causality.¹⁸

The remarks attributed to Wittgenstein in these lectures are considerably more subtle than the blunter remarks of the late 1940s. How do they differ?

Confusion is sure to follow from phrases like: “*nothing* in the seed corresponds to the plant which comes from it” (*RPP/I*, 903), or “the two plants have exactly the same seed” (*PO*, 410), or “the seed of this (plant), which is exactly like that of the first” (*PO*, 375). These phrases make an assumption that appears to be far too important to be made in this context: They assume that further investigation cannot reveal any differences, and they also assume that someone, presumably standing outside our investigative context, can know this. They neatly step around the problem that negative existentials are notoriously hard to establish.

Interestingly, this questionable assumption is only temporary in the case of the two phrases from the late 1930s (*PO*, 410: “But if we discover a difference . . .”; and 375: “And now suppose that in the foregoing example someone had at last succeeded in discovering a difference . . .”), but not in the case of the phrase from the late 1940s. In his earlier discussions he is more likely to set the scenario as: “seeds which we could not distinguish” (*PO*, 411), or “we

¹⁸These passages about seeds seem to me to cinch the case that Wittgenstein is asking us to consider not simply that there is failure of isomorphic correlation, but that there is failure of supervenience. (I made this point already in note 24 of “Wittgenstein and Neuroscience,” 338–9.) If the two seeds are the *same*, then there is not only no difference that isomorphically corresponds to what produced or will result from the seed: There is no difference of any kind associated with what produced or will result from the seed. The seed passages also fit with the radicalness of MS 134, 104–5, quoted above.

can find no difference between them" (375), where "could" and "can" suggest an implicit "so far."

When Wittgenstein says, according to the lecture notes (411), "*now* (today) we have every reason to say there must be a difference" he is precisely articulating the point that makes his later pronouncements seem so obtuse. The later pronouncements sound as though he thinks we could, and perhaps should, just change our minds about these things—indeed, as though he *has* already changed *his* mind. Of course, if these phenomena actually occurred—literally indiscernible seeds producing different plants, and the like—then we would be forced into sympathizing with Wittgenstein's complaints in the later remarks. But nothing "*now* (today)" can play that role, as he earlier acknowledged. Rather, his earlier point was that "in *other* (my emphasis) circumstances we might give this up—give up looking for a difference. This would be a tremendous thing to do. . . . We could imagine circumstances where we would break with this tradition." So, in fact, we can't, now, just break with this tradition.

Why not? Perhaps this would best be understood by trying to describe the "other circumstances" in which we could just "give this up."

Certainly widespread failure to find differences in the face of disparate effects could be such a circumstance. But I doubt that is what he has in mind. Rather, I think he is considering cases where the occasional failure to find differences would not be treated as a *failure*, requiring deeper investigation, but would be accepted. What would circumstances have to be like for that to be so?

One way of seeing what Wittgenstein is imagining is to recall his campaign against essentialism about concepts. Wittgenstein diagnoses us as laboring under the assumption that all instances of a concept must share an essence. We have an urge to believe that there must be such an essence, even if we have been unable to articulate it. Wittgenstein uses, most famously but not exclusively, the example of a *game* to suggest that in fact not all instances share an essence. But more broadly, he wants to persuade us that concepts do not need to be legitimated by essences. They have all the unity that they need by the various and sundry connections and similarities that go under the (somewhat misleading) rubric of "family resemblances." Wittgenstein never denies that some concepts have essences—especially technical concepts—but only denies that all must have them to be legitimate concepts.

Read back through the series of puzzling remarks at the beginning of this paper, substituting the essentialist picture of concepts as the object of suspicion in place of the mediative conception of causality, and you would be surprised how much sense they make. The striking difference, however, between conceptual essentialism and mediative causality is that Wittgenstein thinks we can, and should, resist the urge to insist on essentialism in this, the actual, world. And this, I think we will agree, has some plausibility to it. But we

cannot get ourselves to feel like that about mediative causality. So, whatever it is about our circumstances that allows us “*now* (today)” to resist the urge to essentialism may be what we are looking for in trying to describe the “other circumstances” in which we could just give up the search for differences.

Though we may find essentialism about concepts to be intuitively natural, we have no special stake in that intuition. Our use of (at least) many concepts is not dependent on their having an essence. Essentialism is a meta-issue in relation to the role of concepts in our ordinary practices. The practices can proceed without interruption if we drop the commitment to essentialism. That is what Wittgenstein most wants us to see. (If some practices do happen to presuppose essentialism in some important way, then it is still open to Wittgenstein to be content with our requiring essences for the concepts that are central to those practices—e.g., the need to “operationalize” concepts in science.) The key to resisting the urge to essentialism lay in our ability to reduce our expectations and rest content with an account of unity, in terms of similarities and connections, that is less than we expected and thought we needed. In particular, there were few practices that would be undermined by our relinquishing the urge to essentialism.

What would things have had to be like for us to be *unable* to relinquish this urge? Perhaps if we had been a society of *Socrateses* we would have been unable to relinquish essentialism. Socrates thought that practices revolving around a concept were not well-founded until the concept could be defined in essentialist terms.¹⁹ A well-founded practice would be one in which we could certify instances of the concept by using the essence. For example, Socrates pleads with Euthyphro (*Euthyphro* 6e): “Tell me then what this form itself is, so that I may look upon it, and using it as a model, say that any action of yours or another’s that is of that kind is pious, and if it is not, that it is not.”

If we valued this solid foundation enough we could reform (or replace) our concepts by stipulating their essences. Though there doubtless would be some advantages to practices that had this sort of solid foundation, they are not worth the costs of their pursuit.²⁰

So, are we a society of *Socrateses* when it comes to mediative causality? In a word, *Yes*. The practices of science have become crucial practices to us, and they seem to presuppose a mediative conception of causality. That is, because of the centrality of a scientific viewpoint to us, we cannot give up the urge to

¹⁹In the “Dictations to Schlick” (MS 302, 14) Wittgenstein writes: “I cannot characterize my standpoint better than by saying that it is opposed to that which Socrates represents in the Platonic dialogues” (quoted and translated by Garth Hallett, in his *Companion to Wittgenstein’s “Philosophical Investigations”* [Ithaca: Cornell University Press, 1977], 771).

²⁰This, indeed, seems to be the goal of eliminative materialists, at least with respect to mental concepts. For a discussion of the costs, see §§6–9 of my paper cited in note 4 above.

look for, or have someone else look for, or at least believe in the existence of, mediating differences where there are different effects.²¹

Under what “other” circumstances could we “give this up”? I think there are at least three such circumstances, which I shall try to describe. Briefly, science might have a different role within society, science might draw different conclusions, or science might be practiced differently. Each of these possibilities has some interest for the light it casts on Wittgenstein’s thinking.

1) *Science might have a different role within society.* We tend to give science a sort of hegemony that is not inevitable. We tend to suppose that a scientific understanding of phenomena is both possible and important for all realms, whether or not that understanding is being pursued, and regardless of our particular relation to the pursuit of that understanding. Since science presupposes a mediative conception of causality, we hold all of our uses of “cause” hostage to this understanding. If it were possible to insulate some of our ordinary practices from science and its assumptions, then non-mediative causality could be accepted. We could relax with lowered expectations for causality.²²

This in fact seems to be how it is with respect to the search for and discovery of *essences* for ordinary concepts. People were able to understand ordinary concepts long before science got involved in a search for their essences. In what ways are our ordinary concepts hostage to the discovery of (or failure to discover) essences? More specifically, how apt are we to change our ordinary uses because of scientific discoveries?

The answer is that it depends on the practice. We have made such changes in the case of concepts like “consumption” and “leprosy.” In the former case, we have dropped the concept because no single physiological condition turns out to underlie the wide variety of cases that used to be grouped under that rubric. The concept has fragmented into lung cancer, tuberculosis, pneumonia, pleurisy, and so forth—each of which, save perhaps lung cancer, does have a respectable underlying essence. “Leprosy” was originally a generic term for chronic degenerative skin infections. After Hansen’s work in 1873 identifying the bacteria responsible for certain of these infections, the term “leprosy” came to denote the specific infection produced by that bacteria, also labeled “Hansen’s Disease.” The revised and narrowed concept excluded other superficially similar conditions that had previously been included.

In contrast, there are cases like “jade” where the fact that scientists have found the concept to straddle two different minerals—jadeite and nephrite—

²¹ Sciences are not the only source of this urge. Amateur and professional auto mechanics have it as well. And I am not saying that all manifestations of science have this urge. But certainly science is the salient embodiment of the urge in our culture.

²² Wittgenstein: “Let us represent seeing to ourselves as something enigmatic!—without introducing any kind of physiological explanation.—” (*RPP/I* 963).

has not undermined the usefulness of the concept for ordinary purposes, such as jewelry-making. A question of current philosophical interest is whether mental concepts such as "will," "belief," and "pain" are, or should be, susceptible or immune to scientific advances.

In any case, there are concepts that have proven immune to revision despite the failure to discover an underlying essence, or even the discovery of disjoint essences, by science. The key point is that concepts and practices can have a perfectly respectable life of their own regardless of their lack of scientific underpinnings. So, in the case of causality, the question is whether there are ordinary uses of the term and associated practices that have a momentum and dignity of their own that makes them resistant to the effects of scientific investigation. In these cases, the question whether a mediative account of their causality could be achieved would be unimportant. One could rest content with the non-mediative account. It wouldn't be seen as a failure in need of eventual correction. We wouldn't allow the agenda of science to set the standards of legitimacy for all our practices. We wouldn't be held captive by a certain narrow picture of causality.²³

Wittgenstein seems to be trying to bring us closer to this sort of circumstance by some of his work in the late 1930s. In his lectures on aesthetics given in the Easter term of 1938 he distinguishes three different uses of "cause": "(1) Experiment and statistics, (2) Reason, and (3) Mechanism."²⁴ The first two can operate without consideration of the third. And in the "Cause and Effect" discussion cited earlier, he emphasizes the different ways we have of establishing and thinking about causes (387f). In both these cases Wittgenstein is emphasizing the adequacy and independence of these practices from anything that science may add or subtract from them.²⁵

I think the best way to give a sympathetic reading to Wittgenstein's remarks at the beginning of this paper is to see them as trying to move us towards an insulation of mental causation from physiology. I think it has to be admitted that we cannot just decide to impose this insulation, the way Wittgenstein's rhetorical questions seem to suggest. But perhaps we can see him as speaking proleptically, in an attempt to persuade us that mental causation is worth insulating from physiology.

²³ Recall Wittgenstein's work as a gardener in 1920 and again in 1926. A gardener needs to know where the seeds came from to be able to know what they will produce, but has no concern for the internal structure of the seeds.

²⁴ See the lecture notes by his students, published as *Lectures and Conversations on Aesthetics, Psychology and Religious Belief* (Berkeley: University of California Press, 1972), 13, n 4.

²⁵ This is the tactic that Malcolm seems to favor for dealing with these issues. See, e.g., Norman Malcolm's *Memory and Mind* (Ithaca: Cornell University Press, 1977), ch. VII, where he defends "mnemonic causation."

2) *Science might draw different conclusions.* This second circumstance imagines that science, pursued even with its own presuppositions about mediative causality, would come to see on its own terms that the expectation was inappropriate. The notion of mediative causation is part of the seventeenth century's mechanistic picture of the universe as a bunch of miniature billiard balls moving and colliding. But we know that this is a false picture. Indeed, the stage was set for seeing through this illusion by Newton himself, when he characterized the force of gravity without offering any mechanism or explanation of it. We have just been too long in acknowledging that that is how all science is: We don't, and can't, have mediative mechanisms all the way down. Science will eventually free itself from its own false and outmoded picture.

This approach is clearly being investigated by Wittgenstein in his lectures on aesthetics:

... we wish to get rid of connection altogether. We wish to get rid of the notion of mechanism, and say: 'It's all concomitants.' Why 'all'? You would have to specify what is a case you wouldn't call concomitance. "Tracing a mechanism is only finding concomitance. In the end it can all be reduced to concomitance."

... Cf. "Physics doesn't explain anything. It just describes cases of concomitance."
 ... (You can look on the mechanism as a case of concomitant causal phenomena. You don't of course.) You say: "Well, this moves this, this this, this this, and so on."²⁶

That Wittgenstein is interested in this approach is also suggested by his allusion to the case of indeterminacy (411) in his lectures in Lent, 1938. Indeterminacy was a position reached by a science that had been committed to deterministic assumptions—although it itself came to see reasons to reject them. Science was able to relax with indeterminacy, not seeing it as a failure to be corrected eventually, but an acceptable resting place. (While there remains controversy about this among interested physicists and philosophers, it is still a good illustration of what Wittgenstein is looking for.) Scientists freed themselves from the grip of a certain picture.

3) *Science might be practiced differently.* Science could be a practice that didn't look for mechanisms at all. While this may be the most farfetched of the three kinds of circumstances in which we could accept non-mediative causality, it is probably also the one that is dearest to Wittgenstein's heart. This stance towards science was familiar to Wittgenstein from the scientific work and writings of Johann Wolfgang Goethe. It is hard to find particular pithy passages to quote from Goethe on this topic, for it is best represented by his whole approach to science. But here are a few:

²⁶ 16–17. Unfortunately the lecture notes are very choppy, and it is often very hard to assess, from the notes, what is going on in the lectures. Nevertheless, lacking better evidence, we limp along with this.

In reality, any attempt to express the inner nature of a thing is fruitless. What we perceive are effects, and a complete record of these effects ought to encompass this inner nature.²⁷

It would greatly benefit knowledge, science, technology, and art if the beautiful subject of color theory could be freed from its traditional atomistic restraints and isolation, and returned to the general, dynamistic flow of life and activity. . . .²⁸

Someday someone will write a pathology of experimental physics and bring to light all those swindles which subvert our reason, beguile our judgement and, what is worse, stand in the way of any practical progress. The phenomena must be freed once and for all from their grim torture chamber of empiricism, mechanism, and dogmatism; they must be brought before the jury of men's common sense.²⁹

Though Wittgenstein's familiarity with Goethe's writing is well established, Goethe's influence has not been sufficiently appreciated.³⁰ One subtle bit of circumstantial evidence for Goethe's influence on Wittgenstein's thinking here is that the poppy and rose plants mentioned by Wittgenstein in his 1938 lectures about cause and effect are both specifically discussed by Goethe in his work *The Metamorphosis of Plants*.³¹

In Wittgenstein's and Goethe's view, mechanistic science puts us in a flawed relationship to the world. It is a perversion of the search in wonder that Goethe thought science should be. Instead, as Spengler wrote:

One day we shall no longer ask, as the Nineteenth Century asked, what are the valid laws underlying chemical affinity or diamagnetism—rather, we shall be amazed indeed that minds of the first order could ever have been completely preoccupied by questions such as these. We shall inquire whence came these forms that were prescribed for the Faustian spirit, why they had to come exclusively to this one Culture and what deep

²⁷ Preface to Goethe's *Theory of Color*, reprinted in *Scientific Studies*, vol. 12, Douglas Miller, trans. and ed. (New York: Suhrkamp, 1987), 158.

²⁸ *Theory of Color*, Part 5, §746, reprinted in *Scientific Studies*, 276.

²⁹ *Maxims and Reflections*, §617, reprinted in *Scientific Studies*, 309.

³⁰ Here are the most relevant positive references: *RPP/I*, v. 1, sections 889 & 950; *Culture and Value*, trans P. Winch (Chicago: University of Chicago Press, 1980), 10–11; and Waismann's *Principles of Linguistic Philosophy*, 80–81. Though Wittgenstein's *Remarks on Colour* is largely critical of Goethe's *Theory of Color*, that does not eliminate the possibility of a deeper affinity. Cf. Wittgenstein's letter to Malcolm of 16 January, 1950. Although Wittgenstein does not mention Goethe in his 1931 list of influences (*CV* 19), he does list Spengler, who absorbed (and often cited) many of Goethe's ideas about science. Wittgenstein and Goethe agree, among other things, on the preference for surveyable description over explanation, a distrust of "progress," and the value of wonder. Brian McGuinness characterizes Goethe's influence on Wittgenstein as follows: "To say what Ludwig admired in Goethe would almost be to say what he found remarkable or worthwhile in life, so many are the themes and attitudes from Goethe that recur in his thought" (*Wittgenstein: A Life, Young Ludwig (1889–1921)* [Berkeley: University of California Press, 1988], 34–5).

³¹ Wittgenstein's comments are noted in PO p. 411, quoted earlier. Goethe mentions double poppies in §80, and the proliferated rose in §103, of *The Metamorphosis of Plants*, reprinted in *Scientific Studies*.

meaning there is in the fact that the figures we have obtained appeared in just this picture-like disguise. And, be it said, we have today hardly yet an inkling of how much in our reputedly objective values and experiences is only disguise, only image and expression.³²

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³² Spengler, *The Decline of the West*, vol. 1, 425 (222).

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