

THE IMAGINATIVE CHARACTER OF PRAGMATIC INQUIRY *O CARÁTER IMAGINATIVO DA INQUIRIÇÃO PRAGMÁTICA*

Brendan J. Hogan

New York University - USA
Bhogan21@gmail.com

Abstract: John Dewey's lifelong labor to articulate an alternative account of logic from the 'abstract thought' predominant in discussions of logic culminates in his 1938 *Logic: the theory of inquiry*. In this text Dewey argues that all inquiry involves the instantiation of a general pattern of inquiry. Articulating the role of imagination in the general pattern of inquiry is crucial to illuminating the practical character and theoretical scope of this activity. Specifically, the agency of the inquirer as a future directed, project oriented organism highlights the imaginative dimension to problem solving. In addition, Dewey's theory of concepts as hypotheses whose meaning is practically and experimentally tested and reconstructed is deeply indebted to imagination. This is due to the fact that ideas, concepts, and meanings are not understood from the perspective of speculative or theoretical reason, but rather circumscribed within the practical problem solving context, what Dewey calls 'the situation', in which all activity of human being takes place. The meaning of our concepts and scientific achievements is then constantly available for revision. This revision is a practical affair, giving the pragmatic version of 'the primacy of practical reason' an overarching scope to intellectual activity. The result is that Dewey's pragmatic reconstruction of imagination is fundamental to inquiry, agency, and understanding human agency. This paves the way for the final suggestion of the paper, that a pragmatic philosophy of social science is implicitly committed to this pragmatic reconstruction of imagination.

Keywords: *Inquiry. Imagination. Dewey, Logic, Pragmatism.*

Resumo: *O esforço de Dewey, ao longo de sua vida, em articular uma explicação alternativa da lógica do 'pensamento abstrato' predominante nas discussões da lógica, culmina em sua **Lógica: a teoria da inquirição**, de 1938. Neste texto, Dewey sustenta que toda investigação envolve a instanciação de um padrão geral de investigação. Articular o papel da imaginação no padrão geral da investigação é crucial para iluminar a natureza prática e alcance teórico desta atividade. Especificamente, a ação do investigador como um organismo direcionado para o futuro e orientado por projeto acentua a dimensão imaginativa para a solução de problemas. Além disso, a teoria de Dewey de conceitos como hipóteses, cujo significado é testado e reconstruído tanto prática quanto experimentalmente, é profundamente devedora da imaginação. Isto se deve ao fato das idéias, conceitos e significados não serem entendidos sob a perspectiva da razão especulativa ou teórica, mas sim estarem circunscritos ao contexto prático da solução de problemas, o que Dewey denomina 'a situação', onde ocorre toda atividade do ser humano. O significado de nossos conceitos e conquistas científicas está, então, sempre à disposição para revisão. Esta revisão é uma questão prática, dando à versão pragmática da 'primazia da razão prática' um alcance abrangente para a atividade intelectual. O resultado é que sua pragmática reconstrução da imaginação é fundamental para a investigação, ação e compreensão da ação humana. As conseqüências para uma filosofia pragmática da ciência social serão abordadas resumidamente na conclusão.*

Palavras-chave: *Inquirição. Imagem. Dewey. Lógica. Pragmatismo.*

[Tradução do inglês para o português: Luiz Malta Louceiro]

Introduction

In the crucial sixth chapter of his 1938 *Logic: The Theory of Inquiry*, the "Pattern of Inquiry", Dewey gives his most general and his most articulate characterization of the process of intelligent inquiry. In this characterization we have his mature model for understanding pragmatic method and the functional approach to its moments. This latter characteristic, the functional, or operational, character of all of the moments of inquiry is a key to understanding what Dewey means by 'logic'. It establishes for Dewey the practical character of logic, referred to as the 'existential' and 'transformational' character of all inquiry. Even logical forms, on Dewey's understanding, are the resultant habits of inquiry that serve as placeholder

[at the level of primary and secondary inquiry] postulates fully revisable if evidence and inquiry demands it. It was Dewey's great task to articulate the logical structure of all inquiry so as to make the process explicit without reifying any one of the moments into fixed forms, principles, or abstract entities that somehow existed outside the operations and scope of inquiry and the results of inquiry. It was one of the great theses of this late work that in addition to and because of the fact that inquiry is the existential transformation of an indeterminate into a determinate situation, the logic of inquiry is critical, developmental, and fallibilistic; that it is practical. As Dewey put it regarding this latter point:

The position may be stated in the following language: All controlled inquiry and all institution of grounded assertion necessarily contains a practical factor; and activity of doing and making which reshapes antecedent existential material that sets the problem of inquiry. (DEWEY, 1938: 162).

In order to get to the pattern denoted in the title of the chapter Dewey asks the following question: "What is the most highly generalized conception of inquiry which can be justifiably formulated?" And gives the following answer: "Inquiry is the controlled or directed transformation of an indeterminate situation into one that is so determinate in its constituent distinctions and relations as to convert the elements of the original situation into a unified whole." (DEWEY, 1938: 108).¹

Dewey breaks this transformation down into the following moments. However, they include descriptive language. That is, they are not merely normative or abstract requirements of formal inquiry. They are indeed moments in an existential process. The temporal character of all inquiry is basic and serves to undo the fixing of logic into a merely formal discipline, but rather guarantees its developmental characteristics²:

The antecedent conditions of inquiry: the indeterminate situation (the primary moment of immediate experience).

The institution of a problem (a problem of the perception of the features and causes leads to).

The determination of a problem-solution (the prophetic character of observation/perception as involving consequences. In this case the inferential links to a

¹ Dewey writes: "The search for the pattern of inquiry is, accordingly not one instituted in the dark or at large. It is checked and controlled by knowledge of the kinds of inquiry that have and that have not worked; methods which, as was pointed out earlier can be so compared as to yield reasoned and rational conclusions. For through comparison-contrast, we ascertain how and why certain means and agencies have provided warrantably assertible conclusions, while others have not and cannot do so in the sense in which "cannot" expresses an intrinsic incompatibility between means used and consequences attained." (DEWEY, 1938:108).

² For an earlier formulation of these process which gets at the temporal, critical, and cumulative nature of inquiry: "The method that is employed in discovery, in reflective inquiry, cannot possibly be identified with the method that emerges after the discovery is made. In the genuine operation of inference, the mind is in the attitude of search, of hunting, of projection, of trying this and that; when the conclusion is reached, the search is at an end. The Greeks used to discuss: "How is learning (or inquiry) possible? For either we know already what we are after, and then we do not learn or inquire; or we do not know, and then we cannot inquire, for we do not know what to look for." The dilemma is at least suggestive, for it points to the true alternative: the use in inquiry of doubt, of tentative suggestion, of experimentation. After we have reached the conclusion, a reconsideration of the steps of the process to see what is helpful, what is harmful, what is merely useless, will assist in dealing more promptly and efficaciously with analogous problems in the future. In this way, more or less explicit method is gradually built up." (DEWEY, 1910: 268-9).

possible solution are implicit in the articulation of the problem; the warrant of a hypothesis, ideas as possible operations, as anticipatory).

Reasoning (the integration of hypothetical inferences, ideas, with the results of previous inquiries, i.e. the system of meanings that have issued in successful inquiry prior to this situation. This integration requires extending the web of beliefs to include the new hypothesis, thereby creating a new web. This exercise is imaginative insofar as the extension of a concept involves the articulating a possibility for each concept needed, and possibility is by definition a projection).

The operational character of facts-meanings (observation, evidence and consequences, the necessity of experiment. The employment of hypothesis in practical attempts to bring the situation to a unified end).

Common Sense and Scientific Inquiry (the introduction of scientific meanings, here understood as the results of experiment, and their integration into everyday practices).

What is so striking about the definition of inquiry and its moments is Dewey's intended scope for this pattern. For Dewey, all inquiry has this common structure. This includes not only the natural and the social sciences, but also inquiry in our daily practices. However, this does not lead to a reductive empiricism that erases the differences between different object domains of inquiry, or procedures of criticism. Rather the delineation of different object domains requires the instantiation of different methods, but methods that can be understood as complying with this general pattern. Paying close attention to the above 6 steps will help to exhibit the role of imagination in inquiry such that it is understood as developmental and self-correcting. We will then be in a position to how he also maintains the diversity of procedures of inquiry such that he does not reduce or flatten the real differences inherent in investigating different subject matter, in performing different inquiries. One of the exemplary ways he cashes this claim out is in terms of the difference between the natural and the social sciences. In closing I will sketch briefly the immanent development of a domain of social inquiry, suggesting both the continuity of inquiry and the differentiated character of its branches.

1. The indeterminate situation

In our experience and in nature generally there exist changes that are great. They demand and sometimes cause adjustment in an environment. Some of these adjustments are mere physicochemical chains of events, and some are the adaptations of organisms to changes in their ecosystems, still others are responses to problems with crises in meaning and purpose in the symbolic life of humans. All of these constitute interruptions and all set something like the stage for what Dewey refers to as inquiry. But what counts as an interruption? What serves as the instigation of inquiry in human existence?³

For Dewey it is the indeterminacy of the situation, the occurrence of fragmenting forces that rend the fabric of habit and agency in human life. Dewey's term for the individual environments in which inquiries occur is a 'situation'. On the biological, the existential, or the cultural matrices of inquiry Dewey argues that for human beings problems occur because of a

³ Tom Burke argues that the behavior of animals can be characterized as a kind of proto-inquiry, thereby preserving the semblance of a difference of degree and not kind between the responses to environmental stimuli of animals and the logical activity of humans. It is beyond the scope of this paper to investigate the line Dewey might draw between animals and humans. (BURKE, 1994).

blockage, or an interruption in the projection of ends through the means and meanings available. This is not to say all indeterminate situations develop or stem from the interruption of this projection. Clearly a natural catastrophe, while blocking the course of power and activity in a valued activity is an interruption, it is not only or even primarily that. It is also much more and touches many more levels of human existence than those restricted to problems of cognitive meaning: For instance, one's striving for union with someone who is a mere fantasy of ours, someone of whom we have mistakenly assumed to have a certain character. The nascent 'problem' can indeed take on a variety of unique forms, with varying levels of complexity.

In the first instance of an inquiry, not even the problem or issue at hand is identifiable. This is the meaning of indeterminacy. There is only a vague affective irritation mostly interrupting our habits, and the only thing determinate is that there is indeterminacy, blockage, or interruption. The indeterminate situation is one that is potentially 'questionable' and the criterion for questionability is itself an ongoing concern. However, indeterminacy is not quite yet questioned. Suffice it to say that one of the generic features of existence is that existential contexts will, without doubt and has been 'proven' through the natural history of humankind, evoke inquiry.

Thus it is of the very nature of the indeterminate situation which evokes inquiry to be questionable; or, in terms of actuality instead of potentiality, to be uncertain, unsettled, disturbed. The peculiar quality of what pervades the given materials, constituting them as a situation, is not just uncertainty at large; it is a unique doubtfulness which makes that situation to be just and only the situation it is. It is this unique quality that not only evokes the particular inquiry engaged in but that exercises control over its special procedures. Otherwise, one procedure in inquiry would be as likely to occur and to be effective as any other. (DEWEY, 1938: 109)

Indeterminacy, as are all the stages of inquiry, is a postulate, it is a pragmatic *a priori* of inquiry; a developed habit of logic. This holds for the balancing polar twin of precariousness or indeterminacy in Dewey's understanding of existence, stability, or continuity. Neither precariousness nor stability is necessarily an end all be all condition of reality *in toto*.⁴ Nothing is or ever could be this in Dewey's logic. However, the postulate of indeterminacy is particularly ripe with consequences especially for understanding what instigates inquiry, what evokes questions, and what insures the continuous occurrence of problems in existence.

With such conditions, on the one hand the precariousness of existence, and on the other the individual character of situations, one might wonder how it is that 'indeterminate' situations attain a positive environmental characterization, instead of being reducible to private mental state, one of uncertainty and one that characterizes human existence in general, only. That is, how does the inquirer overcome the problem that this issue may just be in his or her own mind? 'Subject' and 'object', for instance, is a distinction instituted through inquiry and downstream from a primarily practical engagement with the world. However, this does not include, for Dewey, the claim that thus the doctrine of metaphysical realism of a transcendent realm above and beyond a radically independent mind that is unsure of its

⁴ It is here that Dewey's metaphysics gives partial credence to some of Richard Rorty's 'neopragmatist' writings concerning the contingency of selfhood, language etc. Dewey would ultimately have to agree that there is nothing in principle absolutely barring us from becoming creatures for which there are no problems. But surely this would be the end of the being we call human; we would need some other name for this creature.

footing. Mind and experience, for Dewey, are natural events in conjunction with what is experienced. It is this that warrants our judgment of existence, and from this that we generate our inquiries and tools of inquiry.

The immediate locus of the problem concerns, then, what kind of responses the organism shall make. It concerns the interaction of organic responses and environing conditions in their movement toward an existential issue. It is a commonplace that in any troubled state of affairs things will come out differently according to what is done... (DEWEY, 1938: 111)

However, there are necessary conditions that need be met in order for this interaction to be more than stimulus response behavior. Something must be introduced which can account for precisely the type of determination of an indeterminate situation that is intelligent, as opposed to merely reflexive. There must be a crucial difference between the input and output of unconscious or instinctual behavior such that we can point to conditions that are specifically critical in order for the intellectualization of practice, or the development of methods and inquiry can take place. In short, a question emerges as to the delimiting conditions for something to be called inquiry in an environment opposed to mere cause and effect systems of phenomena. Dewey provides us with this in the very next sentence in the passage quoted directly above. I single it out not only for its straightforward claims, but what those claims signify in terms of the thesis regarding the imaginative core of critical inquiry put forward in this paper. Dewey writes:

Organic interaction becomes inquiry when existential consequences are anticipated; when environing conditions are examined with reference to their potentialities; and when responsive activities are selected and ordered with reference to actualization of some of the potentialities, rather than others, in a final existential situation. Resolution of the indeterminate situation is active and operational. If the inquiry is adequately directed, the final issue is the unified situation that has been mentioned. (ibid.)

The examination of existing conditions is only intelligent, or inquiry, insofar as that which is discernible is such in reference to 'anticipated' existential consequences. Anticipation on pragmatic grounds is definable as something I would like to refer to as 'remembering into the future'. It is a projection of the mediated and saturated character of objects (objects again are results of previous inquiries, and as such are mediated) into possible future consequences. The role of the possible, and the potential, as brought to bear on current action and inference is the pillar of the experimentalist understandings of inquiry. This aspect will come into relief more as the paper progresses, however, it should be noted that the imagination, in the ability to project possibilities and to understand the present with reference to the potentialities nascent in our present environment, is the key vehicle which inquiry is carried out through and certainly one of the conditions for its possibility.

2. The institution of the problem

Whatever relative novelty may be found in my position consists in regarding the problem as belonging in the context of the conduct of inquiry and not in either the traditional ontological or the traditional epistemological context. (DEWEY and BENTLEY, 1949: 284).

We saw in the previous section how there is a significant way in which the indeterminate situation, the lack of forward momentum in acting and understanding, or even

the presence of uncertainty, trouble and indeterminacy could be characterized as an interruption for the activity of the imagination insofar as the imagination has a central role in action. Indeed, this interruption sets the imagination on a different course in the next stage of inquiry, the institution of a problem, or the problematic situation. The problematic nature of a situation is not given for Dewey. Only the most general characteristic of uncertainty and indeterminacy are characteristics of the first moments in the pattern of inquiry. The institution of a difficulty, then, becomes the task of the next stage, the determination of the problem.

If indeterminacy is not quite a conscious judgment of the agent, habitual forces of suggestion, of interpretation, enter the scene and begin searching for formulations as to the existential problem at hand. This is both a boon and a bane in the movement to this stage of inquiry. One of the ways in which inquiry can go astray is through the misidentification of a problem, the unwarranted interpretation of the problematic character of an indeterminate situation. The question of the warrant of the characterization of the problem is a key feature of Dewey's understanding of inquiry and of his pragmatism generally, as the situation exerts some control over the process, it is not merely sufficient to rely on previously established methods of interpretation, or habits. The situation is real:

It is the *situation* that has these traits. *We* are doubtful because the situation is inherently doubtful. Personal states of doubt that are not evoked by and are not relative to some existential situation are pathological; when they are extreme they constitute the mania of doubting. Consequently, situations that are disturbed and troubled, confused or obscure, cannot be straightened out, cleared up and put in order, by manipulation of our personal states of mind. The attempt to settle them by such manipulations involves what psychiatrists call "withdrawal from reality." Such an attempt is pathological as far as it goes, and when it goes far it is the source of some form of actual insanity. The habit of disposing of the doubtful as if it belonged only to us rather than to the existential situation in which we are caught and implicated is an inheritance from subjectivistic psychology... (DEWEY, 1938: 109).

Clearly Dewey is steering clear of the possible charges of phenomenism to which his philosophy has been subjected.⁵ The establishment of the reality of the problem with the proper regard to the individual's predilections and predispositions recalls the normative criterion in his definition of inquiry. However, it is not just that the subjectivist psychology of Dewey's day is being addressed; a deeper point is being made. Because Dewey is committed to the existential character of all inquiry, there is no 'outside' of nature in which inquiry takes place: "The organic responses that enter into the production of the state of affairs that is temporally later and sequential [to the indeterminate situation] are just as existential as are enviroing conditions" (1938: 111). Thus, it is not just the case that the indeterminate situation is partly constituted by the role of the inquirer, but that the inquirer is constrained by the situation in the inquiry. When our tools of inquiry are not adequate to the situation at hand, we very often can project an imaginary problem into the scene as an attempt to deal with its indeterminacy. This is mere groping and in no way rooted in the norms of intelligent

⁵ See specifically, COHEN, 1944: 211 ff. Cohen sees the reestablishment of the individual's equilibrium in environment lead to an ultimately subjectivistic criterion to the end of inquiry, the determinate or unified situation. What Cohen fails to note however, is the seriousness of the commitment Dewey has to the interrelatedness of agent and environment, such that any 'equilibrium' would include constraints that are neither mentalist, subjectivistic, and thus not phenomenistic.

inquiry. Getting the problem as right as possible, then, is itself a problem. Given our perceptive habits, Dewey's theory of inquiry, and its possibility are rooted in our interpretations of our environment.

Again we can understand how imagination comes to the center stage as one of the main agencies of inquiry. How are we to institute a problem except through the perception of the situation for what it is? Here the imagination is crucial. Dewey notes the stakes we play for when we are instituting problems and how key our developed perceptive abilities become in inquiry. While the step from indeterminacy to the qualifying judgment of a situation as 'problematic' one of the initial steps of inquiry, it does not lead us immediately to the 'whatness' of the problem at hand:⁶

To find out what the problem and problems are which a problematic situation presents to be inquired into, is to be well along in inquiry. To mistake the problem involved is to cause subsequent inquiry to be irrelevant or to go astray...The way in which the problem is conceived decides what specific suggestions are entertained and which are dismissed; what data are selected and which are rejected; it is the criterion for relevancy and irrelevancy of hypotheses and conceptual structures (DEWEY, 1938: 112).

Dewey notes that there are primarily two ways in which we are hampered from getting the problem as right as we can. The first is in lacking the conceptual differentiations required to grasp the complexity of the problem, at least as far as possible up to that point in the development of the practices of inquiry. The second is in imposing previous conceptual differentiations upon a situation without adopting a hypothetical stance towards the appropriateness of the concepts applied. It is one of the most difficult steps to institute, as situations are by definition individual, thus bringing up the problem of how we are to read a situation given the prejudices, or the habits that inform our interpretations of the world.

As humans are creatures of habit, however, Dewey is very aware that the forces of projection and the desire for security often trump the cultivation of our perceptual and interpretive tools. Likewise at the level of reflection upon the very ways in which we interpret situations, the same dangers arise. We are often only too happy to evade situations that could be cultivated and mined for the opportunities that problems present. Instead of encouraging the reformulation of our principles and habits we beg off. The nature of inquiry, the necessity of criticism and the norm of intelligence require that we address this tendency with what Dewey called experimentalism. For now however, it is enough to note this tension, and to recall the overarching character of this Deweyan observation for all of inquiry, not just science or social science or even everyday inquiries.

3. The Determination of a Problem-solution

Dewey is dialectically sophisticated enough to understand the consequences of his theory of institution of the problematic character of the indeterminate situation. It is to provide it with determinacy, and "since inquiry is progressive", the determination is not a once and for all act. If a concept is indeed all of the possible practical consequences that concept may have, then articulating the nature of a problem at hand is to articulate the possible

⁶ The discrimination of the judgment of the existence of a thing as differentiated from the whatness of the thing is not necessarily to commit Dewey to a distinction between existence and essence. It is not necessary that if one posits the existence of indeterminacy and problematicity as severably knowable in the process of inquiry be committed to a real distinction between existence and essence.

consequences of it using the concepts at our disposal. Conceptual determination provides the meaning of the problem and this provides a further determination of the situation. It at once excludes certain imaginary rectifications of the problem, as they do not address the meaning of the problem in any contiguous way and it also positively provides suggestions, and thus hypotheses for solving it. Dewey continually emphasizes the processual character of the ongoing determination of the problem. However, as the title of this stage of inquiry suggests, there is no determination of the existential specifics of the problem that is not also a determination of the solution.

In the first place the determination of the problem involves the articulation of the conditions and constituents that go to make up the problematic situation. Thus, a reconstruction of the causes and relations that go to make up the problem is required. Conditions are constraints to the next stage of inquiry, but they are also that through which solutions that are feasible and possible are discovered and projected as ends-in-view. It is worth noting that the criterion for what is considered feasible is itself in continual development due to the changing nature of the environment and the growth in our relationship to it. As Ralph Sleeper puts it in describing Dewey's position: “[t]he normative rules must be discovered in and through the successes and failures of inquiry. They are not to be invoked from any outside source.”⁷

This stage is then a further determination of the problem in its specifics, and in so being, progress is made towards proposing a specific solution. As Dewey puts it “A possible relevant solution is then suggested by the determination of factual conditions which are secured by observation.” (DEWEY, 1938: 113). This suggestion is a candidate for becoming, by degrees of examination and testing, an idea- a viable possible solution. By observing the features of the problem, Dewey insists that ideas ‘spring’ up in their original form as mere suggestions and offer themselves as possible means in advancing a solution to the problem at hand. But not just any suggestion is an idea because some ideas do not mark a possibility, they are not within the realm of the possible, they are imaginary. The analyticity of a concept is just its possibilities and these for Dewey, given his heavy use of the revolutions in physics in the early twentieth century on the notion of ‘concept’ and ‘idea’, are only understandable in operation. This goes for logical forms as well.

“An idea is first of all an anticipation of something that may happen; it marks a possibility” (DEWEY, 1938: 113). These means are the vehicle for the articulation of viable ends in adopting a solution to the problem that characterizes the situation. They are also that by which any solution gets its proper sense and is judged. Therein lies the sense in which Dewey understands the problem as well formed is but the solution in a nascent form. This process whereby a problematic situation is gradually perceived and judged to be of such and such a character is facilitated by abstraction.

4. Reasoning

Reasoning carries on the work developed in the previous stage by examining ideas in relation to the whole net of other ideas and concepts we carry with us in our framework of inquiry. These are the successful results of previous inquiries. This is one of the most crucial elements in Dewey’s philosophy. Much depends upon his maintaining a continuous thread between the past, present, and the future of inquiry, as well as the individual, the

⁷ See SLEEPER, 1986.

contextual, and the intersubjective dimensions of inquiry. Here though, the ideas that are tested with reference to the situation at hand need also to be put through a type of testing with reference to the holistic framework of working scientific meanings as to compatibility and extension of previous understandings. This activity involves relating the new hypotheses to the old, again an activity of the imagination, for purposes of directing an experiment that can warrant its acceptance. This is for Dewey the difference between, to put it in pragmatic terminology, the mere assertion of an idea, and its use with pragmatic warrant.

At the level of perception/ hypothesis in the institution of a problem solution we have a back and forth movement that recalls the Peircean notion of abduction, or hypothetical inference. We proceed as though there are linkages between the habitual residues of object perceptions and concepts that go to make up our experiential background and serve as the cause of our acritical inferences. However, there are often times no inductive grounds to link one group of previously understood facts, inferred inductively, and the new group of facts, hypothetical inference allows us to make this leap. It is clear that an immediate suggestion is something like an impulse or a flash of insight. It emerges out of the habit structure that is the human being. However, the relation that this has to the further understanding and progressive development of inquiry should be understood in a careful manner. The formation of hypothesis is one of the crucial junctures of understanding not only the role of imagination in inquiry, but reflexively, its role in perception as well. The Peircean notion of abduction described this process as conceptual resources shading into perceptual experience, making conscious experience result from what could only be conditionally proven, and not inductively or deductively grounded. By reconciling surprising interruptions of the environment with the inductive and deductive tools employed in understanding and perceiving, Pierce allows for novelty in interpretation that recursively changes the logical apparatus that gave rise to the interpretation in the first place. Dewey puts this point the following way: “In logical fact perceptual and conceptual materials are instituted in functional correlativity with each other in such a manner that the former locates and describes the problem while the latter represents a possible method of solution” (1938: 115). Inquiry at this stage is the employment of conceptual to perceptual and vice versa. I quote the passage in full:

The Kantian formula that apart from each other “perceptions are blind and conceptions empty” marks a profound logical insight. The insight, however, was radically distorted because perceptual and conceptual contents were supposed to originate from different sources and thus required a third activity, that of synthetic understanding, to bring them together. In logical fact, perceptual and conceptual materials are instituted in functional correlativity with each other, in such a manner that the former locates and describes the problem while the latter represents a possible method of solution. Both are determinations in and by inquiry of the original problematic situation whose pervasive quality controls their institution and their contents. Both are finally checked by their capacity to work together to introduce a resolved unified situation. As distinctions they represent logical divisions of labor. (Dewey, 1938: 114).

What is necessary to point out is it is not just the case that empirical concepts of experience are themselves a dialectically developing division of labor that is the production of experience, rather the developmental characteristic of concepts *in toto* reaches into the very structuring formation of our experience. The function of our most general logical concepts is

functionally and descriptively similar to the Kantian table of concepts and conceptual judgments. Dewey does not deny the stability of experience, his denial enters into the point where we investigate the ontological or transcendental claims made about concepts, categories, and judgments. The schematizing function that links the transcendental analytic to the transcendental doctrine of judgment for Kant is for Dewey not between ontologically differentiated realms, but between logical divisions of labor, all in the name of orienting one to the creation of an idea out of the ‘flash of insight’. It should not go without notice, however, that there is a functional similarity between two versions of the *a priori*, the Kantian and what Dewey terms, the operational or the pragmatic *a priori*.⁸ For the sake of thoroughness and to dispense of stretching the comparison too far, insofar as it holds, it is clear in the following passage that habit is king, in Dewey’s philosophy, right down to the articulation of logical principles:

A postulate is thus neither arbitrary nor externally a priori. It is not the former because it issues from the relation of means to the end to be reached. It is not the latter, because it is not imposed upon inquiry from without, but is an acknowledgement of that to which the undertaking of inquiry commits us. It is empirically and temporally a priori in the same sense in which the law of contracts is a rule regulating in advance the making of certain kinds of business engagements. While it is derived from what is involved in inquiries that have been successful in the past, it imposes a condition to be satisfied in future inquiries, until the results of such inquiries show reason for modifying it. (1938: 25).

This flash is the imagination acting out of, but creatively in regards to, its dispositional matrix, and its habit-structure. It is based upon the previous accomplishments of inquiry, objects and ideas, by means of which the imagination wends its way through the creative process of turning an impulse into a full-blown hypothesis. But in addition, the new situation and the growth of the tools of inquiry themselves in responding to different environments introduces novelty into the notion of hypothesis and hypothetical inference that securing the possibility of a growth of knowledge and perception as well. It is an emergent inference.

Reasoning involves the relation of the idea/hypothesis to secure its coherency given the warranted ideas in existence, and to articulate the new meaning of the idea given that these connections through being made explicit will extend the original meaning of the idea if cohesive, and extend its operational potentiality with respect to possible function in future inquiry.⁹ In this way, the imagination projects possibilities that, though based on an idea

⁸ C.I. Lewis is famous for working out this concept. Sandra Rosenthal has compared his with Dewey’s understanding in “Pragmatic A Priori: Lewis and Dewey”, *The Southern Journal of Philosophy* 1987; 25 (1).

⁹⁹ Though it is beyond the scope of this description of the role of the imagination in logic as the theory of inquiry, Dewey is well aware of the questions that arise from his positing the continuity of the operation and consequences of ideas through different situational contexts. He discusses the operational pragmatic character of identity and addresses the criticisms of both the rationalist and empiricist schools of thinking in *The Quest for Certainty*. It is easy to see here the ‘Hegelian bacillus’ in Dewey’s thought: “Reflective knowing certainly involves identification. But identity itself has to be defined operationally... There are identifications that are historic, that are concerned with individuals as such. They define the identity of an individual throughout a series of successive temporal changes, while the other type is purely static. This kind of identity is secured by operations that introduce temporal continuity into what is otherwise discrete: it yields genetic and generative definitions. For the identity of an individual is constituted by continued absorption and incorporation of materials previously external--as in the growth of a person, a nation or a social movement. It demands operations that redispense and organize what antecedently exists. Identifications effected by inferential operations are of this type. They are not reductions of the new object or situation to terms of something already known. Traditional theories treat them as if they were of the static and subsumptive type... Identification through operations that

having its genesis in existential conditions, can project a future meaning that is new. The new can be seen as a destruction of the old, if sufficiently different, but can be warranted based on the hypothetical process of working through an idea in its correspondence (institution of a problem/ determination of a problem solution), coherence (reasoning), and pragmatic (operational character of facts-meanings) phases. Though this work is creative, and employs meanings as means at its disposal, there is nothing in principle preventing this from visiting severe criticism upon existing states of affairs, especially as all states of affairs contain novelty and thus present the opportunity for ideas to be exercised in new, inventive and ultimately radically critical ways. Though there is a constraint to this imaginative destruction, or critical extension, in the shape of the experimental available means, because the idea is worked out first within the realm of the ideal, there is an equally ideal possibility (if not too imaginary), to bring about a working situation that transforms ever widening existential contexts in deep ways. "The necessity of execution supplies objective criteria." (DEWEY, 1918: 168) However, the education of the imagination in regards to human affairs, the realm of ethics, politics, and social life depends partially on the methods, disciplinary boundaries, and results of the social sciences.

And so given the role of imagination in perception, hypothesis formation, and in ideas in general, we have the core understanding of the imagination in inquiry. But inquiry also extends to the more practical consequences of inquiry that Dewey's pattern of inquiry now attempt to articulate.

5. The operational character of facts meaning, common sense and scientific inquiry.

Dewey argues that inquiry in its normative sense now engages in a somewhat dialectical process of mutual determination of the ideational and the factual qualities of inquiry insofar as they directly transform the existential context, the problematic situation. The dialectic between these two is one of mutual dependency and a necessary condition for their efficacy. Only facts relevant to the issuing of a resolution to the problem will be found if hypothesis are in place that have been examined with reference to the existing situation, (the perceived facts of the instituted problem) and scientific meaning (they must cohere with the results of science so far.). However, the initial determinations of facts and ideas go through a mutual modification until some end is achieved, this is the end-in-view that guides and controls all inquiry. It is the unified and complete situation.¹⁰ Why is this experimentalism? Because in naming fact and ideas operational we indicate the necessary role in inquiry of a process that tests the ideas and facts: experiment.

Dewey argues that in order to come to unification, one must perform an experiment carrying out the results of the ideational hypothesis in relation to the existential facts. These in turn engender new facts, which engender new hypothesis which engender new experiments to be carried out that in turn modifies the existential situation bringing about new facts of relevance until the situation is whole. However, no fact in isolation has evidential potency. Facts are evidential and are a test of an idea insofar as they are capable of being organized with one another. Thus a retreat to the level of reasoning, and hypothesis formation as new results are observed. Inquiry can only come to an end when doubt and the specific indeterminacy in question are transformed into a settled situation. The results of the inquiry

rearrange what is antecedently given is a process of additive discrimination; it alone is synthetic in the true sense of that word, involving likeness-and-difference." (1929: 150ff.)

¹⁰ This is a social process. This is a dimension I have left unarticulated in this metatheoretical elaboration of the moments of the pattern of inquiry itself.

are objects; they are the objectives of inquiry and in turn serve as means in future inquiries. How this is so is evident in the co-relational structure of perception and conception as logical divisions of labor in the ongoing course of inquiry.

It is at the level of ideational or conceptual subject matter that the imagination serves a crucial function. This is because of the anticipatory character of ideas in inquiry, they mark off possible solutions, and they anticipate a solution and can be successful only insofar as the new observations it engenders are fruitful of generating new factual material that furthers the resolution of the situation. The distinction between the imaginative and the imaginary is alive and well. The factual/perceptual side of inquiry reveals selected important constituents guided by emphasis of selection. It occludes other, less important facts as required by successful inquiry. One can see the imagination at work in this level. In interpreting constituents 'as' things of a certain character, imagination supplies the conceptual similarity, the pragmatic identity of the perceived and the percept. Indeed the selectively ordered perception of facts certainly shows the crucial normative implications for carrying out this activity. What is selected as relevant fact, and thus which guides further operations of perception is certainly crucial. And this process is not given over completely by the environment, as stated, it is taken, in the cognitive process that is inquiry. Even at the level of perception, then, the imagination serves an instrumental role in establishing the features of the existential situation through hypothesis, the positive phase of abstraction, and observation. Hence transforming the situation from indeterminate to determinate in no small way depends upon the imagination. This foregrounding of the transformational character of the hypothetical in leading the perceptual/factual and this in turn shaping the resolution to the situation is an attempt of Dewey to get at the observer dependent quality of all inquiry, and to show the primacy of practical engagement in all inquiry, including natural science. Dewey states, "The temporal quality of inquiry means then, something quite other than that the process of inquiry takes time. It means that the objective subject matter of inquiry undergoes temporal modification" (1938: 122).

Thus we cannot be justified in referring our knowledge to an antecedent reality, to some primary given. We must posit that the reality is the object as known. The consequences of this are deep. Rather than run through the epistemological objections to this understanding of the eventual character of objects and defend Dewey against charges of idealism from empiricists or nominalism from idealists, I would like to just note the real objective domains of inquiry are built up in this way.

Conclusion

In delineating the very structure of inquiry we can now see how a more traditional philosophical perspective could mistakenly claim that pragmatism lacks grounding. Without articulating the deep transformation of the notion of inquiry itself, that is without reconstructing such traditional core conceptions of inquiry, like 'ideas', 'identifying a problem', 'objects', 'principles' and the actual criterion of a successful cognitive procedure in resolving a problem, the conversation between traditional approaches to these questions and Dewey's will remain a troubled one.¹¹ Dewey's employment of traditional concepts, however, is a deliberate strategy as well. His theory of inquiry, that is, his discussion of logic as the theory of inquiry and the results of inquiry as our only source of warranted assertions is part of an overall strategy to show the cultural and historical embeddedness of the activity of inquiry, and inquiry into inquiry.

¹¹ See Tom Burke, *op. cit.*, for a particularly egregious example of this in Bertrand Russell's critique of Dewey's logic.

Inquiry for Dewey is an imaginative activity that engages the agent in its natural environment that is saturated with possibilities that are never completely foreclosed. Objects are achievements of inquiry, and their meaning and consequences can only be verified through practice, through experiment. The ability to extend the meaning of concepts, to engage the objective environment in the imaginative and creative work of criticism, and to realize the growth of meanings and consequences of objects and tools of inquiry in our environment puts the agent's imagination at the heart of the project. However, it is precisely as project that the previous grounds of critical inquiry cannot serve inquiry as once-and-for-all 'true' grounds. If one is to be honest about the claims certain philosophers make for their groundings of inquiry and criticism, the metaphysical and transcendental faith that they rest upon cannot survive the fluidity and growth of inquiry and criticism. It is all too easy to rest on the certainty that reality has shown itself to have an immutable, certain structure, either metaphysically or logically.

However, the growth of inquiry, the increase of meanings and consequences of both objects and concepts inscribes change into the very infrastructure of inquiry and criticism. It is not until one realizes that both the depiction of logical form as supernatural reality and ground of appearance and the Kantian categories as *a priori* transcendental grounds of experience is an unwarranted establishment of antecedent realities that in no way advances inquiry into the resolution of indeterminate situations do we see the pragmatic punch. The primacy of practical reason and existential impacts of logical postulates upon indeterminate contexts transforms the *a priori* grounds that make experience possible into *pragmatic* or *operational a priori* habits of perception, conception, and criticism.

Pragmatic inquiry is critical in its most hallowed sense precisely because it embodies the recognition of the imaginative and creative extension of our always incomplete knowledge of both our world and our tools of inquiry. It does not stop with the forms or the categories or with a static conception of reference or meaning. Hypothesis, imaginative projection of possible solutions, is the driving force of dealing with ever new and increasingly complex problems. It allows us to suggest through imagination possible solutions, courses of action, and ideas in dealing with these troubles. It is a constant and vigilant commitment to critically examining our means for possible fruits to realize ever more creative ways of dealing with new problems. It is the intelligent extension of our meanings in the light of the deep problems in our environments. Pragmatism is critical precisely where traditional philosophers think it is weakest. Pragmatism's unwillingness to rest assured in the prior establishments of our deepest critical inquiries, be they metaphysical or 'logical'. From pragmatism's perspective precisely the reverse is the case. Insofar as the grounds of inquiry are placed outside of the purview of our own critical faculties, we are denied the opportunity to change just those things which set the problems for us, the tools of inquiry. Thus the 'problems' remain the same though the condition for this is a hypostatized, reified conception of inquiry, a static conception of reality. Traditional philosophy, then, remains uncritical in this sense. It comes to a full stop. This is the death of inquiry.

The cash value of this pattern of inquiry is that objects have a two track impact: as the objectives of inquiry and the results of previous inquiries they filter in to our primary experience of the world in a habitual fashion. They are objects; constituents of the objective world. This makes the intellectualization of practice possible, partially by making our *world* intelligible, meaningful. Through inquiry we come to develop a richer conception of our experience through the articulation of the differences, in objective terms, of those things that we are warranted in asserting to exist and their consequences. Our experience then, becomes

the testing ground for the ongoing validity of prior inquiries, as critical successes turn into meanings and means for further practical coping in our experience.

At another level, however, the results of inquiry into inquiry are metatheoretical tools for helping to 'map the provinces of criticism'. They are the postulational framework upon which further inquiry is based given the habitual growth of the principles of inquiry. As such the results of previous inquiries, including the conceptual level involving the methods for dealing with situations, and the factual level involving the particular features and determinations of problematic situations, are loosened from their context via abstraction and their possible consequences are projected into the system of meanings which they are now a member of given success in resolving a situation. They are objective ideas in this sense, and can enter into a variety of configurations with other objects, other successful objectives of inquiry for investigating their meaning and the hypothetical consequences of their existence.

The very structure of inquiry in a precarious world of qualitatively individuated situations prevents 'meaning' from being anything but an ongoing affair. Here meaning depends upon inquiry and the ongoing verification of inquiry's results, including the objective presuppositions we take with us from previous inquiries. In addition, Dewey's theory of meaning requires not just hypothetical investigations, but experimental verification as well in order to achieve pragmatic truth, warranted assertion. Knowledge is never fixed in this sense, but is constantly being amended, reformulated, and revised according to the best means we have available. This revision includes other knowledge and other methods in understanding the 'same' object, new completed inquiries fit themselves into the web of objects, changing the web, and thus the objects that constitute the web in indirect and direct ways. Dewey speaks of these objects in light of the substance ontology from which he attempts to escape, though retaining the word:

"Substance" represents therefore, a logical, not an ontological, determination. Sugar, for example, is a substance because through a number of partial judgments completed in operations which have existential consequences, a variety of qualifications so cohere as to form an object that may be used and enjoyed as a unified whole. Its substantial character is quite independent of its physical duration, to say nothing of its immutability... The condition--and the sole condition that has to be satisfied in order that there may be substantiality, is that certain qualifications hang together as dependable signs that certain consequences will follow when certain interactions take place. This is what is meant when it is said that substantiality is a logical, not a primary ontological determination. It is a form that accrues to original existence when the latter operates in a specified functional way as a consequence of operations of inquiry. It is not postulated that certain qualities always cohere in existence. It is postulated that they cohere as dependable evidential signs. (DEWEY, 1938: 131-32).

It is fair to say that this is some distance away from substance metaphysics. Dewey delineates the structure of objects, or substances, as dependent upon logical inquiry, on a procedure aimed at warrant in assertions that employ the language of objects. This extends to our knowledge about knowledge, that is, our insight into those very procedures and habits of critical inquiry that produce objects. As we saw, this is itself an object, or an objective of inquiry. This self-reflexive moment is what makes the term critical in the aforementioned Kantian sense stick as an adjective of the pragmatic theory of inquiry. However, as we saw, this logical priority does not remove Dewey to a Hegelian idealism, or any epistemological idealism. Logic as a theory of inquiry is constrained by an experiential situation which is real and independent of the theory of inquiry.

However, it is not enough to simply articulate the general pattern of inquiry precisely because of the complexity of different problem contexts. The achievement of objectives in inquiry is the establishment of our objective world. This includes the social and symbolically mediated levels of human existence. This demands an expansion of our method and an imaginative extension of our pattern of inquiry if we are to address the problem of human inquiry and the question of a unique being-in-the-world not entirely described by natural science.

In addition, the bearing such reflections have upon the imagination is clear. Social science, perhaps unsurprisingly, requires imaginative functions more widely intersubjective and social in character. Social inquiry deals with the difficulties of inheriting a precarious world of shifting problem contexts interpreted partially through habitual imaginative projections that illuminate and reveal, as well as obscure and occlude. The obstacles our hypostases create in social inquiry bear a family resemblance to those we have seen thus far in philosophy and the pattern of inquiry. This is to be expected as they are grouped under problems with our imagination. These problems include: a) getting the problem in the situation right. b) inheriting an essentialism with regard to the hypostatized version of extranatural objects of inquiry, like traditional versions of human essence or nature, and c) the requisite ethos required to engage in cooperative social inquiry. These are enormous demands for a community, but Dewey unflinchingly articulates the norms, leading principles, and conditions for the possibility of social inquiry. The differences involved in instantiating the general pattern thereby set it apart from physical science.

* * *

References

- BURKE, Tom. *Dewey's New Logic: a reply to Russell*. Chicago: University of Chicago Press, 1994.
- COHEN, Morris Raphael. *A Preface to Logic*. New York: Meridian Books, 1944.
- DEWEY, John. *How We Think*. Lexington, Mass.: D.C. Heath, 1910.
- _____. *Reconstruction in Philosophy*. New York: H. Holt and Company, 1920.
- _____. *Quest for Certainty*. New York: Minton, Balch & Company, 1929.
- _____. *Logic: the theory of inquiry*. New York: H. Holt and Company, 1938.
- DEWEY, John and Arthur BENTLEY. *Knowing and the Known*. Boston: Beacon Press, 1949.
- ROSENTHAL, Sandra. "Pragmatic A Priori: Lewis and Dewey", *The Southern Journal of Philosophy*, 1987; 25 (1).
- SLEEPER, Ralph. *The Necessity of Pragmatism*. New Haven: Yale University Press, 1986.