

Embodied Experience and the Semiosis of Abductive Reasoning

Donna E. West

State University of New York at Cortland

Abstract

A case will be made for the indispensability of embodied experience as a foundation for Peirce's pragmatic semiotic, especially given the place of semiosis in signification. Lakoff and Johnson's model of space and time, from dependence on physical, embodied experience, to more analogous based concepts in the mental world, is employed as a framework for a discussion of the primacy of Secondness in Peirce's model of reasoning. Peirce's later writings reveal that abductive reasoning entails "recommending a course of action," demonstrating the pivotal place of Secondness in abductive thinking. Nonetheless, recommending a course of action does not stop at experience—it likewise relies on spontaneous insights to trigger a synthesized and acceptable explanatory prediction of a state of affairs. The prediction/hypothesis emanates not from previous direct experience, but from its culminating effects. This "retroduction" ensures the preeminence of self controlled logic (Thirdness impinging on Secondness) over capricious affect in Firstness.

Keywords: Abduction, Peirce, Lakoff and Johnson, Lived experience, Secondness

Introduction

In elucidating Peirce's model of travel toward abductive reasoning, the emphasis is placed on participatory involvement in experiences, or as Lakoff and Johnson (1980, 1999) term it, lived experience. "We have no more fundamental way of comprehending the world than through our embodied, basic-level concepts and the basic-level experiences that they generalize over. Such basic concepts are fundamental not only to our literal conception of the world but to our metaphorical conceptualization as well" (Lakoff and Johnson, 1999: 231). The tenets of Lakoff and Johnson's model bear resemblance to Peirce's model of the development of abductive reasoning, in that both squarely rest their assumptions on the Piagetian claim that foundational to higher level reasoning are primary experiences. Piaget

(1937/1954: 403) expressly asserts that sensorimotor interactions are the building blocks for mature logic: “Thus, starting with the use of reflexes and the first acquired association, the child succeeds within a few months in constructing a system of schemata capable of unlimited combinations which presages that of logical concepts and relations.” Lakoff and Johnson likewise follow this rationale in constructing their model of spatial relations. Although Peirce’s claims are in line with those of Lakoff and Johnson (and implicitly of Piaget, as well), they are not explicitly developmental in nature. Nonetheless, the three models are in accord – that lived experience is primary in developing higher level logic. They further agree that spatial concepts/modes of representation are primary skills for developing more advanced reasoning competencies.

Lakoff and Johnson’s Contemporary Model of Lived Experience

Lakoff and Johnson (1999: 30-35) posit that three reasoning approaches govern children’s involvement in experience: container schema, source-path-goal schema, and bodily projection schema. These lines of reasoning regarding spatial relations between and among the self and between objects arises such that when the higher level becomes dominant, it does not supplant lower level rationale. The result is that higher reasoning simply is integrated with patterns of prior reasoning, to the effect that prior schemas are modified to preclude contravening assumptions within the same system. Nevertheless, the core of Lakoff and Johnson’s assumptions is that spatial relationships are the basis upon which increasingly more complex logic is constructed: “Spatial-relations concepts are at the heart of our conceptual system” (Lakoff and Johnson 1999: 30).

The initial assumptions of the container schema consist in determining inside vs. outside. The inside-outside determination requires identifying boundaries (Lakoff and Johnson 1999: 31-32). Children focus on boundaries to specify locations of objects relative to landmarks. Initially landmarks are static – they are not mobile, nor is movement of objects within them a possibility (Lakoff and Johnson 1999: 32). Landmark parameters are perceived to be relatively unchangeable, and are topological. Upon emergence of the source-path-goal schema, the issue of movement surfaces as a primary determinant of spatial relations (Lakoff and Johnson 1999: 32-34). Spatial and temporal sequences become paramount, such that spatial trajectories, involving motion to and from a landmark take precedence. During this process, cause and effect relations within event structures materialize as issues to be reckoned with, i.e., which event in the episode preceded other events to logically ascertain the resultant event (state/action).

Bodily projection schemas consider orientations other than a single, egocentric viewpoint. Perspectives recognizing the import of other points of view (entities, persons) facilitates the appreciation of origos (points of orientation) belonging to a unique perspective. Equally critical is dependence on one's own bodily interaction with objects and one's own orientation to entities, forms the foundation for recognition of other's (persons/things) unique perspectives – appreciating their orientation. “We project fronts and backs onto objects. What we understand as the front of a stationary artifact, like a TV or a computer or a stove, is the side we normally interact with using our fronts” (Lakoff and Johnson 1999: 34). This projective perspective depends upon recognition of social roles and the particular physical, affective, and cognitive orientation of the origo. Movement in this genre is likewise critical, since repositioning of origo or of objects with respect to origo alters the relationship of origo to contextualized features. It is evident then that the more contemporary model of Lakoff and Johnson incorporates sensorimotor schemes into higher level reasoning, first by integrating movement into spatial parameters, and afterward when applying origo as the shifting role for the zero-point of orientation. In any case, basic spatial relations continue to serve as a necessary foundation for higher levels of reasoning.

Peirce's Model of Lived Experience

Peirce's model highlights the value of lived experience to prefigure higher reasoning skills. Four sequential levels emerge as indicators of abductive reasoning: pure Secondness, percepts, perceptual judgments, and hallucinations. Although these levels of reasoning represent epistemic (cognitive) advances, they do not preclude some components of affect in the mix. Whereas the initial reasoning levels (pure Secondness, percepts) have their foundation in physical interaction with the environment, the latter two levels (perceptual judgments, hallucinations) operate on elements of Thirdness and internal dialogue (with the self).

Peirce characterizes reasoning from a pure Secondness perspective as “compulsive” (1903: EP2: 268). This compulsivity takes flight from the appearance on the scene of unexpected objects/events, and the spontaneous reaction which unforeseen circumstances impose on the human's response. Action orientation is then another obvious component of pure Secondness for Peirce (1885: CP 8.41). “...[volition] does involve the sense of action and reaction, resistance, externality, otherness, pair-edness.” Pure Secondness does not merely result in reaction to stimuli, but surfaces as “volition” -- initiated action. Children take event roles other than that of receiver, as well as agent and the like. At this level of pure Secondness-based reasoning, Peirce accords direct experience a pivotal role in the

emergence of higher reasoning skills (1903: CP 8.266): “The practical exigencies of life render Secondness the most prominent of the three. This is not a conception, nor is it a peculiar quality. It is an experience.”

Peirce’s next level to ascertain abductive reasoning draws on the percept as a point of departure. It is noteworthy, however, that the percept (despite its basis in Secondness) goes beyond raw experience to incorporate some element of interpretation (1903: CP 7.624). Moreover, percepts neither rest on, nor do they fail to rest on belief structures – reflections on interpretations do not encompass belief or disbelief. Nonetheless, percepts do unequivocally consist in mental constructions (1903: CP 7.624): “...Every percept is the product of mental processes...except that we are not directly aware of them...” They require some semblance of recognition of object attributes, but do not reach the level of generalizations or conscious deliberation. This kind of percept might entail an implicit comparison between two objects, without raising any general observation about how certain kinds of objects appear or function. In other words, percepts fall short of a classificatory operation, e.g., all balls are round and bounce. Although Peirce asserts that percepts are “not the first impressions of sense” (1902: CP 2.141). “Not the first impressions of sense” intimates that percepts only slightly extend beyond sense impressions -- to rather simple mental operations consequent to individualized experiences. To illustrate, recognition of an object or an observation that a particular ball bounces well, demonstrates mental processes just beyond first exposure to sense data. Any interpretations which ensue do not rise to the level of a “second look back,” given that analysis is unnecessary to experience a percept. All that is necessary is notice of an object and its effectiveness within an action schema.

In contrast, perceptual judgments require reasoning beyond noticing, or beyond an awareness of object similarities, either functionally or perceptually. One of the functions of the perceptual judgment entails revealing the nature of percepts (CP 7.643). This process materializes via exposure to the “percipuum” (CP 7.643). As such, perceptual judgments ascribe to a higher order reasoning process than do percepts, such that the former exude Thirdness (CP 7.631), while the latter are still limited to Secondness in direct experience: “There are several other points of contrast between the perceptual judgment and the percept that are calculated to exhibit their disparateness. The judgment, ‘This chair appears yellow,’ separates the color from the chair, making the one predicate and the other subject. The percept, on the other hand, presents the chair in its entirety and makes no analysis whatever.” Thirdness here has its foundation in the use of genuine signs (not degenerate uses). Short (2007: 90) characterizes the presence of Thirdness within the Interpretant of a sign as the primary characteristic to qualify for genuine signhood – the meaning must be “reducible.”

Signs which are “reducible” derive some of their meaning/effects from factors beyond immediate experience and beyond the immediate space and time of the object’s observation; that is, genuine Indexes derive meaning from the general use of a term, not from the contextual features coexistent with the Object. The general use of a term represents its invariant meaning in the code. Illustrations of genuine Indexes are deictics such as “this”/“that” when their contrastive use is apprehended (West 2012: 244). Accordingly, these Indexes are genuine by virtue of the rather objective function of their Interpretants – near/far space from speaker’s viewpoint (since according to cultural norms, speaker is origo). Furthermore, Interpretants of genuine Indexes must transcend limitations of haecceity (CP 3.460) accessibility to that which is near. Interpretants must reach a higher representational threshold, that of recognizing (however unconsciously) that speaker viewpoint can be assumed by anyone who actualizes the conversational role. (For further discussion of this topic, cf. West 2013).

Without superseding limitations of haecceity necessary components of perceptual judgments could not materialize, especially the means to “recommend a course of action.” Peirce emphasizes that a primary characteristic of judgments is “recommending a course of action” (MS 637-12): “It will be remarked that the result of both Practical and Scientific Retroduction is to recommend a course of action.” This recommendation is not generated consequent to extensive deliberation; rather it arises spontaneously (CP 5.181). This spontaneous reasoning emerges in a “flash” to preclude any contrivance from infecting the recommendation: “The abductive suggestion comes to us like a flash. It is an act of insight...” Additional support for the inclusion of spontaneity in abductive reasoning, Peirce recounts a particularly relevant incident in which his brother, Herbert, in a “flash” of “insight” made a determination to instantaneously cover their mother’s burning dress with a rug, allegedly to save her from peril (CP 5.538). The judgment then constitutes a relatively undeliberated (perhaps fallible), but viable conclusion (CP 5.181).

This account still does not suffice. Likewise incorporated into perceptual judgments is a recommendation which is functional not necessarily for the self, but for another. Perceptual judgments then must include Lakoff and Johnson’s notion of the means to “bodily project” one’s self into the place of another – a return to space relations as the pivotal construct. Without projecting one’s self into the place of another, an outgrowth of lived experience, a course of action could not be effectively recommended for another. In short, projecting one’s self into the situation links individual epistemological and deontic issues to social ones, and perpetuates interpsychological advances. Recommending a course of action particular to another (a remedy which is likely to function for another), presupposes knowledge of another’s idiosyncratic knowledge base, as well as an appreciation for their potential emotional reaction(s).

Peirce's final, and most developed form of lived experience is hallucination. Such extends reasoning of perceptual judgments (CP 7.641 and CP 7.644): "...I proceed to compare the entire host of hallucinations, which there is no good reason to separate into the veridical and the non-veridical, and which there is good reason to account far more frequent than the census of the Society for Psychological Research admits." For Peirce "hallucination" does not conform to the ordinary or socially normative construal. It is distinguishable from that of the Psychoanalytic model and from common use, in that it necessarily entails the addition of compulsive affect. Such affect though does not by nature give rise to uncontrolled, untrue, unacceptable or destructive forces. Rather its actualization is creative – it stimulates cognitive/epistemic growth (EP 2:192). This growth demonstrates a primary advance in intrapsychological reasoning, in that it materializes in the sudden synthesis of heretofore unforeseen connections/relations, to offer a novel rendition of or a projective account of events driven by unconventional affect, but without being subject to taboo or cultural sanctions. In fact, affect (which is an artifact of experience) is so crucial to epistemic development that, absent its influence, the inception of novel cognitions/propositions which inhabit Peirce's sense of "hallucination" are unlikely to come to fruition.

Conclusion

Although Lakoff and Johnson's model was proposed a century after that of C. S. Peirce, it highlights many of the spatial and experiential components which are only implicit in Peirce's account of logic construction. In particular primary to the development of abductive reasoning are three factors: personal implementation of experience in participatory action schemas, determining the epistemic and deontic complexion of another to suggest viable alternative approaches for them, and proposing alternative approaches/remedies from those already constructed. In short, advancing to abductive thinking requires both interpsychological (social), and intrapsychological competencies, largely arising from self-to-self dialogue. Hence, the role of lived experience in this enterprise can not be overstated. It is the catalyst for bodily participation in events, providing social and cultural remedies. Lived experience further hastens abductive reasoning (the proposal of novel, viable remedies) through the exercise of internally mediated problem-solving competencies.

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