

Transactional Perspectivalism: The Emergence of Language, Minds, Selves and Temporal Sequences

My talk today examines the transactional emergence of linguistic meaning, abstract mental functioning, self-consciousness, and normative social control. I also explicate the construction of temporal sequences. All these functions involve taking of the perspective of others in linguistic transactions. I will turn to Dewey's friend and longtime colleague George Herbert Mead. They initially worked out all these ideas together. Mead later extended and refined the inquiry. I emphasize the durational aspects of durational-extensional transactions, although the extensional aspect is always there.

Some Fundamental Aspects of Transactionalism

John Dewey's 1949 *Knowing and the Known* (KK hereafter) co-authored with Arthur F. Bentley expounds transactional realism (LW 16). In his "Introduction" to the Dewey and Bentley correspondence Sydney Ratner (1964) remarks: Dewey's *Logic* served as the basis upon which the theoretical structure of *Knowing and the Known* was built" (44). Ratner further states, "'Transaction' replaces most of the previous uses by Dewey of 'interaction'" (44). Dewey was already thinking transactionally in texts going back decades. For this reason, I will make use of earlier texts when they can be read transactionally.

At the start of a long series of distinctions between "Inter-action" and "Transaction," Dewey and Bentley themselves identify two earlier places where Dewey was already thinking transactionally. We are told, "The beginnings of this attitude may be found in his paper 'The Reflex Arc Concept in Psychology' (1896)" (KK, 101). We are also asked to "Compare" the idea of "Trans-action" with Dewey's "use of 'integration' in his 1938 *Logic: The Theory of Inquiry*" (KK, 101). When we do, we get such exceedingly transactional statements as "The processes of living are enacted by the environment as truly as by the organism; for they *are* an integration" (*Logic*, LW 12: 32).

In his *Logic* Dewey tells us exactly how to read his earlier use of "interaction" transactionally. He insists that if "what is designated by such terms as doubt, belief, idea, conception" are to have "objective meaning" and "public verifiability" then they "must be located and described as behavior in which organism and environment act together, or *inter-act*" (LW 12: 40). After referring to his earlier discussion of organism and environment interaction, Dewey warns the reader not to suppose that "organism and environment are 'given' as independent things and interaction is a third independent thing which finally intervenes" (40). I would quickly add that "Transaction" is not a third thing either. As long as we heed Dewey's warning, we can rely on earlier texts using "interaction" in the transactional sense of "*inter-act*" (*op. cit.*)

Here is how Dewey states transactional realism in his *Logic*: "But all changes occur through interactions of conditions. What exists co-exists, and no change can either occur or be determined in inquiry in isolation from the connection of an existence with

co-existing conditions" (LW 12: 221). Here is another statement from *Experience and Nature*: "The stablest thing we can speak of is not free from conditions set to it by other things" (LW 1: 63). Here is yet another from, "Context and Thought" where Dewey (1931/1985) avers "every occurrence is a concurrence" (9). Whatever exists is the consequence of co-existing conditions. This is transactionalism's most important insight.

Proceeding transactionally involves, "Functional observation of full system" (KK, 71). Thinking "in the *transactional*" makes it possible to "see together, extensionally and durationally, much that is talked about conventionally as if it were composed of irreconcilable separates" (67). When thinking transactionally, researchers should refrain from "attribution to 'elements' or other presumptively detachable or independent 'entities,' 'essences, or 'realities,' and without isolation of presumptively detachable 'relations' from such detachable 'elements' "(101-102). We must first strive to see co-existences together. Later, for analytic convenience, we may simplify and think interactionally. For instance, a researcher might observe a bird in flight, but transactional observation allows one to "take in not just a bird while in flight but bird nest-building, egg-laying and hatching" (50). Since, "The subjectmatters of observation are durational and extensional" one may even "see" birds together with the dinosaurs from whence they evolved and which they visibly resemble (83). Can you see yourself together with other species of *Homo*? Well, if your ancestors are from Europe or the Middle East up to 4 percent of your genes are *Homo Neanderthalensis*.

Dewey and Bentley contrast transaction with self-action and interaction. "Self-Action" means "things are viewed as acting under their own powers" (KK, 101). The result is, "Pre-scientific presentation in terms of presumptively independent 'actors,' 'souls,' 'minds,' 'selves,' 'powers' or 'forces' taken as acting events" (71). Such things are either self-caused or are a power derived from a self-caused power such as God creating the soul. Interaction is the "presentation of particles or other objects organized as operating upon one another" (71). Interaction presupposes we already have separate powers, objects, elements, *etcetera* having their interactions "mediated" by detachable external relations. Interaction is "where thing is balanced against thing in causal interaction" (101). Organism-environment interaction is an example.

For Dewey and Bentley "Behavior" is not simply located in the organism any more than is the self or the mind. A "Behavior" is "always to be taken transactionally: i.e., never as *of* the organism alone, any more than *of* the environment alone, but always as *of* the organic-environmental situation, with organisms and environmental objects taken as equally its aspects" (KK, 260). An "actor" is a "trans-actor" (259 and 272). "Action" and "activity" are "characterizations of durational-extensional subject matters" (259). Hofverberg and Maivorsdotter (2017) have developed the idea of "transactants" to study the "how human and non-human transact" in the "learning process" (14).

"Regarding behaviors as events of organism-environment in action," write Dewey and Bentley, "we shall find the differentiation of behavioral processes (including the purposive) from physical or physiological to rest upon types of action that are observable directly and easily in the full organic-environmental locus." (136). That

human physical, physiological, and mental states characterized by purpose and intentionality may be reliably inferred from the environmental aspect of organism-environment transactions should interest empirical researchers. A transactional understanding of behavior expands the scope of philosophical pragmatism whose name derives from the classical Greek word *pragma* (πράγμα) meaning deed, act, thing done, and circumstance (Liddell and Scott, 1994).

In the second chapter of his *Logic* titled “The Existential Matrix of Inquiry: Biological,” Dewey states the core idea of transactionalism: “Whatever else organic life is or is not, it is a process of activity that involves an environment. It is a transaction extending beyond the spatial limits of the organism” (LW 12: 32). What exists co-exists. Oxygen is external to our existence, but internal to our functioning. Transactional environmentalism recognizes that one’s body, mind, and self are not simply located. Rather, they are extensionally distributed in a world without a within wherever they are conditions of consequences and, transactionally, consequences of conditions (see Garrison, 2001).

The co-existing conditions of the carbon cycle have consequences for human functioning and, transactionally, human functioning is a condition having consequences for all other functions of the cycle. Circularity is a transactional trait. Dewey and Bentley adopt “procedure in a circle – openly, explicitly, emphatically” (KK, 62). Traversing circles carefully contributes to seeing things together including one’s distributed self in the grander scheme of transactional co-existence.

The organism maintains homeostasis through constant transactional adjustment. Among organisms like human beings, there is “modification” that “constitutes what is termed habit, “which is “the basis of organic learning” (LW 12: 38). Biological habits of action emerge in organism-environment transactions wherein “habits incorporate an environment within themselves.” (MW 14: 38). The forgoing remarks about embodiment help us better understand why Dewey and Bentley insist upon “transactional observation of the ‘organism-in-environment-as-a-whole’ ” (KK, 103). There is no need to synthesize observations if we can transactionally see diverse aspects and phases together.

Dewey titles the third chapter of his *Logic* “The Existential Matrix of Inquiry: Cultural.” Everything just said regarding organism-environmental transactions holds for human organism-sociocultural environmental transactions. While other people, cultural institutions, tools, and artifacts are external to our existence, they are internal to our functioning. Think what happens when you lose your pocketbook or wallet.

The Acquisition of Language, Meaning, and the Mind

I concentrate on the transactional acquisition of linguistic meaning. In linguistic communication physical existences like gestures and sounds directed at other physical things “do not operate or function as mere physical things . . . They operate in virtue of their *representative* capacity or *meaning*” (LW 12: 52). The physical sound or mark gets its “meaning in and by conjoint community of functional use” (52). This is important since

to have a mind is to have meaning: "Mind denotes the whole system of meanings as they are embodied in the workings of organic life" (LW 1: 230). Furthermore, "Mind is seen to be a function of social interactions, and to be a genuine character of natural events when these attain the stage of widest and most complex interaction with one another" (7-8).

Dewey begins his essay, "The Inclusive Philosophic Idea" by noting, "Conjoint behavior is a universal characteristic of all existences" (LW 3: 41). What exists co-exists. He argues the "more complex is an association the more fully are potentialities released for observation" (42). Human existence is the consequence of a vast array of transactionally co-dependent physical and biological conditions. Biological transactions emerge out of physical transactions much as water (H₂O), which extinguishes many kinds of fire, emerges out of hydrogen, which is highly combustible, and oxygen, which sustains combustion. Likewise, social behavior and communication emerges from biological functioning when animal gestures (e.g., vocalization) acquire abstract symbolic meaning including words, images ideas, and goals. With linguistic functioning, "The social affords us an observable instance of a 'realm of mind' objective to an individual, by entering into which as a participating member organic activities are transformed into acts having a mental quality" (50). In the forgoing transactional sense, the social is the most inclusive philosophic idea.

Like the later Wittgenstein, Dewey has a "use" approach to language that emphasizes the primacy of cultural practice (Quine, 1969; Medina, 2004). However, few recognize that for both the acquisition of linguistic meanings is emergent, transactional, and not simply located. Here is Dewey's version:

Language is specifically a mode of interaction of at least two beings, a speaker and a hearer; it presupposes an organized group [e.g., a culture] to which these creatures belong, and from whom they have acquired their habits of speech. It is therefore a relationship, not a particularity The meaning of signs moreover always includes something common as between persons and an object (LW 1: 145)

Dewey depicts a three-term transaction involving A and B coordinating their behavior regarding a common object O in a cooperative social practice, a form of life. Gestures such as vocalizations or even simple pointing acquire their meaning by how they are used in such triangular transactional contexts.

A hen (A), to use Dewey's example, may respond to a farmers (B) behavior by "habit, by conditioned reflex" (14). However,

[A] human infant learns to discount such movements; to become interested in them as events preparatory to a desired consummation; he learns to treat them as signs of an ulterior event so that his response is to their meaning. He treats them as means to consequences. The hen's activity is ego-centric; that of the human being is participative. The latter puts himself at the standpoint of a situation in which two parties share. This is the essential peculiarity of language, or signs. (140)

A and B must coordinate each other's *perspective* regarding O in a complex triangular process wherein linguistic meanings with objective references emerge.

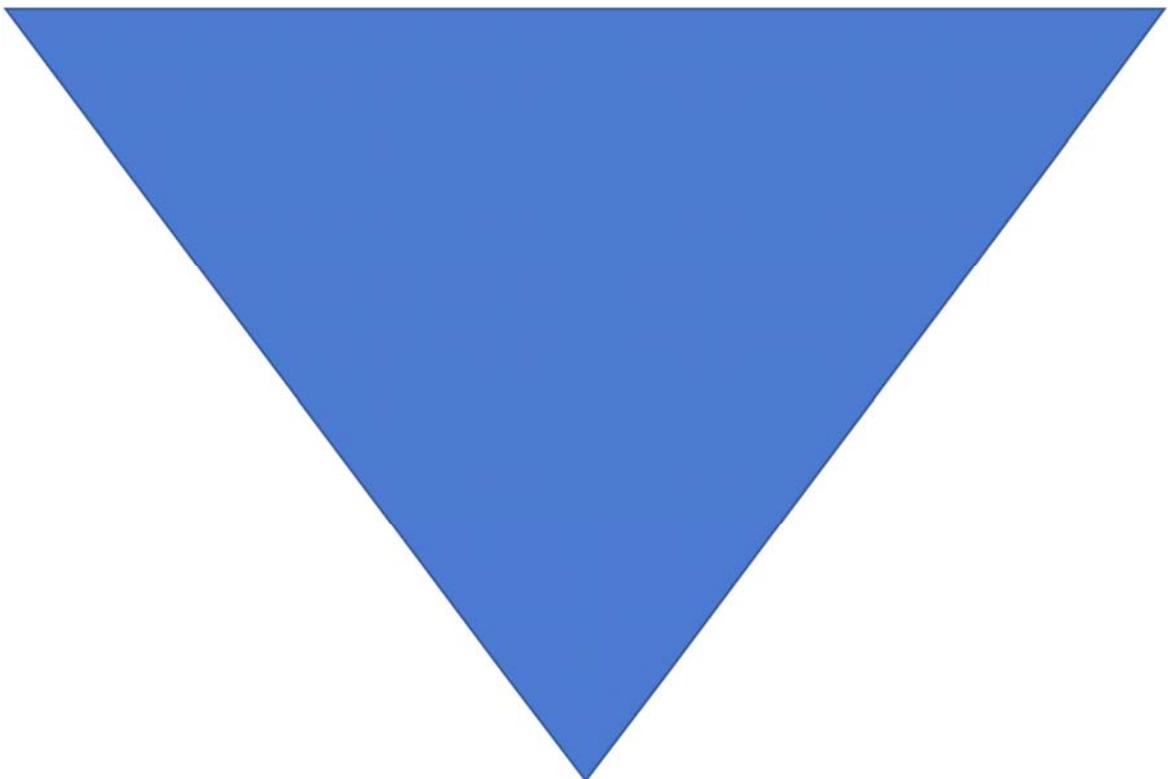
But we must careful, because while clearer and easier to understand, simple triangularity is interactional not transactional. Dewey and Bentley write:

As place-holders in this region of nomenclature we shall provisionally set down behavior-agent and behavior-object. They represent specialized interactional treatments within the wider transactional presentation, with organisms or persons or actors named uncertainly on the one hand and with environments named in variegated forms on the other. (KK, 68)

The following figure is interactional, not transactional.

Behavior-Agent (A)

Behavior-Agent(B)



Behavior-Object (e.g., thing, event, idea, ideal, goal)

“Behavior” must “be taken transactionally: i.e., never as *of* the organism alone, any more than *of* the environment alone, but always as of the organic-environmental situation, with organisms and environmental objects taken as equally its aspects” (*op. cit.*). Behavior is never simply located in a world without a within. For this reason Dewey and Bentley eventually drop the idea of behavior-agent and behavior-object.

Linguistic meanings, the use of abstract signs (i.e., symbols) such as words, emerge in the transaction along with the minds of A and B regarding the referent of the sign— the object O. Perspective taking is a potentially endless course of recursion. For example, A may know that B knows that A knows B’s perspective on O. When they do not agree regarding O the transaction continues. Because A and B cannot instantaneously take each other’s perspective regarding O it is always a durational-extensional process requiring A and B to see each other and O together. A, B, and O emerge together in the ongoing transaction.

Wittgenstein (1953) says, “to imagine a language means to imagine a form of life” (§19). A form of life is a cultural practice. Now imagine A saying to B, “Bring me a slab [O]” (§19). What is a slab? A slab of butter, or beef, a brick? In Houston Texas a slab is a large customized car with high gloss paint, a high volume sound system, a fifth wheel, and swanga wheel covers. It is considered an urban art form.¹

Imagine saying, “Bring me a slab” on a Houston car lot. The point is that meaning emerges in ongoing linguistic transactions along with the minds of A and B as they strive to negotiate and re-negotiate the shared referent O. Has our linguistic transaction just now changed your mind about the meaning of O (“slab”)?

Distinctively human mental functioning is an emergent human organism-sociocultural environment behavioral transaction. In a typescript titled, “What Is It to Be a Linguistic Sign or Name?” found in the Arthur F. Bentley Collection and reprinted in the Carbondale edition of *KK*, we find an explicitly transactional statement of the origin of linguistic signs: “specifiable behavioral operations, *doings and makings* [of O] which involve the body, things and other human beings [A and B], determine certain things, like gestures, sounds, etc., to be signs” (*KK*, 304). First, note that meaning, and hence mentality, is a matter of doing and making. Second, note the role of other human beings. Third, linguistic meaning and mentality are durationally (i.e., temporally) distributed functions analytically comprised of at least three transactional terms A, B, and O. Fourth, “Sign and thing designated are constituents of one inclusive undivided set of operations; any distinction drawn between them is the result of post or reflective operations” (304-305). The separation of sign and signified is only a useful analytic

distinction of inquiry that must not harden into a false dualism. Dewey indicates that even this “later treatment of them as distinctive is itself a constituent of a total transaction” (305 fn.).

It is worth saying something about the behavioral operations of reflective inquiry. One example is the behavioral operations comprising a controlled experiment. Another is the purely symbolic behavioral operations of a mathematical or logical proof. In both cases the goal (i.e., “the end-in-view”) is to render the referent O stable and repeatable among two or more participants in the transaction, A and B. Empirical researchers anywhere or any when must be able to reproduce the same behavioral conditions with the same empirical consequences to secure acceptance within the scientific community. Similarly for mathematical proofs.

The Primacy of Social Perspectives

Michael Tomasello (1999, 2008, 2019) provides extensive empirical evidence for the correctness of Dewey and Wittgenstein’s approach to language. Indeed, Tomasello relied on Wittgenstein in earlier work to develop ideas he still retains. Tomasello’s (2019) “key claim” is:

[C]hildren’s skills of perspective-taking originate in social interactions structured by joint attention. With joint attention we may say that we are attending to the same thing, only differently; we are triangulating on it, each with our own viewing angle. Without joint attention, there is no common object on which the two of us may have different viewing angles, and no sense of perspective. (64)

What Tomasello calls “joint attention” is social perspective taking. Unfortunately, Tomasello is thinking in terms of triangular interaction. What he calls “triangulating” is in fact a three-term durationally-extensionally distributed transaction involving A, B, and O. Tomasello argues that while the higher primates can track conspecifics mental states regarding objects, they cannot consider their own perspective on the object and then triangulate to the perspective of the conspecific. They are also incapable of engaging in cooperative social practices.² In Dewey’s terms, they cannot place themselves “at the standpoint of a situation in which two parties share” (*op. cit.*).

To further explore perspectivalism, I turn to George Herbert Mead and especially Mead’s (1932/1959) *The Philosophy of the Present*. Mead emphasizes that “the appearance of mind is only the culmination of that sociality which is found throughout the universe” (86). Sociality functions for Mead much as transaction functions for Dewey, which is not surprising given Dewey thinks sociality the inclusive philosophic idea.

Mead recognizes “the objectivity of perspectives” (162). Unlike physical or biological perspectives human organism-sociocultural environmental perspectives also includes “other selves with minds” that involves “the individual entering into the perspective of others” (166). A human perspective is much more than Tomasello’s “different viewing angles” (*op. cit.*). Different human perspectives (e.g., A and B) involve embodied needs, desires, selective attention, habits, meaning, valuing, and knowing.

Further, human A's and B's have species typical phylogenetic response patterns as well as a unique genetic inheritance that are part of their perspective. They also have distinct developmental histories that includes different enculturated beliefs, values, and ways of knowing. Finally, epigenetics implies phylogeny and ontogeny transact. Initially, A and B take extraordinarily complex, sometimes seemingly incommensurable durational-extensional perspectival attitudes toward O that must be mutually adjusted to achieve a shared understanding and regularly readjusted to maintain cooperation.

Co-constructing a shared perspective is not a passive spectator activity of simply located organisms. Rather, it is an active durationally-extensionally distributed process conducted in a world without a within involving "specifiable behavioral operations, *doings and makings*" (*op. cit.*). The remainder of my paper emphasizes the emergence of shared durational (i.e., temporal) perspectives.

For Mead (1932/1959), "Sociality is the capacity of being several things at once" (49). Hence, a human "mind as it appears in the mechanism of social conduct is the organization of perspectives in nature and at least a phase of the creative advance of nature" (172). Linguistic "Behavior" in a human organism-sociocultural environment situation comprised of A and B coordinating perspectives in a transaction involving some emergent object (event, idea, goal, *etc.*) O. It is a distributed function involving, in Dewey and Bentley's terms "characterizations of durational-extensional subject matters" and "Behavior" is "of the organic-environmental situation, with organisms and environmental objects taken as equally its aspects" (*op. cit.*).

Mead thought it possible to be in different perspectives simultaneously only when participating in transitional situations involving a "process of readjustment" (47). Such situations resemble what Dewey calls an indeterminate situation requiring reconstructive inquiry to coordinate (LW 12: 109ff.). These situations involve temporal passages varying in duration depending on how long the period of reconstruction endures. A and B are involved in a "process of readjustment" when they strive to coordinate or re-coordinate their transactions regarding some object O.

Temporal passage only occurs in the present. The temporal present is an emergent durational transactional process: "The social nature of the present arises out of its emergence. I am referring to the process of readjustment that emergence involves. . . . There is an adjustment to this new situation" (Mead, 1932/1959, 47). Human mental functioning, norm governed social behavior, self-consciousness, and self-regulation emerge from sociolinguistic adjustment within an enduring temporal present.

Temporal Sequences: The Punctual, Specious, and Functional Present

Mead states that "reality exists in a present" and while accepting that the present "implies a past and future" nonetheless "to both of these we deny existence" (1). The critical idea here involves distinguishing metaphysical existence from logical essence. Dewey does it this way: "Essence is never existence, and yet it is the essence, the distilled import of existence: the significant thing about it, its intellectual voucher" (LW 1: 144). There is "a natural bridge that joins the gap between existence and essence;

namely communication, language, discourse" (LW 1: 133). Thus far, I have examined the construction of the linguistic bridge. The next section examines the construction of temporal sequences as logical essences involving past-present-future. This section takes up the idea that actual existence only occurs in a durational present.

Dewey states, "Time as empty does not exist; time as an entity does not exist. What exists are things acting and changing, and a constant quality of their behavior is temporal" (LW 10: 214). He distinguishes existential temporal quality from temporal sequence. Accordingly, "Quality is quality, direct, immediate and undefinable" (LW 1: 92). Temporal quality "has movement from and towards *within* it; it is marked by waxings and wanings" (385). Temporal quality characterizes durational existence. There is a vast difference between the temporal quality of an evening in the arms of your lover and the temporal quality of a boring committee meeting. Meanwhile, temporal order "is a matter of relation, of definition, dating, placing and describing. It is discovered in reflection, not directly had and denoted as is temporal quality" (92). Sequences of past-present-future are constructions of inquiry not existential givens.

We often think in terms of an instantaneous punctual present, which is why we spatialize the present as if it was an infinitesimal point on a line. However, this is an abstract construction of reflection. Temporal quality resembles what William James calls "the specious present" or Bergson's "*la durée*" which is opposed to physical time modeled on spatial movement. However, James and Bergson assume a subjective structuring of time within the temporal stream of consciousness that is then objectified. Mead rejects this implicit subject versus object dualism in favor of structuring time based on practical human organism-sociocultural environment transactions involving the objective reality of perspectives.

The Emergence of Past and Future from the Present

Durational temporal quality provides a sense of directional change, but not a temporal sequence. Regarding "the Biologic Individual" (i.e., the human organism), in *Mind, Self, and Society* Mead (1934/1967) remarks: "From the point of view of instinctive behaviour in the lower animals or the immediate human response to a perceptual world . . . past and future are not there: and yet they are represented in the situation" (350). In instinctive behavior, past and future is "represented by facility of adjustment" to the situation wherein, "The surrogate of the past is the actual adjustment of the impulse [and habits] to the object as stimulus. The surrogate of the future is the control which the changing field of experience during the act maintains over its execution" (351). It is one thing to have something, another to know it, still another thing to be able to reflect on it and inquire about it.

However, immediate unreflective behavior is confined to the present: "The flow of experience is not differentiated into a past and future over against an immediate now until reflection affects certain parts of experience" (351). Mead concludes:

The biologic individual lives in an undifferentiated now; the social reflective individual takes this up into a flow of experience a fixed past and a more or less uncertain future. (351)

Later, in *The Philosophy of the Present*, Mead came to understand that the past is as uncertain as the future.

The “biologic individual” has a past and future, but only the linguistic “social reflective individual” with meanings and a mind acquired by durationally-extensionally taking and retaining the perspective of others knows it and can think about what it means (*op. cit.*). The “biologic individual” becomes a “social reflective individual” with a past and future in “social interactions structured by joint attention” (*op. cit.*). Eventually, transactional coordination of perspectival attitudes with others is abstracted and generalized into objective norms of social transaction:

Our thinking is an inner conversation in which we may be taking the roles of specific acquaintances over against ourselves, but usually it is with what I have termed the “generalized other” that we converse, and so attain to the levels of abstract thinking, and that impersonality, that so-called objectivity that we cherish. (243)

There is a conscious “empirical self” that humans share with many other organisms. Mead (1913/1964) stresses, “As a mere organization of habit the [conscious] self is not self-conscious” (147). However, the social individual conversing with the generalized other eventually becomes self-aware:

The self arises in conduct, when the individual becomes a social object in experience to himself He acts toward himself in a manner analogous to that in which he acts toward others. Especially he talks to himself as he talks to others. (Mead, 1922/1964, 243)

Self-consciousness emerges as one begins recursively taking the perspectival attitudes of others not only toward objects but, reflexively, also toward the “Behaviors” of their own empirical self.

As the “Behavior” of socially aware and reflective individuals begins conforming to the norms of the abstract perspective of the “generalized other” individuals begin justifying their actions in accordance with the moral and rational norms of the community. Action becomes more abstract and impersonal. In an important sense, objectivity involves intersubjectivity in transactionally coordinating perspectives. When perspectives do not converge individuals and societies undergo transitions involving “being several things at once” (*op. cit.*). In existentially indeterminate situations the most logical approach involves exchanging reasons and evidence, although sometimes re-coordinating perspectives requires a change in social norms regarding what counts as a good reason, which may result in political or scientific revolutions. From whose perspective do you perceive the past, present, and future of recent immigrants to your country?

A self-conscious, self-regulating, reflective being is capable of deliberately engaging in extremely durationally extended behavior:

The stretch of the present within which this self-consciousness finds itself is delimited by the particular social act in which we are engaged. But since this usually stretches beyond the immediate perceptual horizon we fill it out with memories and imagination. (Mead, 1932/1959, 87)

The past and future emerges in the reflective filling out in temporally extended “functional presents,” which are always “wider than the specious present, and may take in long stretches of an undertaking which absorbs unbroken concentrated attention” (88). However, one “can accomplish this only by using symbolic imagery” (88).

Only social individuals capable of coordinating with the perspectives of others can acquire the “symbolic imagery,” that is, the linguistic capacity, necessary to explicitly state the surrogates of the past and future within a durationally extended functional present. These statements may then be placed into a sequential order within the larger context of inquiry. Mead concludes “The functional boundaries of the present are those of its undertaking – of what we are doing. The pasts and futures indicated by such activity belong to the present” (88). The “functional boundaries” with their unique temporal quality expand and contract according to the duration required for inquiry to reconstruct the coordination of perspectives.

For Dewey, the most intelligent form of reflection is found in his *Logic: The Theory of Inquiry*. Consider historical inquiry: The function of constructing a logical judgement “is transformation of an antecedent existentially indeterminate or unsettled situation into a determinate one” (LW 12: 220). Historical inquiry requires the proper sequencing of otherwise indeterminate past events. Dewey marks the difference between “existential change as barely existential” (i.e., existence) and “as subject-matter of judgment” (i.e., essence). Therefore, “Event is a term of judgment, not of existence apart from judgment” (222). Whatever the temporal quality of the existential change, in reflective inquiry, “There is reference to limit *ab quo* [the earliest possible date] and *ad quem* [the latest possible date]” (221).³ Without “this limitation, a change is not characterized. . . . No mere flux can be noted, appraised or estimated” (221). Dewey argues, “Absolute origins and absolute closes and termini are mythical. Each beginning and each ending is a delimitation of a cycle or round of qualitative change” (221). The determination of the limits of an event is an analytical function of inquiry structuring qualitative existential change by and for human purposes.

In their final, “A Trial Group of Names,” Dewey and Bentley provide the following definition: “*Event*: That range of differentiation of the named which is better specified than situation, but less well specified than object” (KK 62). Dewey and Bentley’s events resemble Mead’s “functional presents.” (*op. cit.*). A “*Situation*” is indeterminate whereas an “*Object*” is the “firmest specification, and is thus distinguished from situation and event” (267). As Dewey says in the *Logic* “objects are the objectives of inquiry” (LW 12: 122). Objects are among the products of the processes of inquiry; so too are temporal sequences.

The details of the construction of a temporal sequence involves all the inter-related operations of inquiry. Here, I only cite a simple example from Dewey’s discussion of “Judgments of Recollection”:

Dating, moreover, is nothing absolute. It depends upon connecting a particular occurrence with other events coming before and after in such a way that taken together they constitute a temporal series or history. If I say that "I was at home at five o'clock yesterday," I am in fact constructing as an object of grounded belief a sequential course of events. "Yesterday" has no significance save in connection with today, the day-before-yesterday and a series of tomorrows. (LW 12: 224)

Temporal sequences such as "clock time" are always constructed. Remember, "objects [e.g., dates] are the objectives of inquiry" (*op. cit.*).

Mead (1932/1959) states, "the past (or the meaningful structure of the past) is as hypothetical as the future" (12). Should a memory be questioned by another we are back to the situation between A, B, and O where O is the memory being constructed or reconstructed as A and B adjust to each other's perspectival attitudes, which involve behavioral operations such as the determination and use of evidential data, habits of inference, hypothetical if-then universal propositions, and much more as the inquiry proceeds and the essence of the memory is, perhaps, reconstructed. In the reconstruction of personal memory as much as the reconstruction of a scientific or mathematical concept, prediction is important to confirmation. If a construction of the past accurately predicts the future, or some previously unknown past occurrence, it becomes a warrantable assertion.

Question for the reader: Do you know what a or half a slab is in Australia (or so I am told).

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MW The Middle Works (1899-1924)

LW The Later Works (1925-1953)

Knowledge and the Known (LW 16) is abbreviated KK in the text.

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¹ It must also have a chrome grill, a flying Goddess hood ornament, and custom interior.

² While Segerdahl *et. al.* (2005) agree with Tomasello about the origin of language, they argue that the bonobos they work with can acquire linguistic functioning in a shared bonobo-human culture.

³ Better Latin would be *terminus a quo* and *terminus ad quem*.