

What is a Situation?

Tom Burke

Department of Philosophy
University of South Carolina

ABSTRACT: This paper examines the role of 'situations' in John Dewey's philosophy of logic. To do this properly it is necessary to contrast Dewey's conception of experience and mentality with views characteristic of modern epistemology. The primary difference is that, rather than treat experience as peripheral and/or external to mental functions (reason, etc.), we should treat experience as a field *in* and *as a part of* which thinking takes place. Experience in this broad sense subsumes theory *and* fact, hypothesis *and* evidence, reason *and* observation, thought *and* perception. Logic in this view is a formal study of the generic features of all possible kinds of experience in this broad (thick, deep, wide, multifaceted) sense. The goal of this paper is to explain what Dewey thinks a *situation* is in the context of this view of experience, and to argue for the fundamental importance of that idea for logic and philosophy in general.

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This paper is part of a general attempt to reconcile John Dewey's theory of inquiry and contemporary philosophy of logic.¹ Dewey's most extended and focused treatment of logical matters is in *Logic: The Theory of Inquiry* (1938). The term 'situation' is highlighted in that book as a somewhat technical term, though the meaning this term has by 1938 is of course not new in Dewey's philosophy. It is found explicitly in his 1929 *Quest for Certainty* or in the 1930 article 'Qualitative Thought', for instance, but also years earlier in his *Studies in Logical Theory* (1903, 1916b). I do not intend to delve deeply into Dewey's philosophy of logic at this point, but I only want to explain what I think he thinks a situation is and to emphasize the importance of that idea for the philosophy of logic. To do this properly it is first necessary to examine and reconstruct some basic modern epistemology. We should begin this discussion with a brief look at Descartes's quest for certainty.

1 Cartesian Epistemology

It is customary to present pragmatist epistemology as a kind of post-modern experimental empiricism, in line with James's "radical empiricism" (1912), or Peirce's triadic

¹Many of the ideas expressed here have been developed in discussions with members of the *jdewey-I* email discussion list (currently hosted at listserv@vm.sc.edu, originally *dewey-I* hosted at listserv@postoffice.cso.uiuc.edu). Special thanks are due also to Gregory Pappas and to the anonymous referee for helpful criticisms of an early draft of the paper, and to John Perry for constructive reactions to earlier presentations of these ideas. The research reported in this paper was supported in part by a National Academy of Education Spencer Postdoctoral Fellowship, a Stanford/CSLI Postdoctoral Fellowship, and a grant from The Spencer Foundation. The statements made and views expressed are solely the responsibility of the author.

phenomenology (1931–1958 *CP* 1:284–572), or Dewey’s “immediate empiricism” (1905, 1934). This paper begins instead with a look at modern rationalist epistemology.

Probably no one these days would not question Descartes’s arguments for a mind/matter/God ‘tri-alism’ in *Meditations on First Philosophy* (1641) as he allegedly worked his way out of the depths of methodological doubt which he imposed on himself in search of a solid foundation for a ‘firm and permanent structure in the sciences.’ Dewey in particular balked at the idea of seeking any such once-and-for-all basis for certainty (not to mention Descartes’s particular way of structuring what he thought he knew once he thought he found what he was looking for). For Dewey, this is a misconceived project, a fact which we can appreciate as such simply by noting the intractable epistemological and metaphysical difficulties it has given rise to over the last three centuries. It is a mistake to think that we can encyclopedically lay out what we know if only we can find some solid starting point. We need acceptable beginnings as we proceed to talk systematically about the nature of experience, inquiry, science, knowledge, logic, and so forth; but securing such beginnings is something else besides finding a foundation on which we might construct a permanent encyclopedia of science.

Traditionally, a distinction is made between knowledge and belief, which is entirely appropriate; but some invalid presuppositions are often involved in how that distinction is conceived:

We believe [that such and so is the case even] in the absence of knowledge or complete assurance. Hence the [classic] quest for certainty has always been an effort to transcend belief. Now since, as we have already noted, all matters of practical action involve an element of uncertainty, [the classic view is that] we can ascend from belief to knowledge only by isolating the latter from practical doing and making. . . . [The] best efforts of philosophy have been constantly frustrated by artificiality and by controversial conflicts. Of all the many artificial problems which philosophy has thereby inflicted upon itself, we are here concerned with [this]

one. . . . [The] root of the traditional conception of philosophy is the separation that has been made between knowledge and action, between theory and practice, . . . Our main attempt will be to show how the actual procedures of knowledge, interpreted after the pattern formed by experimental inquiry, cancel the isolation of knowledge from overt action. (Dewey 1929, 21, 40, 38–39)

If Dewey is right, then Descartes is notably blameworthy for continuing if not instigating artificial conflicts in philosophy, particularly by advancing an epistemology which marginalizes methods of experimental inquiry. The present paper will attempt to unpack and explain the view of knowledge presented in this quote, which is clearly contrary to a Cartesian view.

But first, I think we should also admit that Descartes was on the (or *a*) right track with the cogito argument as a way of securing solid ground in epistemology (properly conceived). The cogito argument is not acceptable as it stands, insofar as it is a response to a misconceived project. But it hints at an answer to a question which Dewey or any other right-minded pragmatist should be concerned with. Namely, how do we deal with the distinction between ‘appearance’ and ‘reality’? Is there anything in one’s experience which bridges or otherwise transcends that distinction?

Descartes jumped the gun rather conspicuously by injecting notions of ‘I’ and ‘think’ into his response to this question. Dewey did not take a Cartesian line in his response to this question, but his response was such as to preserve an important philosophical point illustrated by Descartes’s response. The point is that there *are* things immune to the appearance/reality distinction—which to some extent gives Descartes what he was initially after. These things are, namely, the occurrences of the appearances themselves. Questions about personal identity (‘I’) and cognition (‘think’) may persist as we explore these kinds of questions. But minimally, you cannot deny the existence of appearances in general without confirming what

it is you think you are denying. That is not an absolute all-purpose epistemological Archimedean point, but it indicates that solid ground is within reach.

Dewey (1905, 1925b) cast this insight in terms of the qualitative wholeness of individual experiences, encapsulated particularly but not exclusively in his conception of ‘situations’. The quality (quale?) which pervades ‘an experience’ is a reality which is at the same time an immediate appearance. We still have a story to tell about personal identity, thinking, etc., if we want to understand human nature specifically, and we cannot endorse Descartes’s proposals about such things. But the important point is that we have evidence here of an epistemological foundation, i.e., an epistemological ground which transcends the appearance/reality distinction.

In this regard we do not want to side with either rationalist or empiricist traditions in epistemology, though there is something of value to be found in both traditions. In particular, I am *not* recommending the cogito argument as it stands as *the* Archimedean point in epistemology, no matter what one means by ‘epistemology’. With three hundred more years of human history on which to draw, Dewey had more sophisticated ideas than did Descartes on this score. On the other hand, it is worthwhile to note that Dewey’s epistemology, rather than an outright wholesale rejection of classical conceptions, offers variations and developments of insights traceable in part to Descartes (among others). We still do not and cannot have a fixed source of certainty nor a sure mark of truth or knowledge on the basis of which all that we know may now be encyclopedically formulated. Yet we have to acknowledge that there are things which are as they appear and which appear just as they are (hence there’s no worry of any veil of perception at least with regard to those things). Those things are (namely) the qualitative wholes (the qualia, the gestalten) which constitute our experiences.

I do not intend to delve into formal details of Dewey’s philosophy of logic, but I do want to make some points which should help to explain what these qualitative wholes are and why they are important in Dewey’s conception of logic.

2 Experience and Logic

With substantial qualification of his terms, Dewey characterized logic as inquiry into inquiry, i.e., as a science of inquiry (1938, chap. 1). This will sound odd to most of us today who have cut our philosophical teeth on this or that version of the logic of Russell, Carnap, Tarski, Gödel, Turing, Church, Quine, Kripke, and so many other twentieth-century logical luminaries.

2.1 Psychologism and Syntacticism

As a science, logic should have a subject matter. One might argue that logic is psychology, or some part of psychology. According to this ‘psychologistic’ view, logic is a study of principles or laws of actual thinking, or of actual reasoning, and logical laws are laws of thought. This was not an uncommon view in the late nineteenth century. This is the way many people read J. S. Mill’s *A System of Logic* (1858), for instance. But this view does not work. Logic is not a science of thinking. Modus ponens is not a law of thought, not a psychological law, nor a rule learned only by induction from experience. People break the rules of deductive logic all too frequently to allow this kind of view to stand.

Could one also argue that logic is rather a science (or canon?) of ‘correct’ reasoning, being prescriptive rather than descriptive? This is also not acceptable. Logic provides various measures of what makes for good inference—in mathematics, philosophy, law, or what have you—but it is not as if we ought to think along the same lines that a natural-deduction proof is written out, nor according to various tried and true formulations of acceptable inductive inference, nor along the lines of the final draft of this or that tedious philosophy paper, nor along the lines of a closing argument in a court of law. These latter things are the cultivated *products*—the expression—of hard and/or careful thought, but not the form and substance of the thought in and of itself that goes into that production.

There was considerable reaction against psychologism at the end of the 19th century and

early in the 20th century—in the work of Peirce, Frege, Husserl, and eventually many others. This reaction initiated an approach to logic that is still predominant today, in practice if not in principle. This is the view that logic—a mathematical discipline—is the study of formal features of language. See, e.g., Russell’s *Principles of Mathematics* (1903) or *An Inquiry into Meaning and Truth* (1940), or Carnap’s *Logical Syntax of Language* (1937). This ‘syntacticist’ view of logic would seem to afford a kind of objectivity and tractability which sidesteps the empirical inadequacy of psychologism. Even semantics is stripped own and molded to fit the syntactic machinery of set theory. But this also ultimately fails. It has taken some time to put this view of logic through its paces, to see what is and is not possible with this approach. It turns out that plain syntacticism is not rich enough to handle what it professes to be able to handle. Syntacticist logic still cannot match the grammatical and semantic richness of natural languages, nor many of the allegedly formal features of ordinary discourse. Within this framework, problems with the logic of names, or with the interplay of quantifiers and various intensional modalities and ‘attitude’ terms remain as obscure, enigmatic, and intractable today as they were quite early on in the development of formal modal semantics.

Given the empirical inadequacy of naive syntacticism, one wants to say that logic includes—but is *more than*—a study of artificial grammars and proof systems. But no one wants to get mired in some version of psychologism in the course of scoping out just what ‘more’ logic might be. How can we map out the subject matter of logic in a way that avoids the extremes of sloppy psychologism versus insipid syntacticism?

2.2 Movement Away From Syntacticism

Logic in the twentieth century moved too far to the formal-syntax extreme, as a result of (1) an abhorrence of psychologism and (2) having no idea how else to do logic ‘non-psychologically’ except in terms of grammars of meaningless symbols with nothing but syntactic features.

Several well-known developments in the last couple or three decades provide evidence of a movement away from a purely syntacticist position. Developments in the cognitive sciences—e.g., popularity of the computer metaphor in the philosophy of mind (i.e., computeristic ‘functionalism’), logic-programming methods in the AI enterprise, serious consideration (questionable as it may be) of a ‘language of thought’ hypothesis, etc.—tend to support the idea that maybe there is more of a connection between logic and psychology than early syntacticists were inclined to admit. Even ignoring the more ambitious efforts in this direction, a movement away from syntacticism is evident simply in the development of so-called intensional logic and a persistent interest in natural-language semantics, real-world semantics, discourse semantics, and an emphasis on content, context, indexicality, and other matters that go beyond mere syntax.

One could argue that these developments, largely in the last third of the twentieth century, are only the beginnings of an attempt to lift the corner of a rug under which too many crucial logical matters have been swept and otherwise avoided by contemporary analytical philosophy. Recent movement away from syntacticism serves as an implicit acknowledgement that we can admit a connection between logic and psychology without fear of getting mired in a simplistic Millian psychologism.

So what kind of middle ground could there be? However we characterize it, we want to maintain the ‘abstract formality’ of logic (and thus vindicate syntacticism to some degree); but we want to connect it with a concrete subject matter (to vindicate psychologism to some degree as well). This is not a particularly outlandish idea. Complex analysis, geometry, number theory, etc., are abstractly formal; yet they are based on or otherwise derived from concrete subject matters. Why not logic as well?

At this point Dewey’s conception of logic as inquiry into inquiry is worth looking at. Inspired to a large extent by C. S. Peirce and William James, Dewey would have logic

encompass almost all of the things we have just surveyed, and more. The following is a passage from *Logic* (1938) where Dewey very briefly says what the book is about:

[The] position regarding logical subject-matter that is developed in this work . . . in summary form, is that all logical forms (with their characteristic properties) arise within the operation of inquiry and are concerned with control of inquiry so that it may yield warranted assertions. This conception implies much more than that logical forms are disclosed or come to light when we reflect upon processes of inquiry that are in use. Of course it means that; but it also means that the forms *originate* in operations of inquiry. To employ a convenient expression, it means that while inquiry into inquiry is the *causa cognoscendi* of logical forms, primary inquiry is itself *causa essendi* of the forms which inquiry into inquiry discloses. (1938, 11–12)

In this view, logic is concerned not just with the formal features of representational systems used in particular inquiries, but with generic formal features of inquiry itself.

How do we reconcile this conception of logic as inquiry into inquiry with anti-psychologistic post-syntacticist twentieth-century mathematical logic? Simply put, we should not have to choose between Deweyan and contemporary conceptions of logic as if they were mutually exclusive. Granted, Dewey did not like the way logic was developing in the hands of Russell, Carnap, and others in the first four decades of this century. And Russell and others found Dewey's writings on logic naive if not incomprehensible. I want to argue that both sides of this mutual antagonism were probably right about each other in some ways, but wrong to think that their respective research programs, each sophisticated in its own way, could not ultimately accommodate one another. Justifying this claim would take a substantial amount of textual analysis and formal modeling and so forth. All I want to offer here is an analogy which suggests that this claim is reasonable.

2.3 An Analogy: Geometry and Logic

Might it be consistent with Dewey's conception of logic to say that logic is a formal discipline in much the same way that geometry is a formal discipline? In one sense geometry is (or can

be pursued as) a discipline within mathematics, not constrained by concrete applications; yet it is derived from and is still applicable to concrete subject matters. Can we cast logic in a similar light, that is, as a formal abstract mathematical discipline not limited by concrete applications, yet derived from and still applicable to concrete subject matters?

According to this analogy, we would want to say that logic is to some subject matter ‘X’ what geometry is to land-measurement and physical space. There are many reasonable possibilities as to what subject matter ‘X’ might be. The only candidate for ‘X’ which does justice to Dewey’s philosophy of logic, I want to claim, is: *experience*. That is, *logic is a critical study of generic formal features of any and all possible kinds of experience.*²

By this account, logic is to the surveying of experience in general what geometry is to the study of space—not being simply an empirical study of concrete experience (space) itself (respectively), but being inextricably rooted in such a study. Logic is a science (with its own distinctive theoretical, experimental, and instrumental methodologies) in the same way that geometry is a science—where logic may be distinguished from psychology in just the way that geometry is distinguished from physics. According to this analogy, logic may be considered an abstract mathematical study of experience in general, of any possible kind of experience, not limited to actual experience, not even our own; yet historically, it is derived from and still applicable to the study of human experience.

This is not to say that experience is anything like space—the analogy is not between experience and space. Rather the analogy is between logic and geometry (versus, say, physics). The claim is that logic is (capable of being) both abstractly formal and concretely

²This is to be contrasted with Dewey’s characterization of *metaphysics* ‘as a statement of the generic traits manifested by existences of all kinds without regard to their differentiation into physical and mental, . . . It begins and ends with analysis and definition.’ (1925a, 308). We cannot separate logic and metaphysics so easily as early logical positivists insisted we should; but logic, for one thing, employs more of a critical and less speculative methodology than does metaphysics, and secondly, it would be focused on generic formal features of all possible kinds of experience, not generic traits of all kinds of existence. That is a perhaps tricky but important distinction.

applicable in the same way that geometry is. Logic is more like geometry than physics, say, insofar as it is about all possible kinds of experience, not just experience as we have it, which is more the subject of psychology. And so forth and so on.

This conception of logic is an acceptable option, of course, only if we have in mind a suitable conception of ‘experience’. For instance, this claim would seem to run counter to the familiar if not default idea that logic pertains not to ‘experience’ but to ‘reason’—e.g., to laying out principles of ‘correct reasoning’ even if it is not descriptive of actual thinking. The AI enterprise, for instance, would seem to make sense because logic allegedly pertains not to what goes on in the flux of irritations of sensory nerve-endings, but to what goes on with the head’s software. But this conception of experience versus reason is an artifact of modern epistemology which we reject here, for reasons soon to be discussed. The characterization of logic as a study of generic formal features of experience is based on a different view of the relationship between reason and experience, namely, Dewey’s view of it. This view is not simple, and it is virtually unheard of in modern epistemology. So we will have to put some effort into understanding it.

One thing we must ask to begin with is how this characterization of logic comports with Dewey’s characterization in terms of inquiry. Why would subject matter ‘X’ not be inquiry? To answer that question, *first*, one should recall texts like ‘Qualitative Thought’ (1930b) where Dewey talks about logic in broad terms not limited to ‘inquiry’ in the usual sense of that term. As he puts it there, an artist’s logic is the logic of qualitative thought. Whatever the particular medium may be, the conception, construction, expression, performance, and appreciation of art has a logic to it; and the logic of science is in certain respects only a particular instance of this same logic—which is to say that, though art and science are different in so many ways, the logic of art and the logic of science are one and the same logic (cf. Hickman 1990, 60ff; Sleeper 1986, 172, 185ff). We may try to stretch what we mean by ‘inquiry’ to pull such matters into the domain of logic—as if viewing a sculpture or watching

a play, for instance, were a kind of inquiry. Or else we can simply say what we mean in the first place and think more broadly in terms of ‘experience’ here. A *second* reason for focusing on experience rather than inquiry is that we cannot understand what inquiry is in Dewey’s view without understanding his conception of experience more generally. Logic, as a rational and experimental discipline, would be misdirected if it did not aim to comprehend generic features of inquiry in general. But an essential feature of this view is that inquiry is just one kind of experience—one, namely, in which language and thought are brought to bear. Inquiry, then, is a particularly rich kind of experience, at least potentially; and it cannot be studied properly except in terms of how it exhibits generic features of experience in general. By thinking of logic as a study of experience, we have not ruled out inquiry as an important if not central part of its subject matter, just as we will not have dissociated geometry from ‘land measurement’ by identifying its subject matter more broadly with a study of formal properties of abstract ‘space’.

Perhaps it is important to note at this point—whether we take inquiry specifically or experience more broadly as the subject matter of logic—that we are not regressing here into some muddled kind of psychologism. Consider further the analogy with geometry. Geometry is a purely formal discipline but is nevertheless connected to actual surveying and other concrete matters. It emerged out of the practical activity of surveying land, but it eventually became a formal discipline in and of itself, not about any particular actual space, but about space, actual or not, in a general sense—from metric spaces and topological spaces to state spaces and function spaces of all sorts. Apparently, the earliest known systematization of geometrical facts and methods can be traced to Egyptian farmers having to repeatedly survey arable land along the Nile, to re-establish plot boundaries because that land would be flooded every year. These land-measurers were not ‘geometers’ in the present sense of the term, or at least not very sophisticated ones; but after a while, geometry as such emerged via Greek and other refinements (Pythagoras, Archimedes, Euclid, et al.). It eventually became the

mathematical discipline we have today—applicable to and pervading scientific modeling techniques and exposition in all sorts of fields: quantum physics, economics, political science, or virtually any science you care to name.

This eventual abstraction and formalization of geometry does not carry with it a denial of its relevance and applicability to a theory of actual physical space. No one seriously promulgates ‘spatialism’ so far as geometry goes, i.e., no one thinks of geometry as the science of physical space in a crude sense. But neither does anyone deny that connection for fear of being branded as ‘spatialistic’ or ‘physicalistic’. Similarly, linking logic to some concrete subject matter ‘X’ need neither promulgate a reductive ‘X-ism’ so far as logic goes, nor deny its relevance and applicability to a theory of ‘X’. We have to distinguish between noting the connection between logic and a science of some concrete subject matter ‘X’ versus claiming they are one and the same thing or that one is reducible to the other.

In the case of geometry, it took some time to clarify the difference between geometry as a formal discipline and geometry as a study of actual physical space. In the case of logic, it also has taken some time to make a similar distinction, but with confusing results, and only by way of a series of dubious conceptions of what that original subject matter ‘X’ might be in the first place. The Sophists were perhaps the earliest grammarians and semanticists (west of the Ganges anyway), being concerned with language in its own right, in a concrete sense, insofar as it was their job to teach people how to speak well. Honing our analogy a bit, we might say that, historically, this early practical study of language is to logic what land measurement is to geometry. Meanwhile, Plato and Aristotle were originally concerned in their respective ways with validly structuring conceptual schemes according to acceptable forms of reasoning, approaching the subject somewhat more abstractly (just as, e.g., Pythagoras and Archimedes developed and applied geometry in more abstract ways than did early Egyptian surveyors). Aristotle wanted to be able to survey fields of knowledge (versus fields along the Nile) in systematic and reliable ways. Stoic and Epicurean refinements of these earliest classical

perspectives were explored and developed throughout the Middle Ages (much like Euclid sought to systematize geometry), eventually merging (for better or worse) with rediscovered Aristotelean concerns and being canonized to the point that someone like Kant, for instance, could allegedly read off the structure of the mind's constitution from the classification of judgments and argument forms provided by these canons. Psychologism as such emerged relatively late in the story (with the emergence of psychology itself), as part of a 19th-century empiricist reaction against rationalistic apriorism. Syntacticism subsequently emerged in reaction to psychologism, but as if to divest logic of any concrete subject matter at all (if it does not constitute a return to some kind of Platonism, e.g., as Gödel conceived of it). Dewey's conception of logic, informed by historical and evolutionary thought in the 19th century, may be thought of as a kind of cumulative reconstruction of the best of any and all of these historical developments, where logic would become less focused on the structures of knowledge and of proof as such and more on the patterns of the processes of inquiry itself.

We have to be careful not to push the analogy with geometry too far, but tracing parallels between the histories of logic and geometry can help to explain what subject matter X is. Just as geometry moved from (*a*) concrete practical matters regarding land measurement to (*b*) more abstract and systematic studies of geometrical construction methods and on to (*c*) formal theories of metric and topological features of not just solids in physical space but of all possible kinds of 'space' itself,—so logic has moved from (*a*) concrete practical matters regarding the use of language to (*b*) more abstract and systematic studies of language design and use in rational inquiry. That gets us pretty much through the twentieth century so far as logic goes. If the historical parallels hold up, logic should be expected to advance further to developing (*c*) formal theories of structural and dynamic features of not just the design and rational use of languages in human experience but of all possible kinds of 'experience' itself. It is somewhat ironic that experience is the essential common thread in this evolution of subject matters—from language use to rational inquiry and on to experience in general—in

light of the more familiar empiricist-versus-rationalist slant on an alleged experience/reason dichotomy.

In any case, to say what a situation is so far as this view of logic goes, we need to talk about subject matter X, i.e., about experience in general, rather than about inquiry in particular. But of course what is said about experience in general terms should apply a fortiori to inquiry as a particular kind of experience.

So what is experience? How do we characterize it such that, for instance, ‘reasoning’ is a kind of experience rather than something over and beyond experience? We can actually say a lot about experience in general, following Dewey’s basic blueprint. There are of course a number of possible features of experience which we will simply have to accept or otherwise leave aside for the most part in this paper, given that these obvious features of experience are nevertheless part of what is inexplicable about experience—just as space is ultimately inexplicable even for geometers and physicists in spite of everything we know about geometry and physics. Namely, we cannot rationally deny *that* experience *is*, but we probably cannot say *what* experience is, any more than geometers can say what space is (or any more than physicists can say what ‘energy’ or ‘mass’ are, for that matter). These concerns very likely reach beyond the range of logic as such.

Such features of experience include, for instance, the nature of *sentience*—such as we might attribute to an amoeba perhaps, or a fly certainly, or a frog, or a chicken, or a fox, as much as to ourselves. But what is sentience? What is it other than life itself, if it *is* something other than life itself? How might it have come about in an evolutionary universe? By all current naturalistic accounts there was no such thing coming out of the Big Bang; but eventually, now, there is. What is it, and how did that happen?

We can ask similar questions about the emergence of *mentality* (Dewey 1925a; Mead 1934). We should be able to say something about what mind is relative to experience in general—the point being that with the emergence of mind we have the emergence of a

capacity for the kind of experience we want to call ‘inquiry’. But that is not quite the same as saying *what it is*.

Our inability to explain what sentience or mentality are is something which is being faced by a growing number of philosophers currently with an interest in the nature of ‘consciousness’. Whether we identify consciousness as sentience or mentality or both or neither is not a crucial concern presently. The one point to make here (again) is that if, after pursuing logic as recommended here, one is unsatisfied because we still do not know what sentience or mind or consciousness or experience are, then I can only suggest that one take a look at a decent geometry text and, when you are done, see if you know what space is. Not only will you still not understand what space is, but the text will not have claimed to be able to explain it but only, given that space is whatever it is, to have told you that such and so are its formal properties. Perhaps in this regard we should not expect more from logic (or even a study of consciousness) than we expect from other sciences.

Another issue that will not be addressed here in any satisfactory way is the question of whether experience is something to be attributed strictly to individuals, or is it something which may be shared? A collaboration or joint effort is not necessarily the same thing as a group of agents having one and the same experience, as if the group itself were a single agent. It may well be in some cases that it is a ‘we’ rather than an ‘I’ that has experiences—‘we accomplish a shared project, we are’ rather than ‘I think, I am’. If nothing else, it may be worthwhile at least to talk analogically in such terms, for instance, if we want to apply logical principles (in the present sense of ‘logic’) to the activities of research communities, businesses, countries, governments, committees, families, or other social, political, or economic entities—*as if* such entities were living agents. The fact that they are problem-solving agents concerned continually with maintaining if not improving some kind of integrated existence tends to invite the use of some such analogy—see, for instance, Dewey’s discussions of ‘publics’ (1927, 1930a). We need not get into these matters here. This

kind of question should be kept open, but in this paper the discussion is focused primarily on individual experiencers—e.g., flies, frogs, chickens, foxes, or human beings.

So there are a number of issues we cannot deal with here. On the other hand, there are a number of things we can say about experience generally in a preliminary effort to critically explore its possibilities.

3 The Pattern of ‘An Experience’

The English term ‘experience’ is ambiguous. In particular, we want to be sure to distinguish experience in a *mass* sense from experiences in a *count* sense (as in Dewey 1934, Alexander 1987). We can accommodate both conceptions of experience in the same way that, on one hand, we can imagine a field or sea of experience, but on the other hand, we can imagine swells or vortices or splashes or waves or currents of activity of some sort within that field. Experiences (in the count sense) are not obviously discrete in any strict sense; yet experience (in a mass sense) is chunky, and we refer to those chunks as experiences (in a count sense).

Example of experiences (in a count sense) include things like feeling a cold draft, seeing a tree, viewing a landscape, viewing a painting, watching a movie, crossing a street, shopping for groceries, visiting a museum, tying a shoe, stubbing a toe, feeling a pain, riding a bike, driving a car, solving a calculus problem, pursuing a scientific inquiry, reading a piece of text, writing a piece of text, engaging in a conversation, having a job, starting a business, running a business, buying a house, owning a house, sitting on the front porch, and so forth and so on. What generic features do all of these kinds of contemporary human experience have in common?

We can list several features of experience which Dewey would want a philosophy of logic to accommodate. In Dewey’s various writings on the subject we find, for instance, that experience is *central* to human nature, rather than peripheral or otherwise secondary or ‘subserving’ (e.g., to reason). Experiences are not just caused but are *efficacious* (cf. Dewey

1925a, 90). Experiences are not just immediate but are *directed* as if to some acceptable closure. They are thus *dynamic*, (as if) with a beginning and end; and they are *active* through and through.

Specifically, the claim that experience is central rather than peripheral to human nature runs counter to a Cartesian and/or modern empiricist view of experience. According to the view of ourselves which we have inherited from Descartes, Locke, and others, experiences are occurrences in the individual human mind, occurring as ideas impressed on it by external things, more or less at the mind's periphery, injected into the mind through irritations of nerve endings and so forth. The main business of the mind is to reason and formulate intentions and plans and otherwise make choices and control actions on the basis of existing beliefs and desires, and all of this mental activity somewhere back up in the inner reaches of the brain (if not in some realm altogether outside of the physical world) is geared or otherwise answerable to evidence supplied to it through sensory experience. Experience in this view is a flux of sensory excitation at the interface between the mind and the world. The main point here is that, in this modern view, mind (soul, the faculty of reason, etc.) is central to human nature, and experience is a peripheral (but of course important) activity which serves the mind's needs and purposes.

For what it is worth, as of the 1990s, this modern view of mind and experience is essentially the view held by most contemporary computer scientists trying to build AI devices (Brooks 1990a, 1990b being a notable exception). This conception of real intelligence may seem correct at least in broad outline; but so far as that goes, it may seem so only in the same way that the Earth seems flat, or in the way that the Sun seems to move around the Earth. It is 'obvious', yet it could be simply a persistent illusion. Such speculation proves nothing one way or the other; but it suggests that reasonable alternatives are worth considering.

Dewey's alternative view of experience and reason (etc.) virtually turns the old picture inside out, such that mentality is something which occurs within experiences rather than the

other way around. As opposed to a bodily encasement of a mind within the head, over and against the world, God, and other embodied minds, Dewey starts with a broader conception of a live agent embedded in the world (like a knot tied in a rope—not a discrete and separate entity, but a distinct entity nonetheless). While a Cartesian duality (or triality) is not acceptable, we do need to recognize some distinctions. Besides the rough distinction between agent and world, we may also want to distinguish organisms and environments. These two distinctions—agent/world and organism/environment—do not necessarily line up but actually may profitably be conceived of as orthogonal to each other. That is, it may be useful to conceive of an agent as an integration of organismic and environmental elements (e.g., a soldier with weaponry, a carpenter with tools, a cook with utensils, an elderly person with cane and glasses and hearing aid, etc.), where the environmental features of the agent are distinguishable from the world at large in which the agent acts (including the enemy, the house, the meal, the walkway, etc.). Strict boundaries are not crucial so long as we have these distinctions and so long as we do not fail to distinguish distinct distinctions as appropriate.

The important point presently is that we can say something about what (or where) experience is in terms of these distinctions. Namely, experience is some aspect or property of, if not the entire life-activity of, a living agent, where life-activity is something like a field of transactions among agent and world, organism and environment. Stuff moves back and forth and around and through these various arenas of reality, perhaps systematically and perhaps in chaotic if not stochastic ways. A living agent (amoeba, fly, frog, fox, human being) is a knot or clump of such stuff which is capable of sustaining and exploiting such transactions and maintaining some kind of systemic integrity in the process. A nonstop process of continually orchestrating these transactions such as to maintain their systemic integrity is the field of interactivity which (in part if not entirely) constitutes experience. There is obviously an endless variety of ways that this can happen. An appeal to evolutionary principles at this point would introduce capacities for reproduction, variation, heredity, and so forth to account for

the possibility of a large variety and complexity of such living systems with any number of different kinds of possible survival strategies.

What we have so far then is a sense of what (or at least where) experience is in the mass sense of the term. On the other hand, Dewey describes ‘an experience’—in the count sense—as some kind of episode of reactive stabilization. In the very broadest generic sense of the term, this includes anything from simple sensory events to complex and extensive tasks and projects in an agent’s life. Where experience (in the mass sense) is a field of interactivity, *an* experience begins with a disturbance of this interactivity, a *stimulus* that calls for a *response*. An experience is thus a process with (roughly) a beginning, a middle, and an end—moving from some kind of tension (conflict, disturbance, imbalance, threat, disequilibrium, etc.) toward some kind of resolution (safety, balance, solution, security, equilibrium, etc.). It *begins* as an activity (a stimulus), and it *ends* as an activity (a response), and in between, it *moves* more or less continuously through various phases of activity towards some more acceptable way of being, acting, doing, etc. It is thus active through and through, throughout various transformations of the initial stimulus. Innately, the aim or goal of an experience is to achieve an acceptable and conclusive manner of operating which is not problematic, i.e., which is internally coherent and externally consistent with any subsequent experience (where, clearly, even if the former is practically determinable, the latter is in principle not—hence the fallibility of any response, due to the precariousness of life in general.)

According to this picture then, an experience is not something which happens solely within an organism as opposed to an environment, nor within an agent as opposed to the world. Rather, an experience is an episode of interactivity which cuts across these distinctions.

Similarly, we do not want to have to locate mentality exclusively in any one area demarcated by these distinctions (such as, e.g., solely and exclusively within the brain, nor in some separate non-physical realm), though we do want to locate it within a field of

experience. How is this possible? What *is* mind? If experience subsumes *all* aspects of the life-activity of a living agent, then that will presumably include any cognitive activities. Not all experiences are cognitive experiences, but the claim here is that the exercising of mentality (thinking, reflection) is an aspect of life-activity which, to exist at all, must occur as part of some experience. Rather than treat experience as peripheral and/or external to mental functions (reason, etc.), we should treat experience as a field *in* and *as a part of* which thinking takes place. Experience in this broad sense subsumes fact *and* theory, evidence *and* hypothesis, observation *and* reason, perception *and* thought (Dewey 1916a, chap. 11).

Specifically, mentality (mind, an ability to think, an ability to reflect) is an ability to step back and work with representations of things—as opposed to reacting automatically or instinctively to things as directly presented. Thinking is thus an ability requiring the use of *symbols* or symbolic activities, i.e., *representations of things* (1925a, especially chap. 5). One cannot ‘step back’ within an experience if there is no space into which to step; and representational systems provide that space. In this regard, the existence of representational capabilities (languages, etc.) makes thinking possible—the existence of representational capacities (not necessarily inside the head) is a necessary condition of the possibility of thinking. This thesis of course requires more of supporting argument than I will develop here, though Dewey’s argument is essentially the same kind of abductive critique one finds in Mead’s evolutionary ‘just so’ story in *Mind, Self, and Society* (1934).

If it is possible at all in a given experience, thinking constitutes a process to scoping out the possibilities and potentialities of the given experience in and for which it (thinking) functions. The power of symbol systems lies not just in the fact that they provide an arena for an independent representational activity, but that such representational activity will loosely parallel and serve the primary activity within which it is couched. In particular, this loose parallelism between complimentary aspects of experience constitutes the basis of a useful survival strategy (or class of survival strategies). Specifically, an ability to work with symbol

systems whose systematicity allegedly parallels the systematicity of primary experience generates an ability to work through ranges of possible consequences of actions while at the same time being free from having to *actually* implement those actions. Thinking is thus an ability designed to maximize and exploit ‘foresight’ into possible consequences of actions determined by given domains of experience.

The crucial point here is that an ability to think yields an ability to *inquire*—that is, to formulate, test, and revise conceptions of a given domain of experience. The pattern of an inquiry is thus only a more elaborate version of the basic pattern of an experience, namely, where reflective (cognitive, mental, representational) modes of information management and control are engaged in service to the move from stimulus (tension, problem, etc.) to response (resolution, solution, etc.). Mind is thus a distinctive capacity or faculty of agent/world interaction which rides piggy-back on a more basic capacity for instinctive, intuitive, animal experience. The ‘domain’ of an experience is a field of agent/world interaction which may or may not include mental (representational) processes. Experience is basic and central to human nature; whereas mind (reason, thought) is secondary—merely a possible feature or aspect or function within one’s experiences. This would suggest that logic, as a theory of inquiry, requires if not *is* more fundamentally a theory of experience.

So where does this get us? Given the picture of experience that we have outlined here, we are in a position to say what a *situation* is.

4 Situations

Given our account above of what a cognitive agent is, a number of questions arise. How can such an agent be sure about anything it does or believes (where ‘belief’ is somehow associated with information taken to be factual)? What does it mean to be in error about things? What does it mean to be correct about things? How exactly and why does an agent respond to this or that kind of stimulus in this or that way? Presumably an agent’s one

standing aim, if nothing else, would be to secure its own well-being. But how is this accomplished? What manner of response is appropriate in any given instance? How is that determined from one instance to the next? Is there a problem of ‘knowledge’ here? No doubt there is, in a practical sense if not as a matter of philosophical principle. How can a response be warranted without there being some regularity and reliability in agent/world transactions? What kind of grasp can an agent have of the world (in itself)? Well-being cannot simply be wished for. An agent will presumably need some general sense of these regularities (complicated by the fact that they may be ‘evolving’), and some kind of concrete (even if perhaps ‘changing’) existential ground as a basis for action.

We cannot possibly answer all of these questions here, but they all hinge to some extent on the issue of how to secure concrete existential foundations which might serve as a basis for warranting an agent’s actions. Specifically, is there anything in one’s experience which cuts across an ‘appearance/reality’ distinction (and thus is immune to skeptical doubt), and thus may serve as such a ground? Are there ever things an agent can count on to *be* just exactly as they *appear* to be? Well, yes there are. We can give several kinds of examples.

4.1 Appearance and Reality

A familiar example of immediately obvious existential concreteness is of course the Cartesian cogito (as experienced, not just the abstract argument). This kind of example is specific to mental agents; but nonetheless, it at least establishes the fact (which we all may confirm) that such things exist. Contrary to Descartes, such an immediate and indubitable apprehension is not itself to be characterized as *knowledge*—if, for example, we accept Norman Malcolm’s 1949 arguments against G. E. Moore’s 1939 ‘proof of an external world’ or his 1925 common-sense ‘truisms’ concerning immediate knowledge; or C. I. Lewis’s 1946 argument that such apprehensions cannot be classed as knowledge ‘because they are not subject to any possible error’; or Dewey’s 1925a characterization of knowledge as a *consequence* or *result* of

inquiry and thus as essentially mediated; or for that matter, Kant's critique of the second paralogism of transcendental psychology (1781/1787, A 352–356). But the crucial point is that such immediate apprehensions are not subject to any possible error and *as such* may serve to anchor knowledge in concrete experience.

Modern empiricists based their epistemology on a different kind of immediately obvious existential concreteness. Elementary sensory qualia (pains, smells and tastes, auditory tones, visual hues, etc.) also establish the existence of such indubitable apprehensions not subject to any possible error. For instance, if it seems to you like you are in pain, then you *are* in pain. Interestingly, this kind of example is probably not specific to mental agents as such. For all we can say it requires at most an elementary kind of sentience.

Another kind of example is what we might refer to as a static gestalt. The psychological literature on perceptual gestalts provides any number of examples, e.g., where four dots may be seen as a 'square', a circular arrangement of several dots may be seen as a 'circle', and so forth. This kind of example illustrates the possible spatial complexity of such things. They are spatially complex, yet existentially they occur all at once, immediately, as wholes not reducible to their various parts.

Similarly, there are numerous examples in the psychological literature of dynamic gestalts—gappy motions viewed all at once as continuous—a prime example being what we experience at the cinema, but a more striking example being a relatively slow alternation of two separate and displaced images of a disc, say, which is seen as a smooth back-and-forth motion of a single disc. This kind of example illustrates the possible temporal complexity of such immediate apprehensions. Motions are temporally complex, yet existentially they appear as wholes not reducible (in our experience) to a mere succession of states (Hume's atomistic-empiricist arguments notwithstanding). And again, it is not at all clear that this requires *mental* operations, though it does at least indicate that immediate apprehensions may be more complex than what modern empiricists conceived of as simple sensory qualities.

Such ‘qualitative wholes’ are *immediately accessible*, but typically neither atomic nor universal, nor simple, nor static.³ Such things are potentially quite complex (a novelist’s conception of an unwritten novel, a painter’s vision of how to do a painting, a mathematician’s imagination of theory *T*, a physicist’s immediate grasp of a given problem under investigation, etc.), yet they occur immediately, ‘all at once’.

We do not want to refer to these qualitative wholes, on the other hand, as ‘experiences’, since the latter term we already know means something else (or rather, something more). Any such qualitative whole occurs *in* an agent’s experience (in the mass sense). But more to the point, the existence of such qualitative wholes supports a general claim we want to make about experiences (in the count sense). Namely, every experience, while existentially and modally ‘thick’ (deep, directed, tensive, conative, impulsive, dynamic, changing, etc., *not* just in the sense of a rich sensory-excitation at the periphery of the mind), has an immediately accessible face on it—how it appears to and thus how it *is* for that agent in the given instance. This pervasive qualitative whole reflects the distinctive and unique here-and-now *individuality* of that experience. The movement of an experience is reflected in the transformation of this pervasive qualitative whole (from tension to resolution, etc.) toward warranting that appearance with regard to what it is and what its consequences might be (i.e., what it *signifies* or *means*).

Sidestepping rationalist versus empiricist claims to priority on this issue, Dewey used the term ‘situation’ to refer to this immediate pervasive quality of an experience. In particular, an inquiry, in the most general sense of the term, is characterized by Dewey 1938 as a transformation of a situation in this very sense. In this regard, we are committed to the claim that an *experience*—with a beginning, a direction, potentiality, extending out of and into the

³C. S. Peirce (CP1:284–572) clearly encapsulated this insight into his triadic phenomenology. Namely, firsts, seconds, *and* thirds are all phenomenally immediate though irreducible one to the other. There are also affinities here with William James’s radical empiricism (1912), where relations as well as simple events are immediately apparent in our experience.

world, and so forth—is typically more than what or how it ‘appears’ to be on the surface; but a *situation*, while potentially complex, is just that ‘surface’ of an experience. A situation is exactly as it appears to be, wherever one may be within the unfolding of the experience which the situation uniquely presents to the agent.

4.2 Determinate Situations

One can readily see that Dewey’s picture of inquiry is essentially a version of the doubt/belief model of inquiry introduced in Peirce’s 1877–78 series of articles in *Popular Science Monthly* (reprinted all together in Houser and Kloesel 1992, 109–199). But there are some differences to be noted as well. According to Dewey, inquiry is a transformation of an indeterminate situation into one which is sufficiently determinate to become a coherent whole (Dewey 1938, 108–109). But what exactly is a ‘determinate situation’?

If only as an analogy, consider the case of scientific inquiry as depicted in Kuhn 1970. A move from revolutionary science to normal science as Kuhn describes it is a move *not* towards an ‘end of science’ but rather towards a flourishing of science—where instrumental, experimental, and conceptual machineries allegedly work effectively together to produce a coherent mastery of the given subject matter. Such success, such flourishing, is of course generally fallible, given that wholly contrary particulars may arise which undermine the perspective embodied in any such ‘successful’ way of doing things. History indicates that we can count on some such breakdown(s) sooner or later. But logic, in part, should answer to the need to know in general terms what works in those periods of normal science. It is in such periods of science that the machinery of scientific method works most efficiently to test and regulate current scientific activities and thus objectively secure whatever aspects of those activities are at all securable.

To some extent, all inquiry (and for that matter, all experience) is like scientific inquiry in the one sense that the goal—the end in view—will be not a final ‘state’ as such but rather

some kind of secure flourishing of activity. Such successes, viewed as justified conclusions of inquiry, are what Dewey would refer to as 'knowings'. Dewey, like Peirce, wants to know how it is that we come to such justified beliefs, warranted judgments, etc., viewed in this way as the active conclusions of inquiry. Generally speaking, there are certain conditions and principles that have to take shape and operate in an inquiry for warrantable conclusions to be possible (i.e., to be practically attainable). It is not the case that just 'anything goes'. It is easy enough to subsume contemporary mathematical logic in this framework insofar as what we now think of as principles of deductive, inductive, and abductive logic are principles which have to (come to) be operative in a successful inquiry. Such principles are not claimed to operate *necessarily*, i.e., in any and all inquiries, but rather the claim is that they must be allowed (if not made) to operate if the inquiry is to be warrantably successful. These principles are rather necessary conditions for the possibility of successful inquiry, as it were. Whether these principles and conditions are always *sufficient* for successful inquiry is of course a different matter. That depends on the world at large as much as on the inquirer's skills and efforts to succeed.

As for differences between Peirce and Dewey, they differ on what these principles are. One could argue that Peirce sees inquiry in analogy with a kind of sampling procedure which in the long run would produce 'true opinions' in concordance with 'reality'. This is no doubt a justified way to think about sampling. One need not have any problem with this way of thinking about 'truth' and 'reality' in the context of explaining random sampling. But it is not clear that a sampling analogy is the best way to think about 'inquiry' in the most general sense. For instance, for Peirce, the fixation of belief (in the 'long run') would move one from a state of doubt, where inductions are the best one can do given the evidence, to a state of fixed belief where everything (of any relevance) is deducible. Induction would no longer be needed since all the evidence, all possible evidence, is in, and the facts are known and hold together in a deductively coherent system. Peirce uses a crystallization metaphor in the 1891

Monist article ‘The Architecture of Theories’ (Houser and Kloesel 1992, 285–297; or *CP6:7–34*) to characterize this ultimate aim of mental action, i.e., as the realization of a tendency to generalize, to produce habits of action, to settle opinion, and otherwise to bring inquiry to a conclusion as ‘an absolutely perfect, rational, and symmetrical system, in which mind is at last crystalized in the infinitely distant future’. Inquiry in this ideal sense thus aims for some kind of deductive closure.

Dewey’s picture of inquiry—even in an ideal sense—is more open-ended if not truer to the facts as we know them. Generally speaking, one never gets to a point—not even in a supposed infinitely distant future—where inductive and abductive inferencing is not necessary. Rather, inquiry is a process in which one moves from a situation where things work confusedly if at all, toward one where, comparatively speaking, it all works well. As one moves into conclusive stages of inquiry, one manages to institute a type of situation in which one’s logical machinery starts to work efficiently and effectively. This is not the same as moving into or even toward a ‘crystalized’ state of fixed belief where deduction reigns sufficient. In early stages of inquiry, none (or too little) of this machinery works properly, not even proper inductive methods—not until one starts formulating hypotheses, getting one’s instrumentation in place, running experiments, and so forth. But typically one would never work toward (much less achieve) a purely ‘deductive’ state of inquiry. Rather, *all* of the methods and principles of successful inquiry—deductive, inductive, abductive, and whatever else we might come to discover which makes for warrantably successful inquiry—begin to take shape, fall into place, or otherwise start to work efficiently, by dint of one’s efforts to make that happen and insofar as the world at large allows it. A determinate situation then is an arena of successful activity in just this sense—not one in which the problem of induction is ‘solved’ but one in which the principles of induction (and of deduction, and of abduction) work as well as anyone could expect them to work in that context.

In this regard, Dewey draws an analogy—maybe more than an analogy—between science

and moral activity. Namely, the question of what makes for *warranted* judgment is a matter of evaluation. While an inquirer has one's methods and skills and data and conceptual frameworks as concrete considerations (as 'warrants') in any given case, the very nature of conclusive judgment is tricky at best, insofar as one's judgments have consequences going beyond what one can have a concrete handle on. In this case, Dewey would never claim that the method of scientific inquiry, if followed properly, should lead to "true" judgments, insofar as it is not clear what that even means. Dewey's characterization of scientific inquiry and of warranted judgment in particular is normative in the sense that normal (i.e., flourishing) science is what one wants to be doing, and logic is a study of ways to get there and of what to be doing once one is there.

Logic as it is taught in mathematics and philosophy departments today (viz., usually in the absence of any reference to inquiry) deals with only a piece of this picture. It is focused on systems of inference as they would function in stable cases of normal science, whereas logic on Dewey's view would aim to subsume *all* phases of inquiry within the scope of logic. Nothing in contemporary mathematical logic is irrelevant in this regard, but it does require placement within a broader theory of inquiry.

We have used a Kuhnian framework to draw an illustration here. But we can generalize this characterization of determinate situations to all kinds of inquiry, and even all kinds of experience (such as simply appreciating a work of art), such that one can begin to see the full scope and depth of Dewey's conception of logic—complete with 'normative' considerations of what leads warrantably (reliably, justifiably) to the flourishing of experience.

5 Conclusion

Dewey's conception of knowing as a flourishing of experience is rather different from a Cartesian conception of knowing. From a Deweyan perspective, Descartes's project was ill-conceived. One cannot commence to give an encyclopedic account of what one knows

once one has solid epistemic ground to stand on (such as the cogito argument allegedly provides). Not only is the cogito argument *not* an Archimedean point for accomplishing such a feat, but neither is anything else one might suggest. We should hesitate to adopt the cogito argument as an Archimedean point in epistemology in this encyclopedic sense because we should hesitate to adopt that whole kind of project in the first place.

Nevertheless, once we adopt Dewey's conceptions of inquiry and knowledge (knowing, intelligent habit, experimentation, warranted assertibility, and so on), we find ourselves (as epistemologists, and in that sense as specimen inquirers) in a position that is not dissimilar to Descartes's initial position in the *Meditations*. Suppose that we accept Dewey's picture of inquiry as a coherent account of reflective problem solving. How do we know that it works in the real world, i.e., that it is more than just a coherent tinker-toy construct? There is possibly something behind the charge that inquiry as Dewey characterizes it is somewhat circular and therefore would never really get off the ground if you seriously tried to literally follow out the pattern he describes. How do we know it is not a philosophical analog of an impressively complex recursive definition which is nevertheless worthless because we cannot establish a single initial case to kick off the recursion?

Well, we cannot expect to find a solid foundation once and for all such that on that basis we are assured that we can successfully perform all inquiries and accumulate absolute knowledge. *But* on some kind of principled grounds we want to be able to say that each and every inquiry does have (access to) some kind of solid experiential foundation—even if that foundation does not count as an instance of certain knowledge in its own right, and even if the results of every inquiry are fallible at best, and even if inquirers do not always make the most of that foundation. What Dewey has to say on this matter is that, no, we cannot say once and for all what the content of any such foundation is (whether it is 'I think, I am' or whatever one might suggest) but, yes, as a matter of principle we can say across the board that every inquiry has its own unique foundation (it's own Archimedean point, so to speak) whatever it might be,

namely, the qualitative immediacy of the given situation that is unique to that inquiry. This qualitative immediacy, among other things, serves the same role in a given inquiry that the cogito was supposed to play in a Cartesian epistemology. Descartes's cogito is just one particular (kind of) example (in one kind of inquiry) of this indubitable qualitative immediacy. In any given instance, this qualitative immediacy of a possibly complex situation is a solid epistemic foundation in that it is as immediate and obvious and indubitable as is Descartes's own thinking is to himself in the particular inquiry described in *Meditations on First Philosophy*.

I might inquire at length into the what-fors and where-foms and how-sos of my coffee cup here in front of me, for instance, even to the point of doubting whether there is a cup there at all. But the immediate givenness of the appearance as a whole (as the subject matter of that inquiry) is beyond question. The cup may or may not be what it seems, but *that* it seems at all, one way or another, is a solid fact. If it suddenly disappears then fine; that will then be the situation in its 'present' guise. This is a trivial example, but the point it illustrates is not trivial. We can safely acknowledge that there are things which are as they appear and appear just as they are: namely, the qualitative wholes (the situations) which pervade or otherwise constitute the immediate presence of our experiences.

In a general account of the nature of inquiry and of the acquisition of knowledge (properly conceived), we are thus immune to any charge of having *only* a coherence theory, or of being locked up in our minds behind some veil of perception. We have a theory of knowledge that cuts across any such alleged 'veil' or duality otherwise. We are on solid ground here because we can point to any number of things in an inquirer's experience which are immune to any such 'doubt' as to what they are versus what they appear to be. We can point, namely, to the appearances themselves, i.e., to the qualitative wholes within a field of organism/environment interactions which immediately populate one's sense of things.

This helps to explain why Dewey began his theory of inquiry and his philosophy of logic

with a discussion of ‘situations’ (1938, 72–73, 108–109, 145–146). It guarantees that our account of logical matters can be built on solid ground. Descartes does not supply that solid ground in the most general sense that is required, but he gives a good example of it (within the confines of a specific inquiry based on a rather nebulous set of preconceptions and cultural constraints otherwise) and thus he provides an important clue to the general mystery of what or how it is that something can count as solid ground in inquiry. What is profoundly significant about the cogito argument is not the dualism nor the representative theory of ideas nor an encyclopedic conception of science and epistemology nor any number of other matters which Descartes drew on—these things may be put aside. The one thing that is crucial is simply the observation (the recognition) of the qualitative immediacy of the experience of thinking in the particular inquiry he set for himself. The cogito may be worthless even if relevant in other inquiries dealing with other subject matters, but the important point is that those other inquiries will have their own ground—equally solid—in the qualitative immediacy of their own subject matters as given. More generally, every particular *experience* will have its own ground in this same kind of qualitative immediacy. That circumscribed qualitative immediacy is what a situation is.

References

Note: Page and chapter numbers in citations of John Dewey’s works refer to versions of those works in Dewey 1899–1924, *MW*, and Dewey 1925–1953, *LW*.

Alexander, T. M. 1987 *John Dewey’s theory of art, experience, and nature: The horizons of feeling*, Albany (State University of New York Press).

Brooks, R. A. 1990a ‘Elephants don’t play chess’, *Robotics and Autonomous Systems* **6**, 3–15. Also in *Designing Autonomous Agents: Theory and Practice from Biology to Engineering and Back*, ed. Pattie Maes (Cambridge, MA: The MIT Press, 1990).

Brooks, R. A. 1990b ‘Intelligence without reason’, AI Memo 1293 (MIT AI Lab). Also in *Computers*

- and Thought*, Proceedings of the International Joint Conference on Artificial Intelligence, Sydney (Los Altos, CA: Morgan Kauffman, 1990, 569–595).
- Carnap, R. 1937 *Logical syntax of language*, London (Routledge and Kegan Paul).
- Dewey, J. 1899–1924 *The middle works (MW)*, vols. 1–15, Carbondale (Southern Illinois University Press). Ed. Jo Ann Boydston, 1976–1980.
- Dewey, J. (ed.) 1903 *Studies in logical theory*, Chicago (The University of Chicago Press). University of Chicago decennial publications, second series, vol. 11. Dewey’s contributions reprinted in Dewey 1899–1924, MW 2:293–375.
- Dewey, J. 1905 ‘The postulate of immediate empiricism’, *Journal of Philosophy, Psychology, and Scientific Methods* 2, 393–399. Reprinted in Dewey 1910, and in Dewey 1899–1924, MW 3:158–167.
- Dewey, J. 1910 *The influence of Darwin on philosophy, and other essays in contemporary thought*, New York (Henry Holt and Company).
- Dewey, J. 1916a *Democracy and education*, New York (Macmillan Company). Reprinted in Dewey 1899–1924, MW 9.
- Dewey, J. 1916b *Essays in experimental logic*, Chicago (The University of Chicago Press). Essays reprinted separately in Dewey 1899–1924, MW 2,4,6,8,10.
- Dewey, J. 1925a *Experience and nature*, Chicago (Open Court). Reprinted in Dewey 1925–1953, LW 1.
- Dewey, J. 1925b ‘A naturalistic theory of sense-perception’, *Journal of Philosophy* 22, 596–605. Reprinted in Dewey 1925–1953, LW 2:44–54.
- Dewey, J. 1925–1953 *The later works (LW)*, vols. 1–17, Carbondale (Southern Illinois University Press). Ed. Jo Ann Boydston, 1981–1990.
- Dewey, J. 1927 *The public and its problems*, New York (Henry Holt and Company). Reprinted in Dewey 1925–1953, LW 2:235–372, 375–381.
- Dewey, J. 1929 *The quest for certainty: A study of the relation of knowledge and action*, New York (Minton, Balch, and Company). Reprinted in Dewey 1925–1953, LW 4.

- Dewey, J. 1930a *Individualism old and new*, New York (Minton, Balch, and Company). Reprinted in Dewey 1925–1953, *LW* 5:41–124.
- Dewey, J. 1930b ‘Qualitative thought’, *The Symposium* **1**, 5–32. Reprinted in Dewey 1925–1953, *LW* 5:243–262.
- Dewey, J. 1934 *Art as experience*, New York (Henry Holt and Company). Reprinted in Dewey 1925–1953, *LW* 10.
- Dewey, J. 1938 *Logic: The theory of inquiry*, New York (Henry Holt and Company). Reprinted in Dewey 1925–1953, *LW* 12.
- Eaton, R. M. (ed.) 1927 *Descartes selections*, New York (Charles Scribner’s Sons).
- Hickman, L. A. 1990 *John Dewey’s pragmatic technology*, Bloomington (Indiana University Press).
- Houser, N., and C. Kloesel (ed.) 1992 *The essential Peirce: Selected philosophical writings*, volume 1 (1867–1893), Bloomington and Indianapolis (Indiana University Press).
- James, W. 1912 *Essays in radical empiricism*, New York (Longmans, Green, and Company). Posthumous, ed. R. B. Perry. Reprinted in the *Works of William James* series (Cambridge: Harvard University Press, 1976).
- Kant, I. 1781/1787 *Critique of pure reason*, New York (Macmillan, 1929). Trans. Norman Kemp Smith.
- Kuhn, T. S. 1970 *The structure of scientific revolutions*, Chicago (Chicago University Press).
- Lewis, C. I. 1946 *An analysis of knowledge and valuation*, La Salle (Open Court Publishing Company).
- Malcolm, N. 1949 ‘Defending common sense’, *Philosophical Review* **58**, 201–220.
- Mead, G. H. 1934 *Mind, self, and society*, ed. Merritt H. Moore, Chicago (The University of Chicago Press).
- Mill, J. S. 1858 *A system of logic*, London (Harper and Brothers).
- Moore, G. E. 1925 ‘A defence of common sense’, In *Contemporary British Philosophy* (2nd series), ed. J. H. Muirhead London (George Allen and Unwin). Reprinted in Moore 1959, 32–59.

- Moore, G. E. 1939 'Proof of an external world', *Proceedings of the British Academy* **25**. Reprinted in Moore 1959, 127–150.
- Moore, G. E. 1959 *Philosophical papers*, London (George Allen and Unwin).
- Peirce, C. S. 1931–1958 *Collected papers of Charles Sanders Peirce (CP)*, Cambridge, MA (Harvard University Press). Vols. 1–6 ed. Charles Hartshorne and Paul Weiss; vols. 7–8 ed. Arthur W. Burks.
- Russell, B. 1903 *The principles of mathematics*, Cambridge (Cambridge University Press).
- Russell, B. 1940 *An inquiry into meaning and truth*, New York (George Allen & Unwin).
- Sleeper, R. W. 1986 *The necessity of pragmatism*, New Haven (Yale University Press).