

Hodgson on the relations between philosophy, science, and time

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Abstract:

Shadworth Hodgson offers an account of how philosophy relates to the science, both physical and psychological, in which three different conceptions of time can be identified. He distinguishes the methods of philosophy, involving analysis of the contents of immediate consciousness, and of science, which presumes the existence of world of common sense. Hodgson holds that philosophical analysis of immediate consciousness, or, the analysis of a present moment in experience, provides the ultimate justification for knowledge in science. Time as an object of study in science must be distinguished from the temporal structure of immediate consciousness. Time as a target of scientific study is thus differentiable into time in physical science, and time in psychology, where the temporal characteristics of consciousness can be studied, but only from a perspective external to that consciousness. Each of those scientific conceptions of time still presuppose and are evidentially dependent on the analysis of immediate consciousness, itself already temporal. The result is that time as a fundamental unit of experience could not, even in principle, conflict with time as studied in science, because it is presupposed by and the evidential base for claims about time in science.

Keywords: Hodgson; consciousness; time; experience; empiricism

I. Introduction

Shadworth Hodgson developed a strikingly unique account of the structure of temporal consciousness, a proto-phenomenological approach to the structure of the present moment. Hodgson was also the founding President of the Aristotelian Society (1880), as part of which he gave a series of Presidential lectures. These addresses, especially at the early ones, lay out the elements of a synoptic view of how science and philosophy relate, a theme he took to be central to the new Society as well as to the ongoing progress of science. These Addresses connect his earlier work, in particular *The Philosophy of Reflection* (1874) to his later work, *The Metaphysic of Experience* (1898). The Presidential addresses seem to have served as the forum for refinement and clarification of the views expressed in his earlier work, which are then reframed and elucidated differently in the later work. Even as an already under-examined philosopher, his Presidential Addresses have received no sustained treatment. Hodgson's developing views of time, experience, and evidence in the

sciences, and his vision for how philosophy relates to sciences, both physical and psychological, prefigure later movements within philosophy, including the development of philosophy of science as a distinctive subfield.

In this paper, I examine the unique form of empiricism that Shadworth Hodgson offers in his account of time-consciousness, focusing specifically on his 1884 Presidential address about how the sciences and philosophy relate to one another, with additional reference to his 1892 address regarding the measurement of time. His views on temporal experience are part of the support structure for his claims about method and scope in the sciences versus in philosophy. Hodgson's approach to the relationship between the sciences and philosophy is of particular interest because of the way in which it illustrates the consequences of his empiricist account of knowledge as fundamentally temporal. Knowledge of anything real is ultimately grounded in knowledge of the contents of direct or immediate experience, temporally structured and located. Thus knowledge of anything that is the subject of a particular science, such as physics or psychology, is ultimately dependent on and justified with respect to temporally structured knowledge in immediate experience. I draw out an intriguing consequence of this: it would be impossible, on Hodgson's view, for any theory of time in physics to be in genuine contradiction to or tension with time in immediate experience; and it would be difficult for temporal experience as studied by psychology to be in genuine conflict with time as studied by physics, since both draw on the same evidential source.

Section II provides a synoptic overview of Hodgson's main ideas and terms. Section III focuses on his discussion of the differences in method between philosophy and science, and how those methods relate. Section IV considers Hodgson's distinction between two senses in which something could be real, a world of *percipi* in immediate consciousness versus an externally existing real world, and how this illuminates the relationship between immediate experience as source of knowledge and the sciences as assuming that source. Section V looks at how physical science and psychology each relate to philosophy and to one another. Section VI then draws out the specifically temporal implications of the preceding sections: time in immediate consciousness provides the evidence for time as an object of study in both physical science and in psychology. This results in a tripartite conception of time: time in immediate experience, time as studied by physics, and time as studied in psychology. Time as fundamental unit of experience cannot conflict with time as studied in science, because ultimately any possible evidence from science is grounded in immediate experience. Time studied as an object in science can be studied in physical science, as external to any consciousness, or in psychology, as internal to some *other* consciousness than the one providing the evidence by studying an external consciousness, but both sciences draw on the knowledge found only in immediate experience, namely, in the present moment. Section VII concludes.

II. Context in Hodgson's work and Synoptic Overview

Hodgson developed a consistent systematic view that involved a core set of characteristic ideas, refined over decades and culminating in the four volume *The Metaphysic of Experience* (1898; ME

henceforth). He takes his earlier works, such as the *Philosophy of Reflection* (1878; PR henceforth) and *Time and Space* (1865; TS henceforth) to lay out the same project as the later ME (see the introduction in ME). Between these books, Hodgson gave a series of Presidential Addresses to the newly founded Aristotelian Society. He credits these addresses and ensuing discussions as having provided a forum in which he could refine his views in preparation of the addresses, and introduces ME as having come out of those discussions (ME Bk 1, vii-viii). Hodgson uses these addresses to situate philosophy in a very synoptic way, laying out what he takes to be the proper relationship between different areas of study: within philosophy, within the sciences, and between philosophy and the sciences. The Addresses also tend to be more self-contained compared to the more sprawling ME, as they are written to stand alone even as he builds out a system year by year.

While Hodgson's work is generally not well studied, his presidential Addresses have received the least attention. Furthermore, Hodgson is largely known for his views on time and experience; the Presidential Address (PA 1884 henceforth) that is my primary focus here relies on those views of time and experience but focuses more directly on the relationship between philosophy and science. It turns out that Hodgson's views on science, and evidence in science, interact with his views on time consciousness in this Address, and yield a novel three-part distinction regarding time as it could possibly be known. Focusing specifically on the relation between philosophy and the sciences in this address, while holding onto the distinctive understanding of immediate experience as fundamentally temporal that Hodgson lays out elsewhere, draws out this new perspective on time and on in-principle limits on scientific evidence.

Before embarking on the detailed look at Hodgson's arguments in this Address, it's useful to have an overview of the trajectory of his arguments and how the different elements of his view hang together. Here, Hodgson wants to situate philosophy as a distinctive endeavor with a unique and important role to play with respect to the sciences. Philosophy must consider first the question of *what* is known, as it is known, he claims: he reminds the audience of his proto-phenomenological bracketing (Andersen and Grush 2009) to examine direct experience, the contents and structure of the present moment. Hodgson's approach prefigures but differs from phenomenological bracketing: as soon as he makes this distinction, he turns to the task of re-connecting these distinct worlds, that of the contents of immediate experience in the present moment and that of an external world from which such content arises (ME Book I, ch. IV; PA 1884). Even though it is philosophically labourious to re-connect them, the distinction between the world of immediate experience and the common-sense world, real and external-to-experience, is not meant to remain an unbridged gap, as it does in Husserl's work (e.g. Andersen 2017). It is in the re-connection of these two worlds, and how they mutually interact, that Hodgson's distinctive views on science come out. His novel empiricism, where all knowledge must ultimately be founded on the contents of immediately experience analysed as such, becomes the concretely connected foundation for empirical evidence in the sciences. The 1884 Presidential Address traces out this path from immediate experience to scientific evidence.

In later work, such as ME Book I, Hodgson lays out this path from immediate experience to an external world in some detail, invoking the idea of a threshold above which content rises. In the Presidential Addresses, however, Hodgson presumes this step rather than lays it out, so it is worth

some quick review here. Hodgson takes knowledge to ultimately be found only in reflection on the contents of immediate experience, performed from within that ongoing experience itself. Reflection is a technical term for Hodgson (e.g. PR 1878), and involves two connected meanings. One is taking the present moment of experience, along with its contents, as itself the content of a present moment to be examined, in this very moment in which we perform our analysis. Reflection also involves the transparency of the multiplicity of contents in experience to each other, and the transparency of different moments as they transition to one another. The stream of consciousness is clear, as it were, so that the content of a recently-passed moment is still available to the newly-present moment as continuous with but different from it. Reflection under these two auspices are mutually supportive. It is only because experience is transparent to itself that we can regard and analyse that very experience we are currently in. Reflection as a philosophical analysis of the contents of the present moment is possible only because of the reflective or transparent character of experience itself.

This moves into the heart of the arguments in PA 1884. Because we know objects in consciousness *as* having objective existence, *as* having a place in the causal ordering of a world, we can then put a frame of sorts around those objects. They can then be studied as objects separately from the reflective experience in which we originally came to know them. Science starts from this assumption that the content in experience is that of experience as belonging to a world outside of that experience. If we grant or presume that the content of experience, where that content involves there being a world external to that very experience, then such content can be studied without going through the immediacy of the present moment every time we want to talk about the objects thus found as content in a present moment. Science investigates its phenomena from within the frame that hides the fundamental basis in immediate experience, so that phenomena can be treated as targets of analysis separate from the rest of the stream of consciousness. Philosophy provides the required evidential support for science's assumption that these contents can be studied on their own as objectively existing separate from experience. The result is that the analysis by philosophy of the contents of immediate experience establishes the empirical legitimacy of knowledge, making good on cheques written in the sciences. Anything that can be known must have a path that can be traced back to contents discoverable via reflection in immediate experience. Nothing can be truly independent, *tout court*, from experience, because it can only in principle be known through experience, and any object just is the collection of perceived content in consciousness that it would condition. Thus, the methods of a science like physics are revealed as independent of experience only by that very experience of which they are independent.

Hodgson's distinctive views about consciousness set his empiricism apart in terms of the novel status of time. Consciousness is itself foundationally temporal: it is the contrast of different feelings, in different temporal relations. Immediate experience is, for Hodgson, the content of the present moment. The contents may change, coming in and trailing out, but consciousness just is that moment. In his usage, 'the present moment in experience' and 'immediate experience' are interchangeable. Hodgson gives an incredibly central role to time in knowledge. This means, though it is not drawn out as directly in this particular Presidential Address, that all objects and real conditions known in physics, *including those involving time*, are so known because of the conditioning effects they have on experience, as revealed by philosophical analysis of those contents in

themselves. Time in physics, known as something physical and independent of existence, is only so known because of experience, and only exists as the sum total of ways in which it could affect immediate experience. Hodgson claims that psychology differs only somewhat from physics, in that psychology includes, and physics does not, the phenomenon of consciousness as an object of investigation. Psychology is the study of consciousness, from a perspective external to the particular consciousness being studied, and taking the conditions required for that externally-considered consciousness as part of its purview for inquiry. Physics is the study of everything else, that is, all real conditions excluding consciousness, considered external to consciousness.

Part of what is valuable about Hodgson's treatment of the relationship between philosophy and the sciences in developing his solution to the problems facing empiricism is how he sets both physics and psychology together, with equal footing as sciences. They are both foundationally supported by reflective analysis of the contents of immediate consciousness, which is just to say, of content of a present moment in experience; and they differ only in that physics leaves out, and psychology includes, one major target in inquiry, namely, consciousness considered from outside. To this day, there is a tendency to follow McTaggart (1908, 472), who offers the specious present as in direct conflict with the genuine simultaneity or temporal ordering of events.

To some extent, James (1890) enabled this tension: while he does not as clearly endorse time in experience versus time in physics as in direct conflict, he does utilize the work of R. Kelly/E.R. Clay in calling the temporal extension of the present moment in experience 'specious'. Hodgson is relegated to a footnote to this passage. This approach treats the temporality of experience as a competitor with physics, where at most one can be 'right', and experience is taken to obviously lose. One is then left to not explain but to explain *away* the central temporal features of experience (e.g., Ismael 2017). At best, one might argue that they are less incompatible than previously thought (e.g. Callender 2018). In doing so, it is impossible to use the relationship between temporal experience and physical representations of time to get any explanatory traction in how the two relate, because there simply could not be a relationship where one relatum is taken to not really exist. Hodgson thus had a substantial, unificatory, explanatory resource for understanding time as studied in psychology. This role for temporality in philosophy as providing the evidential support for any claims about time in either science is easy to overlook, because Hodgson speaks of experience as evidence in the two sciences, but not explicitly about time. The rest of this paper will make more explicit that this notion of experience is fundamentally temporal, that all evidence for any science is thus evidence drawn from immediate experience of a present moment, and how this sets both time in physics and the experienced present studied by psychology on equal footing with respect to their evidential bases, both dependent in the same way on the contents of immediate experience.

III. The Methods and Objects of Philosophy and the Sciences

Hodgson's opens his address by reminding his audience of the topics of previous addresses so as to draw on the arguments made there without reiterating them. He notes with dismay the proliferation

of ‘schools of thought’ in philosophy, none of which seem to make genuine progress, and reminds them of what he takes the method of Philosophy to consist.

... that method, I may remind you, being briefly definable as ‘*subjective analysis of objects of consciousness by means of the distinction between conditions of their essence and conditions of their existence*,’ a definition which was obtained in my third Address “The Method of Philosophy,” and repeated in the following one, the Address for last year.

The method is distinctive of philosophy from science, not because of its two questions, *what* and *how comes*, or ‘conditions of essence’ and ‘conditions of existence,’ but because it puts those questions to objects of consciousness as such, that is, to objects forming the immediate contents of consciousness. (PA 1884, 9)

The idea that philosophy involves the analysis of the contents of immediate consciousness (which he interchangeably also calls experience or immediate experience) is a constant theme in Hodgson’s work. It is because consciousness has the character of reflection that it is capable of such analysis. Drawing on the *Philosophy of Reflection* to situate this, reflection involves consciousness examining itself even as it is conscious of content that is not contemporaneous with the current act of examination. Consciousness is such that it has some minimum in order to be conscious at all. When Hodgson isolates this minimum for consideration, “the first point to be noticed is the difference of the feelings. The minimum of consciousness contains two different feelings. One alone would not be felt” (PR Bk 2 Ch IV section 3; 249). Feeling, here, is a neutral term for the phenomena that ongoingly succeed one another in consciousness. So, some contrast between two or more feelings is required: consciousness cannot be pure, simple, or homogenous.

Of the two feelings that are required for a minimum of consciousness, “The second brings the first into consciousness together with itself” (PR, 250). He clarifies that “one sub-feeling is as it were relieved against the other, and this relief it is which brings both into consciousness” (PR, 251). Having two feelings, from the succession of feelings, simultaneously is required for a minimum of consciousness. This could happen in one of two ways:

The first is that of a real simultaneity, the two sub-feelings are really parts in coexistence, not in succession; the second is that in which one of them is felt as growing fainter (called *going* when referred to its place in succession), the other as growing stronger (called *coming* when referred to the succession). The simultaneous perception of both sub-feelings, whether as parts of a coexistence or of a sequence, is the total feeling, the minimum of consciousness, and this minimum has duration. (PR 250)

The first possibility is that both feelings, both contents, are indeed simultaneous. Perhaps one hears a piano struck in the other room at the same moment one smells the coffee on the table. The second possibility is that they are not fully simultaneous, but their temporal extensions within experience overlap. The first is not just fading out, but is *felt as* fading out as well, and a second is felt as rising. The first piano note might be struck and then another follows closely after; they are simultaneous in this second sense by the one growing fainter just as the second grows stronger. Nothing simpler

than this can be genuinely conscious. Each of these two feelings are understood in terms of temporal relations to one another.

He summarizes: “A former and a latter are included in the minimum of consciousness; and this is what is meant by saying that all consciousness is in the form of *time*, or that time is the form of feeling, the form of sensibility.” (PR, 252). This will be crucial later on, in discussions about knowledge in philosophy and the sciences. There, he will use terms like experience and consciousness, but not usually invoke the explicitly temporal aspects of them. But these are ineliminably, foundationally, temporal in character. Thus, any claim he later makes about how contents of consciousness are known, or what is known objectively through subjective experience, must also be understood as foundationally temporal in this way. It is not that all feelings themselves must have explicit temporal content; it is that to know any content, it must be known *as* content of some present moment, and all present moments constitutively involve temporally related contents. That temporality need not linger or attach itself to the contents thereby known, but it is central to its being known at all that it was known in its temporal relation to other content at a moment and reflected on in other moments.

This becomes more emphatically stated in his later work. “Not only, therefore, is an empirical present moment the only thing which it is possible to analyse as it occurs, but it is the only thing which ever exists as immediate experience of ours.” (ME, Bk 1, Ch. II, section 1; 35). In later work, he also emphasizes to a higher degree that fontal character of this empirical present moment: it involves the continuous upwelling of content as rising above a threshold from whence it then fades out again from the present moment. This gives the idea, in reflection on that experience, of some source outside of consciousness from which such content is generated as it rises above that threshold into immediate experience. The fontal character of this threshold serves a crucial role in ME for Hodgson’s empiricism: it is the basis by which he eventually unifies the inner phenomenological world, with an external objective reality revealed through that inner world (see especially ME Bk. 1, Chapter II, section 3).

This brings us back to PA 1884: it is the task of philosophy to focus on this immediate experience, and to analyse it for content. This is what Hodgson will refer to as the *what* question: philosophy ascertains what, exactly, those contents are. After this, science ascertains how that content fits together fit together, which Hodgson will call the *how* question. “Of all kinds of knowledge, Philosophy is the one which is most completely dependent on the interrogation of consciousness as such, its acknowledged test being that of immediate evidence to the individual enquirer” (PA 1884, 7). Hodgson reminds the audience of two different ways in which reality could be attributed to something. His framing echoes the tension between idealism and the naïve or common-sense realism of science. This is “...the distinction between what I called the two senses of *Reality*, one in which it denoted objects as perceived, or the percipi of objects, the other in which it denoted objects as conditioned or conditioning, that is to say, their dependence upon, or their place and function in, an order of *real conditioning* or causation.” (10) Science aims to establish the ordering relations of events in a world treated as external to consciousness and independent of investigation.

This is what he calls real conditioning: the real conditions are rather like the full set of causes, including background or enabling conditions, where causes and effects are connected by something more like lawful connections, not like a contemporary understanding of causation as counterfactual or a view where causation involves production. The ordering of real conditions yields answers to what Hodgson calls the ‘how’ question of things happening, in that it describes what comes after what, on and on. Philosophy goes beyond this by inquiring into what he terms the ‘what’, the essence that illuminates why it happens this way (12). The ‘what’ for philosophy is the question that is answered via the analysis of immediate consciousness; it reveals the essence or nature of the various real conditions themselves. Hodgson uses the term ‘how’ for the descriptive part: how things happen is like a description of one thing after another, laying out all the happenings, in the right order, of the external world. The ‘what’ is the explanatory portion, yielded only by philosophy, that reveals what we might in a more contemporary way call the ‘why’ of the description of real conditions.

The sciences seek

... to determine the order of real conditioning, affecting their several groups of phenomena, that is, the particular kinds, quantities, interactions, and combinations of forces, upon which the varied play of common-sense phenomena depends, and without which that play would not take place as it does.... The first business of any science is to discover, in what the real conditioning, governing its phenomena, consists. (12-13)

On the one hand, scientific work investigates objects existing independently, in the ordering of real conditions. On the other hand, philosophical analysis investigates objects as they appear in consciousness, without presupposition that the objects revealed as content are genuine external conditions. By objects here, he means something neutral: philosophy’s objects are *percipi*, while science’s objects are real conditions in an external world. Each of these kinds of objects, contents in immediate experience and real conditions of the external world, are real, because each is real in a different sense of reality. This sets him up for the question of this address: “...how we bring this search for real conditions into connection with the correlative member of our distinction, the world of objects, taken simply as percepts, that is, immediate objects of consciousness” (14) How do these two Realities, the one affiliated with science and the one affiliated with reflection in philosophy, connect to each other? How should we understand the relationship between these two ways of being real, these two kinds of objects, these two methods of analysis?

It is the task for philosophy, which draws the distinction between these two worlds in the first place, to show how the world of immediate consciousness enables the possibility of knowing anything about the world of the sciences.

It is philosophy, not science, which perceives in the first instance, that by things are meant *known* things, or objects of knowledge, and thus distinguishes, without separating, *knowing* from *the known*. ... The philosophical conception of a world of immediate perceptions thus comes to throw an entirely new light upon the scientific conception of real conditions. There

is, in knowledge, no road from unknown things to knowledge, but there is from knowledge to unknown things. This fact gives the primacy to philosophy over science, in the realm of knowledge. In order to investigate real conditions, you must first either assume them or infer them. Philosophy throws light on this necessity. (15)

Since all we can know is immediate consciousness, and immediate consciousness is always the contents of a present moment, that must serve as the evidence by which we know anything in the sciences. There simply isn't anything else: we could not know anything in the sciences without having known it through or in some moment of consciousness. The contents revealed by philosophy include, as their content, that they are part of a world of real conditions external to that immediate experience. This does not thereby mean that content is veridical; but it is the result of philosophical analysis that its objects are about the other world, that of external reality. Thus, Hodgson frames the method of philosophy as analysing the contents of immediate consciousness, returning with the 'what' of those specific contents in consciousness, such that the process of reflection yields content about an external world. What is known is known *as* being of real existents outside of consciousness. That end result of philosophical analysis, the contents of immediate consciousness, become the starting point for the sciences once these two worlds are inferentially reconciled.

IV. One Starting Point, Two Paths, Two Worlds

Hodgson notes that this assumption on the part of science that its targets exist independently of investigation is not false. Rather, it is made too soon: it is a premature assumption. It will turn out to be justified, though science cannot provide its own justification for this starting point. That justification comes only via philosophical analysis.

The world of common-sense objects, just described, is our starting point historically, in philosophy, as it is in science; it is the common starting point of both; but there are two ways of starting from it. One is by assuming its objects to be ready-made existents, and examining their relations on that footing, which is the way of science; the other is by examining its objects as they are known to us, that is, examining our *knowledge* of its objects, which is the way of philosophy. It is owing to this its primary assumption, that its original choice of road from the starting point, that science is debarred from explaining the connection between real conditions and the world of knowledge. But on the other hand philosophy necessarily renounces the search for real conditions, at least for real conditions of any kind which can come within the scope of science, or be the objects of scientific hypothesis or verification; and contents itself with the analysis of knowledge generally, including a knowledge of the connection between the search for real conditions and analysis itself. (16)

Hodgson takes these real existents, as a term of art, to have a double aspect. They can be treated as objective: they can be treated as independently existing, part of the order of real conditions. Or they can be treated as subjective: they can be analysed as content in consciousness. Analysing the content

of consciousness, the contents of immediate experience, *is* the act of reflection on experience, and is possible, recall, because experience is reflectively transparent to itself.

This brings us to the central fact, or cardinal operation, in all knowledge. Reflection, taken in its simplest, or lowest terms, is the act or moment of consciousness, an act continually repeated, in which we look back upon the state of consciousness immediately preceding it, without which act the preceding state would be no more to us, than if it were a state of consciousness in another person, or a feeling in a severed limb. (18)

This is a central part of how time figures in Hodgson's account of philosophy and the sciences. All acts of reflection *are* moments of consciousness, and reflection itself is partially constitutive of the continuity between these different moments in consciousness. The results of these temporally situated reflective acts are then the starting point for scientific analysis.

This is how philosophical analysis delivers on the assumptions required by the sciences, as well as what unifies science with philosophy. They both have the same starting point, common sense objects analysed through their own distinctive methods. Each kind of analysis reveals the same object, differently analysed. The objects as revealed in philosophical analysis as subjectively present percepts in immediate consciousness at a moment, are also the objects that can be treated objectively as the real conditions external to that consciousness.

Philosophical reflection, which is reflection distinctly conscious of asking the question *what*, and that question only, of the phenomena presented to it,--philosophical reflection looking back upon its previous history, that is, prior acts of reflection and the content of consciousness perceived in them, becomes aware, that reflection therein gives us what we may call a varied stream of consciousness, consisting of feelings of all kinds, extended colours and pressures, as well as feelings having duration only; and not of presented feelings only, but of represented also; not isolated but in combinations and groups; in fact, a full and varied picture, changing its content from moment to moment. This picture of stream, given in reflection, is also perceived by philosophical reflection to be the counterpart of equivalent for the common-sense world of objects, to be in fact the matrix or material out of which the knowledge of the common-sense world of objects has been and is still being produced; so that we have, as it were, two worlds before us, the common-sense world with which we began, and the varied stream or picture, woven out of consciousness, which is now seen to be its perennial source, so far as our *knowledge* of either of them goes, apart from the causes or conditions which may have produced, or may still sustain and govern them. (18-19)

Hodgson does not start with philosophical analysis as something uninformed by prior assumptions. He starts from a common-sense understanding of what the world is like, and then proceeds via philosophical analysis to excavate the foundations of that view. Having thus discovered the source of that earlier understanding of the world, he thinks can return to it, with better justification. We need assume neither that common-sense will be completely vindicated nor that it is entirely misleading.

This leads to a crux in Hodgson's overall argument. He shows that these two paths, science and philosophy, start from a common point, diverge, and eventually converge again. They have objects that appear to be of fundamentally different types, but actually are different perspectives on the very same objects, as revealed through two different methods. There is ultimately one object to which the dual senses of reality are attributed. When that object is analysed in the subjective mode, it is *percipi*, as content in the stream of consciousness, and when that object is analysed in the objective mode, it is investigated as to its place in the ordering of real conditions.

Now these considerations introduce us to one of the most important distinctions in philosophy, and especially so in the delimitation of philosophy from science; I mean the distinction between *objective thought* and *object thought of*. Take any common-sense object, a material object for instance, and place it by reflection in the two worlds spoken of, and you will find that the first stage on the road to its complete philosophical analysis consists of objective thoughts,--thoughts objective to consciousness,--while at the same time the object itself, the common-sense object, becomes an object thought of, namely, the object of those thoughts. *They* are the analysis, *it* is the unit analysed. The tree, for instance, is the unity of the objective thoughts which I bring successively into immediate objectivity to consciousness, as composing in combination the tree itself as known to me. The tree is the name for their combination into unity, as an individual unit. (22)

This object in thought unites the two worlds revealed by philosophy and science (see 28 especially). Hodgson has laid out a view where there is a common starting point for philosophy and science, namely, the common-sense understanding of the world. This leads to two paths from that common starting point. On the first path, science forges ahead by assuming that common-sense world, a kind of naïve realism, and then refines and clarifies it by discovering the kinds of forces, quantities, etc. that characterize it and giving much more precise, even mathematical, descriptions of it. In the second path, philosophy turns back onto that common-sense experience and analyses it subjectively. Instead of presupposing the contents as real, philosophy asks, what is it, really, we are experiencing? Philosophy does this using reflection. Performing this foundational analysis of the contents of consciousness as they rise into and then fade out of immediate experience, philosophy discovers the source of that common-sense world. These two paths complement because it is, ultimately, the same objects they are analysing.

Here it is that we are met by the remarkable fact, that these objects, the objects of thoughts, which are the special objects of science, are capable of a second kind of analysis, quite distinct from the philosophical, that is, from the subjective analysis of the objective thoughts which represent or mirror them, but also quite compatible with it... This second analysis, in the case of material or physical objects, consists in resolving them into material parts and processes, by which they mutually act and re-act on each other, every such part and process being conceived on the general pattern or analogy of the material common-sense objects and processes from which they come, and of which they are the analysis. (26)

The objects thought of, when analysed subjectively in immediate experience, yield objective thought. Objective thought is that which reveals its content to be as of objectively existing objects. Those contents of immediate experience thus turn out to be the source for those common-sense objects we started out with. Thus, philosophy discharges the naively realistic assumptions made by science. They begin from a common point, take two different paths, which split into two worlds, one threatening to veer to idealism and the other threatening to veer to materialism, but converging again because of this unity of object.

V. Relation of Philosophy to Science, Physical and Psychological

Hodgson describes physical science as the study of the order of real conditions in the world, where the ultimate evidence for the regularities, laws, and entities in real conditions may be directly sensed, or be objects of thought only, such as mathematical relations. “Real conditions, therefore, are objects, some of which are objects of sense as well as thought, and others objects of thought only, though always of thought based on sense.” (27-28). He specifically mentions Newtonian forces here, and other terms from physics such as quantities, motions, etc. He takes these as vindicated through immediate experience even though there is no single presentation in immediate experience that is a ‘force’. It is only through experience we come to know there are forces, but not in a naïve fashion of direct perception of forces or quantities as such. Physical science in general, then, takes a materialist stance towards the real conditions of the world, viewing them as objectively existing, external features of the world that give rise to, but are not created by nor confined to, experience analysed subjectively.

Even though these worlds of external real conditions and immediate experience converge in unity, the worlds themselves do not collapse into one another. They remain distinct products of their respective methods for analyses. Science is thus freed to discover and examine the laws and regularities, the forces and quantities, governing the order of real conditions in an external and objective world that gives rise to and is responsible for the details of that subjective experience.

Psychology differs from physical science in what turns out to be a comparatively small regard, and shares with physical science many real conditions as phenomena of investigation. Physical science takes an external stance towards conditions that are the same as those revealed subjectively through immediate experience, and does so by studying all materialist features of the world except consciousness. Psychology, on the other hand, takes up the study of consciousness itself, but in the manner of a science rather than the manner of philosophy. “It thus takes up the enquiry from the common-sense point of view, beginning with percipients as individual beings, and with consciousness divided into individual lives.” (36) That is, psychology studies consciousness from a perspective outside of the consciousness being studied. Philosophical analysis studies consciousness from within; psychology studies it from without.

The proper subject-matter of psychology, therefore, is the relation of consciousness to the organism which is its seat and its condition; not of course without regard to conditions

external to the organism, but still with regard first and foremost to the nature and laws of the organism which is its seat, as its proximate condition.... The division thus drawn between the two groups of physical and moral sciences seems moreover to be exhaustive. The simple presence or absence of consciousness in the subject-matter is the basis of the division. (32-33)

Psychology studies what Hodgson calls the psychological centre, the cohesive unity of consciousness, and the real conditions that enable it. The psychological centre is more like a fact discovered while doing science, that individuals who are conscious have a kind of unity to their consciousness. This is one of the features identified by James in *Principles of Psychology*, for instance. This is emphatically not to be confused with the cohesive unity of consciousness via reflection, which can only be performed within immediate experience. Hodgson holds that the psychology unity of consciousness enables reflection; and that reflection in turn reveals the psychological centre of consciousness. But this is not the reflective centre, the metaphorical location from which philosophical analysis via reflection is performed.

The science of psychology studies consciousness that could be called opaque: the consciousness studied is not transparent to the investigator. The philosophical analysis, in contrast, uses reflection so that consciousness is transparent to the investigator: it is from within that very consciousness it is philosophically analysed. Hodgson particularly exhorts his audience to not run them together. The reflective centre depends on the psychological centre, as a real condition; but reflection from within experience, from the reflective centre, is what reveals the existence of this distinct psychological centre. Reflection unity of consciousness is fundamental to consciousness being consciousness; psychological unity of consciousness is an empirically verified fact about consciousness, dependent on various real conditions that can be scientifically investigated.

Confusion of the reflective centre, or more strictly, constant feature in consciousness with the psychological centre or centres, localized in the conscious being, is the most fruitful source of fallacy in philosophy. Unless there was a psychological centre, there would be no constant reflective act; it is its *real* or efficient condition. Unless there was a constant reflective act, there would be no knowledge of the psychological centre; it is its making known or *revealing* condition (*conditio cognoscendi*). (24)

Reflection is a process that constitutes the temporal structure of experience as a cohesive stream, thereby revealing a *psychological* subject that can be studied scientifically from a viewpoint outside of that consciousness being studied. This differentiates the researcher in psychology, who surely is consciousness and thus could subjectively analyse their own stream of consciousness, from the individuals whose consciousnesses are the target of study of study for the psychologist. Hodgson separates psychology from philosophy by putting one's own immediate experience off limits as the subject of scientific study.

When Hodgson discusses the foundational role that immediate experience plays in making good on the premature assumptions of science, it is temporally structured evidence from immediate consciousness, and it is only through an intrinsically temporal process of reflection that this evidence

is available at all. All evidence in either science, then, involves presuming the external existence of the targets of investigation, and this evidence is ultimately justified by philosophical analysis of immediate experience.

This means that the temporal character of consciousness itself can be studied two ways: subjectively, through philosophical analysis of immediate experience, or objectively, in terms of the real conditions studied external to consciousness. Taking the temporality character of consciousness itself as a target of scientific investigation is possible, but it is never possible from within that consciousness. It is only possible to scientifically study the temporality of some *other* consciousness. Even while doing psychology, one can study another's consciousness, including its temporal features, but cannot scientifically study one's own immediate consciousness. One's own immediate consciousness can only be analysed philosophically, because one cannot get outside of it to do so scientifically.

VI. Time in immediate experience versus time as an object of scientific inquiry

The distinction by Hodgson between psychology and philosophy as ways of analyzing consciousness from without and from within is the final step in seeing what is so important about Hodgson's empiricism for our understanding of time in science. This distinction means that time as studied in psychology is not the same as time as the fundamental unit of immediate experience; and that time as studied in either physics, or psychology, still ultimately depends evidentially on the contents of a present moment. The fundamental temporality of consciousness is required for reflection, and reflection reveals the contents of immediate consciousness. Those contents may then, themselves, be also temporal. But they are temporal in a different way than the reflective consciousness that revealed them via philosophical analysis. Even though the psychologist may study consciousness scientifically, they do so by proceeding along the second path from the starting origin point of common-sense objects. As such, psychology makes the 'premature assumption' discussed earlier, on which philosophy must eventually make good. Any evidence for the science must ultimately come from the contents of immediate experience. And in philosophical analysis itself, the temporal character of the contents revealed must be distinguished from the temporal character of reflection in immediate consciousness.

There are thus two primary avenues by which time (including the temporal character of objects) can be the object of analysis in Hodgson's system, one scientific and one philosophical. Furthermore, the scientific is itself divided into two kinds of targets of investigation, time in physical science and time in consciousness studied scientifically. This yields three possible conceptions of time as it revealed through objective or subjective analysis. There is time considered as a physical feature of real conditions, excluding consciousness, in physics. There is time as the temporal characteristics of consciousness studied objectively from outside the consciousness being studied; this includes the temporal character of consciousness as objectively analysed. Finally, there is time as the fundamental unit of experience, the present moment that is immediate experience; this is immediate experience that is reflected on and subjectively analysed.

This third conception of time as the fundamental unit of experience serves as the empirical foundation, the source of evidential justification, for each of the scientific conceptions of time. Each of these, as sciences, commits what Hodgson called the premature assumption about their objects of study. It is only the third conception, the intrinsically temporal immediate experience, that can justify this assumption on the part of the sciences. This has two implications that are somewhat surprising in light of subsequent discussions about time in the 20th century. The first is that neither physics nor psychology has any particular claim to be the most fundamental or basic science compared to the other. Physics does not get time ‘right’ if time as measured in physics conflicts with temporal consciousness studied objectively in psychology. Psychology and physics simply study overlapping but nonidentical parts of real conditions: the former includes and the latter excludes consciousness. Secondly it could not be the case that time analysed subjectively, from within consciousness, could turn out to be ‘wrong’ and the physics conception of time ‘right’. Any conception of time as measured in physics rests, in a fairly direct way laid out in the 1893 PA, on the intrinsically temporally structured immediate consciousness. The present moment is the sole ultimate source for evidence about time in physics. Physics could not get so far outside that evidence as to be able to show it to be illusory, without thereby undermining its own justificatory basis as well.

With respect to the first avenue above, time as studied in physics, the objective analysis involves placing a frame around various common-sense features of the world, as discussed in section III. This works, even though it is Hodgson’s premature assumption, because philosophical analysis can eventually justify those assumptions. Hodgson takes up this issue in a later Presidential Address to the Aristotelian Society (1893). He identified the relevant issue for time physics relevant to philosophy as one of defining a unit of time: a basic unit must be of equal measure every, and must be able to be measured the same way. This means two units of time, measured separately from one another, must be able to be verified as of the same duration. This is an especially interesting problem from a philosophical perspective because one can’t simply stipulate that the two units of time be measured by having them occur together. We could say of two units that transpired simultaneously that they were the same length, he notes. But what is required of a genuine unit of measurement is that it be equal at different times, measured far apart from one another. He contrasts the case of length, where one length of a unit can be held to directly measure another length. Time cannot be measured by taking one fixed unit and holding it up that way.¹ Even in articulating the problem, he reiterates points now familiar from the 1884 PA. “Physical bodies and their motions as real existents must be assumed by physical science to begin with, and that not only as being the object-matter which it deals with, but also as the source which supplies its units of measurement...” (1893, 80-81)

Hodgson takes this process of justifying the basic units for measuring time, which he points to as central to physical quantities such as velocity and force, as something only philosophy can supply to physics, which physics then takes up and moves forward with.

¹ He goes into a discussion of the difficulties of ascertaining whether two units of time were simultaneous which involved a clear understanding of some physics of his time. It would be an extremely interesting project to compare Hodgson on physical time and measurement with authors even just a decade later, such as Einstein.

Here the circumstance attending time-measurement which I have brought into view becomes significant. It marks the boundary, the *locus* of transition between physical science and philosophy, and thus ascertains more definitely their relative positions. The process in consciousness by which the perception of physical objects is originally attained is a part of consciousness which lies outside the domain of physical science, because the existence of those objects is pre-supposed by science as already known. But it lies within that of philosophy, being one of the experiences which it is its special function, as subjective analysis, to examine. (1893, 81)

This is one of the ways in which Hodgson ties the scientific analysis of time to the subjective analysis of immediate experience. It is both the temporal character of that experience, and the specific temporal characteristics of specific contents in immediate experience, that provide the grounds for establishing a unit by which time can be measured in physics.

In a similar way, the second avenue, scientific analysis of the temporal features of consciousness studied objectively, requires placing a frame to isolate just the consciousness of another as a target of inquiry. Consciousness in psychology must, by its definition, involve a non-reflective analysis of consciousness. As such, it cannot be subjective, or philosophical, analysis. The temporality of individual consciousnesses can be studied as empirically obtaining facts, including the real conditions of the physical organism, as Hodgson puts it, that are involved in consciousness. Hodgson has elsewhere (see especially PR 1878) discussed the psychological temporality of consciousness, including his phrase ‘*empiric present*’ cited by James (1890) in his chapter “The Perception of Time.” This differs from his subjective analysis of immediate consciousness. For more detail on this, see Andersen (2017).

Each of these two avenues, physical and psychological, require an objective analysis and are inferentially supported by time as the present moment in immediate consciousness. Thus, time as studied in physical science and in psychology each stand in the same relation to the foundation of the time of immediate consciousness. And neither of the two sciences could produce analyses that conflicted with the subjective analysis without thereby losing their own justificatory standing. Time measured in physics could not show that time analysed subjectively is deeply wrong, without thereby losing its standing as a justified claim within physics.

Recall the previous section, where subjective and objective analysis start from a common point, and diverge into what could be called two worlds, or two senses of real, in identifying objects for their analysis. The conclusion of that reasoning was that these are the same objects, revealed differentially by these two different methods. This can now be applied more explicitly to the study of time. There is time itself, something that physics can measure, revealed through objective analysis. But that very same object, time in the physical external world, is *also* revealed by and is real in subjective analysis. It is the very same object that is revealed by two methods, which remains unified as a single object thus revealed.

This means that, for Hodgson, these two analyses cannot genuinely conflict. There cannot be a genuine tension, only at most an apparent one, between time measured in physics and time as contents of immediate experience. Similarly, there could be at most superficial differences between time consciousness studied in psychology and time measured in physics, since each are equally founded on subjective analysis, and cannot reveal new objects through objective analysis that have no counterpart, direct or indirect, in immediate experience analysed subjectively.

VII. Conclusion

Hodgson's work shows a great deal of diachronic unity: his distinctive ideas and terminology are clearly present in some form in his earliest work, even while he refines their definitions and shifts his emphasis and presentation. The 1884 Aristotelian Society Address serves as a bridge between his earlier and later books, focusing on how science and philosophy relate, specifically for the purposes of understanding time as an object of scientific study and time as evidential foundation for such study. *Metaphysic of Experience* offers the fully stated version of Hodgson's view on what metaphysics, as a branch, should be. The series of addresses, though, offer further clues as to how Hodgson situates philosophy as not a mere appendage to, but instead a key foundation for, the new sciences including psychology.

I have already explained to you, how different the new conception of philosophy is from this old conception of a search for the hidden causal essence of things. Instead of going beyond science on the same line, it turns back to contemplate our knowledge of things, to contemplate science contemplating things, the world and science together being its object; leaving the real conditions of things wholly to science, and therefore ceasing to expect positive knowledge of them where science drops its pursuit. Metaphysic no longer means *physic in vacuo*, but *physic in conspectu*, or *sub judice*. Physical science transcends itself, that is, becomes Metaphysic, by reflecting on itself as a subjective process of knowing, and on the relation between that process and the object of it, which is physical nature, or Matter. It thus becomes self-conscious, conscious of its own *nature*, as well as of its own purpose. (45-46)

This meta-metaphysical view presages the early 20th century work of William James on pragmatism in a highly suggestive way. The totality of experience setting outer bounds on knowledge, and the rejection of anything noumenal beyond those, is similar in Hodgson's work and in James' later pragmatist writings. Hodgson shares James' concerns about Hegelianism, but instead of joining James in rejecting metaphysics as sterile, Hodgson offers a new kind of Metaphysic that does not suffer from the defects he found in idealism. It is one that turns back and stitches together the results found in the sciences, evidentially supporting those sciences, rather than going beyond and 'trying to fly in a vacuum'. It offers a close and complementary relationship between science and philosophy, where philosophical analysis plays a necessary role in systematicity and unification. It is not a 'correction' to science; instead it is retroactively justificatory of a premature assumption.

Hodgson thinks that analysis of experience largely vindicates results in science; collectively, we've mostly gotten it right, or at least, we need not be radically skeptical and think that we've gotten it completely wrong all this time. Conversely, it would simply not be possible to exceed or correct metaphysics solely from science, or for science to reject metaphysics and do without. The domain of science is entirely delimited within, and dependent on, analysis of consciousness. There could in principle be no evidence that science might muster to show the inefficacy of philosophy as metaphysics, that did not already bring in and presuppose that very metaphysics. If there were criticism of philosophical analysis of metaphysics from science, it would be an indication that one had not performed the analysis well enough. Hodgson says that the norms for science don't apply in analysis of consciousness. There is no 'right' analysis, in that there is no independent way to verify that one analysis is right and the other are wrong. There are just other analyses, performed well, or poorly. There is harm in the idea of a hidden reality which would render one analysis the single right one (1884, 80). The criteria by which they are evaluated involve aptness, and how illuminating they are found to be. Hodgson's claims that knowledge is a mode of consciousness, that consciousness is fundamentally temporal, and that the sciences study the same objects through a different method of analysis, show how his system provides support for knowledge in the sciences.

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