

THINKING THROUGH CONSEQUENCES: THE PERILS OF PRAGMATISM

JAAAN VALSINER

Department of Psychology
Clark University

ABSTRACT

American pragmatism has elevated the valuation of present thinking on the basis of its consequences into a system of world view which has profoundly influenced the developments in much of psychology through the 20th Century. The pragmatist stance has been the basis for selection of non-American psychological theories (such as the activity theory of A. N. Leontiev, Vygotsky's cultural-historical perspective) for import and cultivation in the social context of the U.S. society later in the 20th Century. Yet in its focus on consequences the pragmatist thought eliminates the indeterminacy of the developmental process of arriving at these consequences. The consequences of a dynamic process are not known ahead of time, and thus cannot serve as criteria of truth. Yet there is a difference between American pragmatism (as a social movement of thought) and early American founders of that movement— Peirce, James, and Dewey. The latter, in different ways, tried to overcome the difficulty of thinking about development of novelty, while preserving the centrality of consequences. An explicit formal theory of psychological synthesis is needed to solve the problem.

Key words: Pragmatism, Peirce, James, Dewey.

RESUMEN

El pragmatismo americano ha elevado la validez del pensamiento

presente sobre la base de sus consecuencias a un sistema de visión del mundo que ha tenido una profunda influencia en los desarrollos de mucha de la psicología del siglo XX. La psicología pragmatista ha suministrado la base para la selección de teorías psicológicas no Norteamericanas (tales como la teoría de la actividad de A.N. Leontiev o la perspectiva histórico-cultural de Vygotski) para su importación y cultivo en el contexto de la sociedad estadounidense del final del siglo XX. En su focalización sobre las consecuencias, el pensamiento pragmatista elimina la indeterminación de los procesos de desarrollo para llegar a estas consecuencias; sin embargo, las consecuencias de un proceso dinámico no se conocen por anticipado y, por tanto, no pueden servir como criterio de verdad. No obstante, hay una diferencia entre el pragmatismo norteamericano (como un movimiento social de pensamiento) y lo que sostenían los primeros fundadores norteamericanos de ese movimiento (Peirce, James y Dewey). Estos últimos, de modos diferentes, al mismo tiempo que conservaban la centralidad de las consecuencias, trataron de superar la dificultad de pensar sobre el desarrollo de innovaciones. Para solventar este problema se hace necesaria una teoría formal explícita de la síntesis psicológica.

Palabras clave: Pragmatismo, Peirce, James, Dewey.

Consider what effect, that might conceivably have practical bearings, we conceive the object of our conception to have. Then our conception of those effects is the whole of our conception of the object.
Dictionary of Philosophy and Psychology, 1901, p. 321

This was the maxim that Charles Sanders Peirce viewed as crucial for the pragmatist metaphysical perspective for attaining clearness of thinking. By anchoring the criteria of clarity of thought in the realm of practice, the developing pragmatist philosophies took upon themselves a move of philosophy from the realm of purified thought to the complexity of experience. Yet that was not experience in the abstract—but that of primarily dwellers of North America in their rapidly changing societies. The pragmatist philosophical movement was social-ideological at its inception. It made the experience its focus, and consequences of the experience its valuation criterion.

Duality of experience. Human experience has two features that would maintain it as open-ended and dynamic—its *socially organized nature*, and its *extension within irreversible time*. Combining these two within one single theoretical framework would entail the creation of a **substantive science of social development**— a task still ahead for our contemporary

social sciences. The difficulties here are theoretical, rather than practical (or social). Experience that proceeds within irreversible time, and is dependent upon constant interchange with the environment, entails indeterminacy that defies prediction and control of future outcomes. Instead, it is filled with constant emergence, proliferation, and extinction of 'intermediate gestalts' (in terms of the classical theory of microgenesis—Valsiner & van der Veer, 2000, chapter 7). Hence consequences—or 'final gestalts'—can be made into the criterion of truth only under the assumption of the rationality or rights of the selection for survival. The consequence (surviving experience) proves the righteousness of the survival process. Pragmatism attempted to unite the focus on the dynamic processes of experiencing with static evaluation of these processes (through outcomes)—a conceptual task of utmost complexity. Therefore it is not surprising that the solutions provided within the pragmatist movement remained half-ready, and encountered obstacles that could be denied only through loyalty to the general idea, but not through careful general solutions to difficult problems.

The context of proliferation of pragmatism. American pragmatism brought philosophy out of its ivory towers to the marketplace of common living—and situated it in amidst the full complexity of the latter. As such, pragmatism was situated in the middle of growing social regulation within the U.S. society named "the Progressive Era"—a label used by the various populist and post-populist social reformers in the U.S. in the first two decades of the 20th Century (Hofstadter, 1963). The "Progressive Era" had the "cash value" of changing the U.S. society in the direction of extensive social regulation, while maintaining its basically religious ideological undergrowth. Pragmatism was a philosophical perspective emerging in the context of the social changes that were leading to the "Progressive Era" (Safford, 1987). In psychology, pragmatism led to behaviorism. In both cases the prevailing focus on consequences—how to predict and control them—led to defocusing from the autonomous, self-reflexive individual in favor of an adequately behaving rat or citizen. Behaviorism at its inception was not a scientific but a moralistic movement, similar in tone to the preaching of pragmatism of the time. Both pragmatism and behaviorism fitted the needs of social powers that used previous consequences to predict future gains—hence the proliferation of psychological testing during and after World War I in American organizations.

PRAGMATISM AS A NEW WORLD INVENTION?

The complex of ideas that we now label "American Pragmatism" was a general orientation towards life by men (and women) of action. Pragmatism

...put ideas to work and judged them by their results. ... It rejected theories and abstractions and established the single standard of workability. It was as practical as the patent office—or the Declaration of Independence. Its expediency was individual; it came, increasingly, to be social, to require that men work together to establish the truth of their hopes.

It was a democratic philosophy, held every man a philosopher, gave every man a vote, and counted the votes of the simple and the humble equal to those of the learned and the proud. It took its truths where it found them, sometimes from the unlikeliest places. It made philosophy a servant, not a master, an instrument, not an end. It assumed that men could direct their spiritual as they did their political destinies; it overthrew the tyranny of philosophical authoritarianism and substituted the democracy of popular representation. (Commager, 1950, p. 95)

Pragmatism was thus one of the few contributions to philosophical thought that the U.S. social history has provided to the World. A number of its features were borrowed by social reformers in Europe in the later decades (Soviet Union—Brickman, 1964; Van der Veer & Valsiner, 1991; Valsiner, 1988; Italy—Safford, 1987; Turkey—Biesta & Miedema, 1996, and China—Su, 1995). Importantly, it has been accepted at times when wider populace in a changing society was gaining social power, and the issue of regulation of such power became important.

As a philosophy of American kind, pragmatism is profoundly individualistic:

It assigned to each individual as it were, a leading role in the drama of salvation, gave him a share and a responsibility in making what he held good come true. It denied him the consolation of unconditional reliance on God or on Nature and decreed that he succeed or fail through his own efforts. It emphasized his uniqueness rather than his conformity, and it encouraged him to put his own faith to the test. It was voluntaristic and raised its armies by enlistment, not by conscription. It was impatient with authority—the authority of history nor science or theology—and preferred the teachings of experience to the dictates of logic. (Commager, 1950, p. 95)

Yet American individualism is in its essence deeply conformist—the voluntaristic individual actor is always (simultaneously) a conforming "good citizen" of some community. The tension between the voluntarist and conformist forces leads to hybrid phenomena of massive endorsement

of homogeneity viewing it as if it emphasizes individual uniqueness of the endorsers¹.

The emergence of pragmatism in the U.S. at the end of the 19th Century was an outgrowth of the intellectual liberation from the religious overcontrol of the society (see Valsiner & Van der Veer, 2000, chapters 4 and 5). Yet in this movement it retained many of the stylistic features of the very same social traditions against which it fought. It quickly established its own quasi-religious nature (at least in William James' version of it, see below).

DIRECTIONS WITHIN PRAGMATISM

Pragmatism was never a unified movement—despite William James' efforts to present it as such. It could not be—given the individualistic beginnings. Pragmatism had three major directions. First, there was Charles Sanders Peirce (1877/1923; 1878/1923). Although considered to be the originator of pragmatism on the basis of his earlier thinking, yet who retained his own version of the general perspective (Peirce, 1905a, 1905b). Secondly there was William James who in the 1890s elaborated his belief system that was based on the primacy of utility. And finally—there was John Dewey who brought his version of pragmatist ideas to the practice of education. All three directions have their connections with our contemporary socio-cultural approaches. It was Dewey's kind of pragmatism that was close to the development of activity theories in the 20th Century, and which has had its impact upon activity-theoretic traditions in contemporary socio-cultural studies. James' work on the self has inspired our contemporary self researchers and proponents of dialogical perspectives. Peirce's semiotic logic is crucial for the traditions in our time which focus on semiotic mediation of human psychological functions.

Pragmatism is best described as a general axiomatic stance, rather than a philosophical theory. Even as Peirce, James, and Dewey can be considered to belong to the same category ("pragmatism") their perspectives were notably different. It was the effort of William James to present all these trends as a unified movement (James, 1904a; Turrisi, 1997), while Peirce and Dewey made sure their difference from James

¹ Phenomena of "political correctness" in speech, fights for mass-produced goals such as eradication of fat from diets and smokers from buildings constitutes an arena of individuals' actions towards believed-in "common good".

was notable (Dewey, 1908; Peirce, 1905a, 1905b). As it often happens, historical narrative about ideas differs from the history of the ideas. In a schematic form, the relations of Peirce, James and Dewey in the context of pragmatism can be summarized by a tri-furcation (see Figure 1).

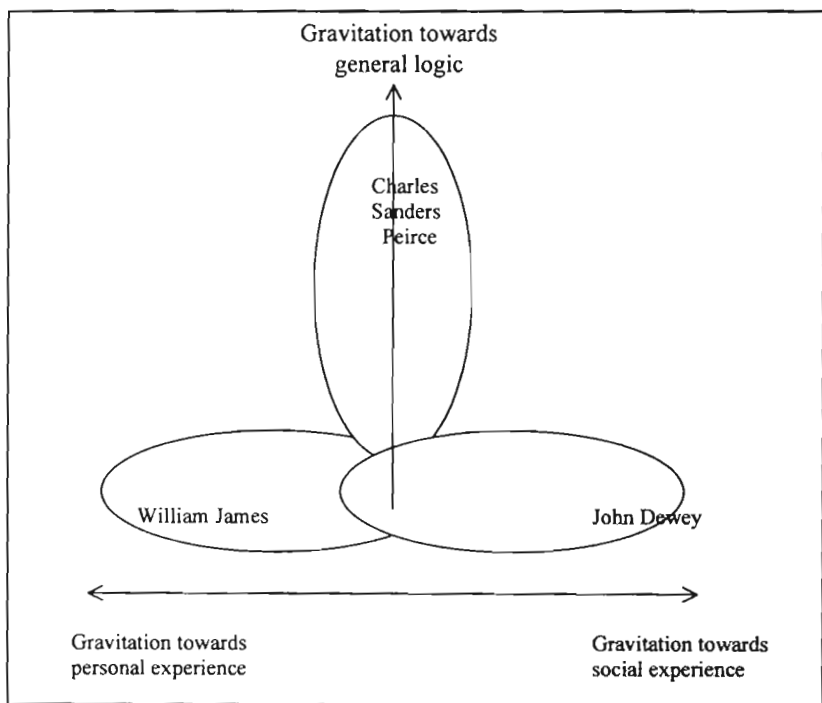


Figure 1. Three main directions in the american pragmatist thought

While Peirce's version of pragmatist thought got its beginnings in the philosophy of Kant, it continued to gravitate towards generalized abstract principles (of logic), rather than to the glorification of the vagueness of common experiencing. It was the latter direction—explication of pragmatism through the subjective experiencing of the world—that James found most appealing. Dewey—with his Hegelian roots that were transformed into instrumentalism—was pulling the cart of pragmatism in the direction of social practice in which individuals were a part. All three directions, while agreeing on the main principles, represent distinct directions of construction of the pragmatist world-view.

THE WILL TO BELIEVE (AND DUTY TO DOUBT): WILLIAM JAMES

William James (1842-1910)- when he was not depressed—had the will to believe. He set up the notion of pragmatism as a movement that fitted the ethos of the upcoming “Progressive Era” in U.S. society. James’ claims for pragmatism as being «radically empirical» (James, 1904c) had the emphasis on action. By acting upon objects, the person appropriates the relevant functions of these objects, thus turning the objects into both subjective and objective in relation to the person (James, 1905, p. 179). One step beyond this “radical actionism” was the focus on behavior. The prediction and control of the consequences of behavior became the curse of American psychology after 1913 from which even the subsequent «cognitive’, ‘ecological’ or any other movements (which tend to label themselves ‘revolutions’) have not succeeded in overcoming.

Pragmatism was meant to be an alternative to intellectualism - the belief in the finite existence of the mind as such. As such, it constituted a general belief system which made the notion of utility the core for the determination of the «truth» or «falsity» of ideas. In the middle of human personal experience (characterized by James as «quasi-chaos»; James, 1904c, p. 543), practical consequences of action lead to the possibility to establish the truth value of facts.

True ideas are those that we can validate, corroborate, and verify. False ideas are those that we can not... The truth of an idea is not a stagnant property inherent in it. Truth happens to an idea. It becomes true, is *made true by events. Its verity is in fact an event, a process, the process... of its verifying itself, its verification.* Its validity is the process of its validation. (James, 1907b, p. 142, added emphasis)

The process of verification ranges widely— from direct testing of an object, to inter-personal establishment of a common language referent. James’ example was a clock on the wall. He claimed that *if he* would consider that object a «clock» *and his interlocutor would agree* that it is a «clock», that this indirect verification can be sufficient as it works for the given purposes.

Construction of the purposes. What are these “given purposes”? How do they become “givens”? These were questions that were left out of James’s interests field. These can emerge in the course of establishing a social consensus in a group. Yet that amounts to illusory intersubjectivity which conceals a large leap in faith—a conventional illusion thus can become truthful. This issue becomes particularly crucial in our contemporary world where illusory intersubjectivity is successfully cultivated by insertion of simplified meanings into complex events through mass

media. If a source X succeeds to persuade Y that a particular event is of quality P by way of suggesting that X and Y are united within a field of shared values (see Diaz Martinez, 2000), goals (or any other vehicles of intersubjectivity) then any resulting action based on such socially constructed unity would be 'truthful'. The social consensus is made into a 'truth' because it is a consequence of previous search for it.

James saw truth emerging at the intersection of belief -> verification -> new belief cycle. Yet much of human knowledge is mediated via symbolic means, and not immediately available. For example, the act of reading about «tigers in India» in a here-and-now setting provides the immediate access to the qualities of the paper on which the text is written (e.g., to a molecular architecture 'beneath' the smooth whiteness of the paper). Yet the meaning of «tigers in India» is available to the reader only via representative or symbolic knowing (James, 1895, p. 107). The latter is fully dependent upon the trustworthiness of the writer of the text. The possibility that there might be no tigers in India is not considered by the reader, as the story is created by the writer. A similar situation is even clearer now, a century later, where our worlds are filled with packaged products (and messages about their contents, instructions for use, and durability—see Del Rio, 1996). The relationship of the user of the products and the producer is mediated by the messages on the packages—which are assumed to be trustworthy because of their social institutional marker (e.g., some bureaucratic approval by some anonymous government agency). As is known, the major consequence of formal schooling is the literate subjects' uncritical acceptance of major premises in syllogistic reasoning tasks (Luria, 1976). The 'will to believe' in what the authority (the teacher, the experimenter) says is set up as a social norm, while the 'duty to doubt' is left to be the dubious nature of the unschooled, obstinate, or simply 'uniformed' populace.

Communication and truth. If the cases of mediated verification depend upon communication between persons, the issue of intersubjectivity is of prime relevance for any standpoint that claims usefulness to be the core criterion of truth. After all, any claim about usefulness of anything is an act of labeling, and such labeling can occur in accordance with personal goals of the labeler, even if claimed to be so from the viewpoint of «common good.» This possibility makes the application of pragmatism's utility-centered criterion of truth infinitely open-ended, since the rhetoric construction of «usefulness» can take an infinite number of forms. James recognized this open-ended nature of the communicative validation of truths, and tried to solve the problem of the indeterminacy of the pragmatic view on truth via a moralistic imperative of avoiding falseness (see James,

1907b).

The pragmatist doctrine depends upon axiomatic assuming of a particular position of what «usefulness» is. Inter-psychological communication situations of purposeful and effective deception of the other are not assumed to be the basis for the verification of truth. Communication between people necessarily entails coordination of different personal perspectives. The role of the «social other» in the process of the mediated verification of truth is assumed to be that of a *benevolent* seeker of the same truth (only from a different starting point). Such assumption is a sociological axiom which, if adequate, solves pragmatism's problem of what consequences (of socially created kind) are. The tension within the opposites— «will to believe» (James, 1896) and «will» to not-believe (or, «duty to doubt») can become overcome through social consensus, and turned into a «duty to believe» (with its sub-dominant component of «will to doubt»²). Science may become democratically governed as a result of this transition— yet the benefits of such governance may be upset by the difficulties of inventing understandings that go beyond the socially shared common sense³. Any method— based on social consensus, needs of society, or religious belief— that starts to block the centrality of intellectual doubt in science is likely to stand on the way of development of new ideas.

FROM DOUBT TO THE BELIEF IN ABDUCTION: THE LOGIC OF C. S. PEIRCE

Charles Sanders Peirce has been credited (by William James) to establish the pragmatist direction in 1877/1878. Peirce's actual work was closer to the direction of logical positivism—which of course made its domineering pitch in the 20th Century— than to James' version of pragmatism. Peirce's focus was in the realm of logical forms, which led to his explicit denigration of pragmatism as a proposition based on psychology (Peirce, 1903/1997, p. 249). It was the generalized epistemological stance—logic—that was to serve as the basis of his kind of pragmatism. Within that stance, the process of abduction played the central role⁴.

² See Josephs, Valsiner & Surgan (1999) on the dynamics of transitions in meanings in dualities of {A versus NON-A} kind.

³ See Smedslund (1995) on pseudo-empiricism in contemporary psychology.

⁴ In Peirce's own words, "...the true doctrine concerning Pragmatism whatever it may be is nothing else than the true Logic of Abduction." (Peirce, 1903/1997, p. 239)

Peirce's thinking through the processes of human thinking has been rooted in logic on the one hand, and in everyday experiences, on the other. In his striving for a generalized logical system he opposed James' focus on "psychologism" in the elaboration of the pragmatist tradition. In order to separate his own perspective from that of James and others, Peirce even introduced a new name for his— *pragmaticism*⁵ (Peirce, 1905a).

Peirce's look at human realities of reasoning (back in 1877) covers the ground that was made vastly popular in cognitive psychology of the study of heuristics. Peirce probably had a clearer grasp of the ideas:

We are... in the main logical animals, but we are not perfectly so. Most of us... are naturally more sanguine and hopeful than logic would justify. We seem to be so constituted that in the absence of any facts to go upon we are happy and self-satisfied; so that the effect of experience is continually to counteract our hopes and aspirations. Yet a lifetime of the application of this corrective does not usually eradicate our sanguine disposition. Where hope is unchecked by any experience, it is likely that our optimism is extravagant. (Peirce, 1877/1923, p. 11)

For Peirce, the experience necessarily entails doubt—while its antidote is that of fixed belief. This set of ideas was taken from Alexander Bain (Apel, 1981, p. 57) to constitute the anchoring points for the process of human reasoning. Human thinking is a movement from doubting to believing. In Peirce's own words,

Doubt is an uneasy and dissatisfied state from which we struggle to free ourselves and pass into the state of belief; while the latter is a calm and satisfactory state which we do not wish to avoid, or to change to a belief in anything else. (Peirce, 1877/1923, p. 15)

Belief leads human being in their actions based of existing convictions. In contrast, doubt leads to actions to overcome it—in the form of inquiry. Inquiry is the process of moving from doubt to belief. Beliefs can become fixed through social processes within a community.

Yet that fixation of beliefs is not possible before it has happened—while the process involved in overcoming doubt and reaching the safe haven of belief antedates the outcome. The emergence of an idea is but one step towards that consequence:

Our idea of anything is our idea of its sensible effects...[] Consider what effects, which might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object. (Peirce, 1878/1923, p. 45)

Peirce added a rather dramatic example:

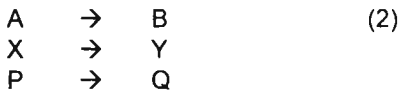
There is absolutely no difference between a hard thing and a soft thing so long as they are not brought to the test. (Peirce, 1878/1923, p. 46)

The trouble: will to believe that we know. Here we encounter the gnoseological trouble that the pragmatist tendency encounters from its outset. It relies on the notion of effects—consequences of some previous processes (which may be unknown) to evaluate the present. The evaluator is a human being whose experience begins to include these effects, is the one who determines the utility of the process on the basis of that emerging experience. Thus, an antecedent A at Time 1 can acquire its meaning through the consequence B that comes into being at Time 2—but is not yet there in Time 1:



This general scheme can be illustrated by Peirce's example: a thing (A) at time 1 is unknown as to its "hardness" (or "softness"), but becomes known only if subjected to test that leads to the determination (B) of the quality. Once that determination is made, the consequent characteristic becomes retroactively considered as characteristic of A.

Of course this argument can work under two conditions: (a) the set of consequences is fixed (known), and (b) there is one-to-one relation between consequences and antecedents. In other terms, this would fit the case where each antecedent is precisely mapped upon its consequent:



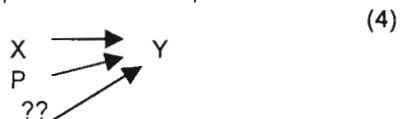
In the case of (2) it is possible indeed to establish knowledge of the characteristics of {A, X, P} through their respective consequences (B, Y, Q). This possibility vanishes in case of many-to-one relations:



Here the consequence Y indicates the presence of two characteristics (X or P). The argument through leads to a paradox: if X is characterized

via Y and P is also characterized by Y, then it should be that $X = P$, but it is not the case. A way to salvage the argument would entail recognition of Y as inherently ambiguous (specifying the unity of different antecedents within the same whole). This is the direction taken by dialectical perspectives where a consequent specifies not just the quality of an antecedent but a system of opposition – X and non-X (which is P)—as the causal system which has led to the particular outcome. Yet this entails the translation of the many-to-one relation into an one-to-one relation (where the *system* {X and P} leads to the consequent Y).

The situation would be even more complex if there are unknown antecedents of a particular consequence:



Here the argumentation through the consequences arrives at its limit of usefulness. Even if the multiplicity of antecedents is acceptable (3) it still applies, but in case of the unknown {??} in (4) the outcome may characterize something that we do not know (aside from the known – X or P). The consequence does not explicate the characteristics of the antecedents, but creates a mystery of the unknown⁶.

There were two ways in which American pragmatists tried to solve this problem of the unknown. First, Peirce himself attempted it by looking at the processes of moving from past to future. Alternatively, John Dewey solved it through the notion of coordination (see below)

The dynamic unity of past, present, and future.

Peirce provided an elaborate account of the issue of time in his article "The law of mind" that appeared in *The Monist* in July, 1892 (Peirce, 1892/1923). Peirce understood the irreversibility of any experience that takes place in time. In contrast to looking at ideas as entities, Peirce begins from the process of individual consciousness in its constant movement:

By taking the word "idea" in the sense of an event in an individual consciousness, it is clear that an idea once past is gone forever, and any supposed recurrence of it is another idea. These two ideas are not present in the same state of consciousness, and therefore cannot possibly be compared. To say, therefore, that they are similar can only mean that an occult power from the depth of the soul forces us to connect them in our thoughts after they are no more. (Peirce, 1892/1923, p. 204)

Peirce attempted to work out the general abstract principles of the work of this "occult power of the soul"—beginning from the mathematical conception of infinity. He reached the conclusion:

...the present is connected with the past by a series of infinitesimal steps (ibid, p. 205)

Peirce superimposed the mathematical demonstration of infinity from a geometric realm to that of time. If one were to explain infinity in case of dividing a line into sub-segments this division (which itself is a discrete act of dividing a whole into two parts) this process can be continued infinitely, with the result of dividing the line into infinitesimally small (and ever smaller) sub-parts. If, instead a geometric figure (line) there is the time, the time too can be divided into similar infinitesimally small segments (moments). Thus, the present in the infinitesimal time moment between the past and the future. As such, the experiencing organism cannot perceive it as "the present". All perception of the present, and reflection upon it in ideas, is already the *next* present's reconstruction of the immediate past. It is here that the pragmatist's use of consequences to establish the meaning of antecedents becomes itself meaningful—*given the irreversible flow of time, it is only from the position of the consequences that the antecedents can be conceptualized.*

The act of division of a whole—line or field (see Herbst, 1995 for co-genetic logic) creates simultaneously the divided segments and the boundary that both divides and unites them. The notion of the present is such boundary in case of personal division of the past and future. For Peirce, "**...the present is half past and half to come**" (Peirce, 1892/1923, p. 219).

The present as a boundary. Peirce arrived at the notion of the present as a boundary through an example of the color of the boundary between different surfaces:

Suppose a surface be part red and part blue; so that every point on it is either red or blue, and of course no part can be both red and blue. What, then, is the color of the boundary line between the red and the blue? The answer is that red or blue, to exist at all, must be spread over a surface; and the color of the surface is the color of the surface in the immediate neighborhood of the point... as the parts of the surface in the immediate neighborhood of any ordinary point upon a curved boundary are half of them red and half blue, it follows that the boundary is half red and half blue. *In a like manner, we find it necessary to hold that consciousness essentially occupies time; and what is present to the mind at any ordinary instant, is what is present during a moment in which that*

instant occurs. (Peirce, 1892/1923, p. 219, added emphasis)

Yet the transposition of the physical question (color of the boundary of two surfaces) to the process of organic growth of consciousness by Peirce can be viewed only as an effort to indicate the role of the present as a boundary. As an infinitesimal boundary between the past and the future, the present is the birthplace of the next present. Differently from the mere being of a physical boundary (e.g., the red & blue nature of the boundary of surfaces in Peirce's example) the moving boundary of the present is not that of a co-presence of the past and the future (as some kinds of existential "surfaces"), but a *process of emergence*. Peirce recognized this difference of the flow of consciousness-in-time (ibid, p. 220).

There is a basic feature of all organic matter: its future is being born from the past, and the opposite (past emerging from future) cannot take place. This recognition is also at the foundation of James Mark Baldwin's "genetic logic" (Baldwin, 1906): development cannot be represented by convertible propositions ($A \rightarrow B$ is not $B \rightarrow A$). The irreversibility of time breaks the symmetry, as was understood over half-century later even in the physical sciences (Prigogine, 1973).

How does the "birth of the next present" take place in the psychological domain? Peirce emphasized the role of *generalization* that operates between the *fields* of past re-constructions and future expectations. Development for Peirce entailed limitation of possibilities within a field (Peirce, 1892/1923, p. 221). Peirce solves the problem of generalization through the notion of association:

A finite interval of time generally contains an innumerable series of feelings; and *when these become welded together* in association, the result is general idea. . .

The first character of a general idea so resulting is that of its *living feeling*. A continuum of this feeling, infinitesimal in duration, but still embracing innumerable parts, and also, through infinitesimal, entirely unlimited, is *immediately present*. (Peirce, 1892/1923, p. 224, added emphases)

The person can overcome the limitations of the present through generalizing an idea reaching out into the past and future via that generalization. Yet the general idea is immediately present in the form of a general feeling, in the boundary of the present.

Insistency of an idea. Peirce provided a model of the ideas "reaching out" into past and future through a scheme of two equilateral hyperbola (see Figure 2)

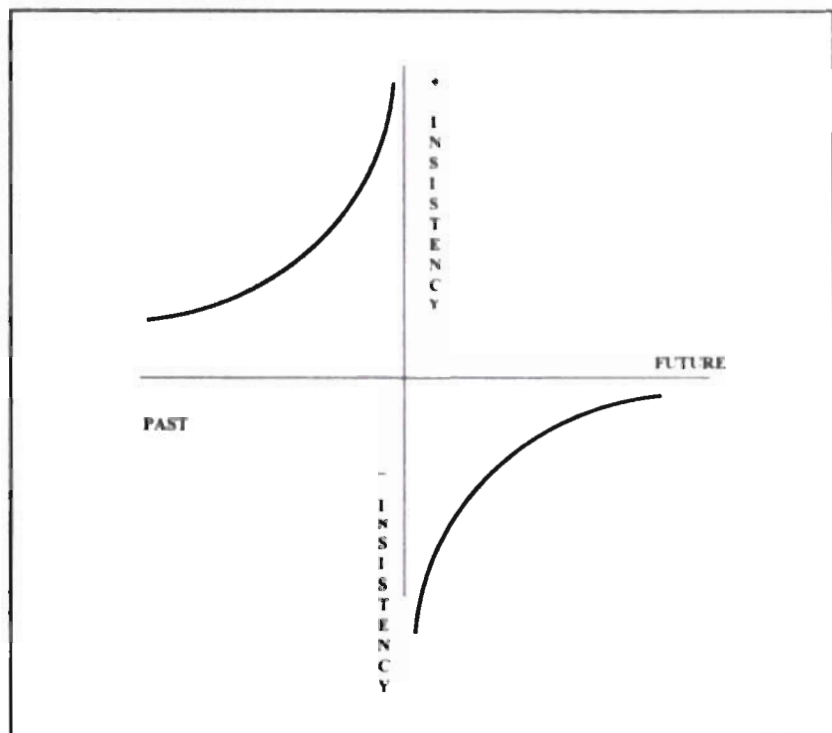


Figure 2. Peirce's graphic depiction of the insistency of ideas into the past and the future.

Thus the idea is constantly in tension between the positive (past) and negative (future) poles of insistency, and its actual form depends upon the resolution of the tension within that field. Explaining the Figure, Peirce tried to present the notion of insistency of idea as a function of time:

The insistency of a past idea with reference to the present is a quantity which is less the further back past the idea is, and rises to infinity as the past idea is brought up into coincidence of the present. (Peirce, 1892/1923, p. 225)

Thus it is the maximum—infinately high—insistency of the past idea inside the present that guides the making of the next present. He tried to depict it with the opposite (minus) sign (see Figure 2), confessing that the meaning of the quantification cannot be exactly specified (*ibid.*, p. 226).

In terms of the meaning of the "future idea with reference to the present", Peirce took a stand that later would find another elaboration in Lev Vygotsky's thinking (Valsiner & Van der Veer, 1993). The curve of future insistency

... says that feeling that has not yet emerged into immediate consciousness is already affectible and already affected. In fact, this is habit, by virtue of which an idea is brought up into present consciousness by a bond that had already been established between it and another idea while it was still *in futuro*. (Peirce, 1892/1923, p. 226)

Here we can see the value of the pragmatist (or pragmaticist) central idea—reasoning on the basis of consequences. In the future-oriented insistency, the actual consequences are not yet real—they are expected. Thus all human mental activity is constantly taking place between some state of reflection upon AS-IT-WAS and that of AS-IF-COULD-BE (see Josephs, 1998). Note that this process is *oriented towards* some further (possible, desired) consequence, but it is not determined by it. Neither can the present psychological process be evaluated by the actual consequence (which has not yet emerged), but only by a reflection upon some preferred possible future consequence. The limits of pragmatism are in the domain of undifferentiated unity of the possible and the actual consequences in the irreversible flow of experiencing.

Signs as bridges. In the light of pragmaticist look at time, the use of signs links the past and the future. Our references to the past, from Peirce's standpoint, actually are references to the future. In his words,

... a belief that Christopher Columbus discovered America *really refers to the future*. (Peirce, 1905b, p. 499, added emphasis)

At first glance, this statement looks absurd. Yet it is not. A statement about the past is being made (in the present) in the move towards the actualization of the future—not of Columbus, but of *the person who mentions that Columbus discovered America*. The factual referent here is secondary to the reasons (driven by anticipated consequences) why the utterer in the present makes that (or any other) kind of a statement. The reasons for our thinking (and speaking) are in the facing of the future, even if the materials we use come from the past.

Abduction. Peirce's efforts to work out a theory of abduction can be viewed in that light. Abduction entails creative synthesis emerging from the tension of insistencies of the mental process to grasp both the past and the future in the infinitesimal time moment of the present. Abductive logic transcends both its deductive and inductive counterparts by way of integrating both through violating them. Abduction is the mechanism of

synthesis— a qualitative «leap» that transforms the experiential here-and-now input (and a retrospect into the past) into a new form of thought (and feeling) that had not been present before. It is through abduction that psychological functions work their way towards the immediate next present, making it out of the expectations for the future.

Peirce's consequences

Peirce was clearly the most original thinker of the three co-"brothers" of American pragmatism. A largely non-social person himself, he was certainly not into the habit of taking societal needs and tendencies into account in his building of the science of real logic (of abduction). Yet his ideas would find their continuity in the following century in the cultural-historical thought of Lev Vygotsky, and in various semiotic approaches to human conduct (Lang, 1993; Rodriguez & Moro, 1999).

Peirce's pragmatism was a perspective in which meanings and sensory experiences join in practice to lead to the emergence of knowing. Yet there was a social validation component in his otherwise ego (abduction) centered process of meaning construction. In Dewey's words, for Peirce

...everything ultimately turned... upon the trustworthiness of the procedures of inquiry. Hence his high estimate of logic, as compared with James— at least James in his later days. Hence also his definite rejection of the appeal to the Will to Believe... Closely associated with this is the fact that Peirce has a more explicit dependence upon the social factor than has James. The appeal in Peirce is essentially to the consensus of those who have investigated, using methods which are capable of employment by all. (Dewey, 1923, pp. 307-308)

The history of the role of social consensus in the construction of knowledge is a crucial feature of all of the scientific knowledge (Daston, 1992). For the development of scientific knowledge the increased reliance on a social consensus— first of those of the few individuals who investigate a phenomenon, then of groups of members of the 'scientific community', and — finally— of the indiscriminate 'society at large' — constitutes a crossing of the boundaries of the social autonomy of science in its relation with the social system of a society. The autonomy of scientific knowledge is always an issue for the scientists involved, whose abductive processes may take them as far beyond the common sense as those of artists. Yet at the same time there exist efforts to control and regulate the autonomy of such unbounded thought by social institutions. Pragmatism in its different versions— relying on the consequences of thought— opened the door for social institutions to insert their values into the social look at the

consequences of scientific inquiry. The move that liberated science from impotent scholasticism made it vulnerable to (equally impotent, and blind) evaluations based on the ill-defined value-laden notion of 'common' (or social) 'good.'

JOHN DEWEY'S INSTRUMENTALISM: THE WILL AND DUTY TO BE SEAMLESSLY MERGED

Dewey's version of pragmatism was social, and developmental. Although embracing pragmatism as a general label, Dewey's thought constituted a special version of it - one that emphasized dynamics of experience, its ethical and prospective side (Dewey, 1908, p. 97). This dynamicism was most exemplified in his treatment of the reflex concept (Dewey, 1896), and found its practical applications in his educational experiments. It was uniquely prepared by Dewey's philosophical roots in Hegelian thought (see Dalton, 1997) which led him to "naturalize" Hegelianism to the practice of "social behaviorism" (Biesta & Miedema, 1996, p. 7). Dewey's Hegelianism never vanished (Dalton, personal communication, September 19 and 20, 2000), but became latent in much of his voluminous writings.

Dewey was building his practice-oriented philosophy within the context of the U.S. society of the end of the 19th Century. It was a social ideology of the unquestionable goodness of 'the community' and citizens' 'participation' in its matters that linked Dewey's thinking with the social world of his time. Differently from the aloofness from social issues that characterized the life-work of Peirce, Dewey was known for his consistent efforts to improve society through education which is based on community participation.

Dewey's notion of 'community'

...was a hybrid in the sense that it joined together multiple sets of 19th century values and historical trajectories. For Dewey, the capacities and dispositions of the citizen were bound to a particular universalism of Protestant, bourgeois society. Dewey's notion of community articulated an uneasy tension between the 19th century U.S. Protestant pastoral images, ideological notions about human perfectibility, and science as the motor of social progress... The writing inscribed an American exceptionalism that transformed Protestant millennial visions about the U.S. as a New World into secular ideas about history and human perfectibility. (Popkewitz, 1998, pp. 538-539)

The social realities of the U.S. at the beginning of the 20th Century entailed the newly established political need of social administration of the self. Hence the practicality of Dewey's educational focus on 'learning by doing' as a part of the focus on the community. The latter was assumed to be the benevolent social unit towards unity with which individuals would strive in their practices. Obviously, this ideological goal would find any efforts to treat individuals and community as separate and mutually oppositional as a misfitting axiomatic stance. Instead, Dewey emphasized the «seamless nature» of human experience. Structure of dynamic processes was sacrificed theoretically for the sake of a focus on the dynamic elimination of opposites within a whole.

Dewey and dualisms. It is interesting that the witch hunts of our contemporary kind—against "dualisms" in the social thought—were as much a currency in pragmatist discourse. Dewey's fight with dualisms in psychology seems to have resulted in a basic theoretical thought limits of psychologists to think in terms of dualities. Moving out of his neo-Hegelian perspectives towards creating his instrumentalism, his thinking lost the direct focus on qualitative "leaps" in structural organization of a system which would be the mark for any stringently dialectical perspective⁷ Addressing the issue of meaning in human psychological functioning, Dewey emphasized the experiential basis for meaning:

...the sole way accounting for the fact that we have significant experience, or that *sensations, in addition to being psychical occurrences, are also psychical meanings*, is that the mind conserves permanently out of every experience the meaning of that experience, and, when it sees fit, reads this conserved meaning into a given sensation, thereby completing the transfer of significance. (Dewey, 1887, p. 392, added emphases)

The sensation (which is also meaning) is thus both transitory and non-transitory. Meaning remains sensation while it is differentiated from it in a qualitatively new way (conservability over time). Meaning "constitutes the worth of every psychical experience (ibid, p. 396)—it is an inferential mediate factor. Dewey's account here has already the notion of the cycle – of move from experience to conserved meaning to new sensation—that by 1896 (Dewey, 1896) was to be the key to his re-making of the reflex arc notion.

Beyond accepting meanings as "mediators", Dewey remained vague about how this conservation of meaning takes place. In this vagueness he already distances his thinking from its Hegelian basis. He arrives at a different use of the notion of dialectics. Thus, in his lectures on Hegel in 1896, he claimed that "psychologically, the dialectic means that all

inhibition is also stimulus and therefore *contributes to a new coordination*" (Dalton, 1997, p. 8, added emphasis). Here the focus on ongoing—even if transforming—coordination that was the hallmark of his reflex cycle notion (Dewey, 1896) is evident. Instead of an emphasis on "qualitative jump" or synthesis, the coverage of mere "contribution" entails defocusing from dialectics. The notion of qualitative synthesis is the third defining characteristic (aside from unity of opposites, and their contradiction), and its loss equals elimination of the whole dialectical viewpoint.

How did Dewey deal with differentiation? Dewey – as his standpoint emerged from a neo-Hegelian background— did recognize the unity of dual opposites:

In any organized system... there is no dualism of self and world. The emergence of this duality is within the conflicting and strained situation of action; the activities which subtend purpose and intent define the 'me' of that situation, those which constitute the interruptive factor define its 'external world.' ... it is precisely the process of rationalization by which a *brute practical acceptance-rejection gets transformed* into a controlled directed evaluated system of action, *in which the duality of me and object is again overcome.* (Dewey, 1907, p. 255, added emphases)

Already in the 1880s Dewey claimed that «activity of mind never leaves sensuous elements isolated, but connects them into larger wholes» (Dewey, 1891, p. 90). The mechanism of such an establishment of wholes of experience was seen as a unity of integration (of different present sensations) and reintegration («extension of present sensory elements by distinct revival of past elements»; Dewey, 1891, p. 96). Again, the notion of qualitative synthesis is absent—future is created by *extension* of the past, not by a qualitative transformation based on the past.

The issue of time: eliminating structure and focusing on fusion. It is notable that the linkages between present and past sensations were conceptualized by Dewey at around the time of emergence of pragmatism in associationist terms (similarity, contiguity), rather than building into the process of reintegration a Hegelian dialectical scheme. He claimed to have understood the principle of continuity of experience independently of Peirce (Dewey, 1903, p. 14). Yet Dewey's "postulate of continuity of experience differed from Peirce's. All experiential continuity was viewed as active. Dewey elaborated it in ways that could as the bases for contemporary activity theories:

So far as ... development is intentionally directed through the construction of objects as objects, there is not only active experienter, but *regulated activity*, i.e., conduct, behavior, practice.

Therefore, all determination of objects as objects (including the sciences which construct physical objects) has reference to change of experience, or experience as activity; and, when this reference passes from abstraction to application (from negative to positive), has reference to conscious control of the nature of the change (i.e. conscious change), and thereby gets ethical significance. (Dewey, 1903, p. 27)

Dewey seems to be in tension about the co-existence of abstraction (conscious mediation of conduct) and the immediate embeddedness of that mediation in the flow of experience. The notion of regulated activity would require specifications of the ways in which the activity is regulated—the structure of regulation. Yet any focus on structure diminishes one on function—especially dynamic function, which was primary for Dewey's interests.

Dewey's functional stance led to elimination of structural notions and towards an emphasis on the process over its participating components which later became the key for his thinking. Dewey considered integration to be synonymous with fusion - the latter being clearly free from the notion of dialectical tension between opposites:

We have... a continuous whole of sensation constantly undergoing modification and constantly expanding, *but never parting with its unity*. This process may be termed *fusion or integration*, to indicate the fact that the various elements are *continually entering into the whole in which they lose their independent existence*. Professor James illustrates this intimate union by the taste of lemonade. This does not retain unchanged the tastes of sugar and of lemon, but is itself a new sensation into which the old ones have passed as elements. What association gives us... *is not loosely connected aggregate of separable parts, but a new total experience*. (Dewey, 1891, pp. 94-95, added emphasis)

James' example of the taste of lemonade (James, 1895, pp. 105-106), which Dewey used here, is utilized as an example of how fusion of substances leads to the holistic new taste as an outcome, rendering the process of the fusion itself *de facto* into a «black box». Again, the question is not about general description ("new general experience" emerging from elements entering "into new whole"), but about the lack of coverage of the ways in which that new whole actually emerges⁸. By *equating fusion with integration*, the structural notion is downplayed in favor of a dynamic process. That process was coordination.

The processes of coordination. Dewey published an article on the reflex arc—which became a classic in later constructions of psychology's

history—in 1896 (Dewey, 1896). The reflex arc concept – which he replaced by the idea of “reflex circuit”—came close to his desired working model of a functionalist scheme. It still carried the separation of parts of the functioning system («center» versus «periphery») that he found to be unproductive:

the reflex arc idea, as commonly employed, is defective in that it assumes sensory stimulus and motor response as distinct physical existencies, while in reality they are always inside a coördination and have their significance purely from the part played in maintaining or reconstructing the coördination; and (secondly) in assuming that the quale of experience which precedes the 'motor' phase and that which succeeds it are two different states, instead of the last being always the first reconstituted, the motor phase coming in only for the sake of such mediation. (Dewey, 1896, p. 360)

In another terminological effort, Dewey argued that the response is not to be that *to* a stimulus, but *into* it (Dewey, 1896, p. 359). The parts of the reflex arc were to be viewed not as separate entities in themselves, but as «divisions of labor» within a single dynamic whole. Stimulus and response are viewed as «teleological distinctions» (Dewey, 1896, p. 365), that is, distinctions of functions with reference to reaching or maintaining an end. Dewey was clearly distinguishing different parts of an integrated system as parts within the whole.

The coordinated system was not a fixed cyclical flow of nerve impulses within the 'reflex circuit'. Instead, the coordination process afforded the emergence— yet from within the process itself—of some functional regulator. Thus, attention

...always goes to the weakest part of coordination in process of formation, meaning by *weakest, that part least under the immediate control of habit*. This being conceived alone as act, everything lying outside of it is conceived as resistance; thus recognition is avoided of the fact, that the real state of things is, that there are *two acts mutually opposing each other*, during their transformation over into a third and inclusive act. (Dewey, 1897, p. 54, added emphases)

Here Dewey's Hegelian roots may be seen again—the unity of opposites is recognized within the coordination process: habitual (smooth, or “strong”) parts are opposed to the non-strong (“weak”) parts (which have no established regulators). The latter leads to the incorporation of the “weak” parts into the habit-controlled whole.

Functionalism. For Dewey, the sensation meant a function. What the sensation might be at a given time depends upon the activity being used.

It has no fixed quality. For instance,

take a child who, upon reaching for bright light (that is, exercising the seeing-reaching coördination) has sometimes had a delightful experience, sometimes found something good to eat and sometimes burned himself. Now the response is not only uncertain, but the stimulus is equally uncertain; one is uncertain only in so far as the other is... The question of whether to reach or to abstain from reaching is the question what sort of bright light have we here? Is it the one which means playing with one's hands, eating milk, or burning one's fingers? The stimulus must be constituted for the response to occur. (Dewey, 1896, pp. 367-368)

The dynamic nature of the act, for Dewey, always links the sensation and movement (into sensori-motor coordinations). His argument against the reflex arc notion entailed the criticism of turning the dynamic process of the act (exemplified by coordinations) into a static and disjoint separation of «stimuli» and «responses», hence eliminating their dynamic interdependence. In his reformulation of the terms, Dewey emphasized:

The stimulus is that phase of the forming coördination which represents the conditions which have to be met in bringing it to a successful issue; the response is that phase of one and the same forming coördination which gives the key to meeting these conditions, which serves as instrument in effecting the successful coördination. They are therefore strictly correlative and contemporaneous. The stimulus is something to be discovered; to be made out; if the activity affords its own adequate stimulation, there is no stimulus save in the objective sense already referred to. As soon as it is adequately determined, then and then only is the response also complete. (Dewey, 1896, p. 370)

Coordination thus is seen as the holistic unit which relates the two mutually constituting phases (of sensation and movement, or stimulation and responding). Dewey here united his background Hegelianism with the focus on the behavior. Dynamicity of behavior became captured through the notion of coordination, and the notion of dialectics became reduced to the emergence of new coordinations.

Late Dewey: return to the issue of synthesis. While Dewey downplayed the notion of structure in favor of the dynamicity of function at the times when American pragmatism was expanding, then later on he returned to issues of emergence of qualitative novelty. This happened in 1931, in the context of a series of lectures at Harvard on art⁹, which were subsequen-

⁹ I am grateful to Thomas Dalton for drawing my attention to these lectures.

tly published (Dewey, 1934). Of course explanation of art is the most difficult for any psychological theorist to handle (see Baldwin, 1915, Vygotsky, 1925/1971, for their efforts). The constructive nature of the work of artists is a domain of experience where the emergence of novelty, far beyond the «street use» of our psychological functions, takes place.

Dewey can be seen (in 1931) to endorse a view of experiencing in time that comes close to that of Peirce:

To the being fully alive, the future is not ominous but a promise; it surrounds the present as halo. *It consists of possibilities that are felt as possession of what is now and here.* In life that is truly life, everything overlaps and merges. But all too often we exist in apprehensions of what the future may bring, and are divided within ourselves. Even not when overanxious, we do not enjoy the present because we subordinate it to that what is absent. Because of the frequency of this abandonment of the present to the past and future, the happy periods of an experience that *is now complete because it absorbs into itself memories of the past and anticipations of the future, come to constitute an esthetic ideal.* Only when the past ceases to trouble and the anticipations of the future are not perturbing is a being wholly united with his environment and therefore fully alive. *Art celebrates with peculiar intensity the moments in which the past reënforces the present and in which the future is a quickening of what now is.* (Dewey, 1934, added emphases)

If Charles Sanders Peirce were to comment on this description of the reality of aesthetic experience, he would probably see in it the notion of abduction in the reality of human experience. The «quickenning of what is» in the experience—through art—amounts to construction of qualitative novelty.

The notion of *tension between opposites* (and its overcoming) is in its prominent place in Dewey's analysis of aesthetic experiencing (Dewey, 1934, p. 157). In ordinary life, different tensions can exist in long periods of «gestation» (ibid, p. 75), before leading to synthesis of novelty. Development entails overcoming of tensions. While commenting on art, Dewey claimed:

... characteristics such as continuity, cumulation, conservation, tension and anticipation are thus formal conditions of esthetic form. The factor of resistance is worth especial notice at this point. *Without internal tension there would be a fluid rush to a straightaway mark; there would be nothing that could be called development or fulfillment.* The existence of resistance defines the place of intelligence in the production of an object of fine art. *The difficulties*

to be overcome in bringing about the proper reciprocal adaptation parts constitute what in intellectual work are problems. As an activity dealing with predominatingly intellectual matters, the material that constitutes a problem has to be converted into a means for its solution. It cannot be sidestepped. But in art the resistance encountered enters into the work in a more immediate way than in science. The perceiver as well as artist has to perceive, meet, and overcome problems; otherwise, appreciation is transient and overweighted with sentiment. For, in order to perceive esthetically, he must remake his past experiences so that they can enter integrally into a new pattern. (Dewey, 1934, p. 138, added emphasis)

The new pattern as emerging from tensions between opposites is clearly visible here. At the same time, the notion of coordination is retained. Dewey did not eliminate the notion of emerging novelty from his theoretical thought— while, at the same time, he also did not emphasize it.

PRAGMATISM AND ITS CONSEQUENCES

The development of American pragmatism as a part of the social context of the U.S. society had its own consequences. First of those could be seen in its rhetoric efforts to take over philosophical treatments of human issues. While providing an empiricist correction to the otherwise speculative philosophizing, it also entailed a quasi-religious fervent that could rule out different domains of inquiry. The role that behaviorism played in the underdevelopment of American psychology since 1913.

The quintessence of pragmatism can be found in the following statement by a contemporary:

The test of truth is utility: it's true if it works. Hence the final philosophical wisdom: if you can't have what you want, don't want it. For man is the measure of all things. The universe ultimately is a joint-stock affair: we participate in the evolution of reality. Our action is a real factor in the course of events. In the search for truth, we must run the risk of error. Lies are false only if they are found out: a perfectly successful lie would be tantamount to absolute truth. We must 'will to believe.' (Bowden, 1904, p. 421)

This fervent of pragmatism of hundred years ago arrives in our contemporary psychology in a number of ways. First, of course, is the long-standing fixation upon psychology as a science of study of behavior. Even as the notion of «behavior» is vague as to what it entails, its function has to exclude some (basically intra-psychological, subjective) phenomena from belonging to the realm of legitimate object for science.

The second echo of pragmatism in contemporary psychology is visible in the realm of socio-cultural research. It sometimes can be traced back directly to the work of Dewey (especially in educational and anti-dualistic arguments), to James (in the domain of self) and— more rarely— to Peirce (in the case of approaches of semiotic mediation). At other times, such links to pragmatism can be mediated by the activity-theoretic and cultural-historical perspectives in the history of Russian psychology (Alexey N. Leontiev, Lev Vygotsky). The role of pragmatist perspectives in the re-organization of Soviet society (especially experiments with schooling— at times under the influence of Dewey) was substantial. The perspectives in Russia that used pragmatist ideas in their own developments were later re-discovered in the United States since the 1970s. Thus, American pragmatism needed to be inserted into a Russian costume to be— in an exotic form— influential in the post-Sputnik era in the United States.

The direct impacts of pragmatism in contemporary socio-cultural thinking in the U.S. have also been made explicit. Thus, James Wertsch (1991, pp. 2-3) emphasizes the continuity of concerns of contemporary socio-cultural researchers with the pragmatist traditions in American social discourse (especially the educational philosophies of John Dewey). More specifically, the idea that the constraints that cultural tools impose on activity can be recognized only in retrospect (Wertsch, 1998, pp. 40-41) is directly linked with Dewey's version of the use of consequences for evaluation of the action. In her argument against separation of the person from the context, Barbara Rogoff (1990, p. 28) uses the thinking of Dewey against separation of elements from their dynamic unity. Her insistence upon «seamless relation between person and the social world continues Dewey's functionalist perspective. Michael Cole's work— built initially on the basis of the cultural psychology and neuropsychology of Alexander Luria— has direct connections with Dewey's focus on the holistic nature of any social situation (Cole, 1996, pp. 132-134). Similarly the centrality of contemporary cultural psychology's focus on cultural tools goes back to Dewey (among others— *ibid.*, p. 109). It is particularly Dewey's Hegelian background that— combined with his focus on dynamic wholeness of experience— that makes his heritage easily linkable with our contemporary socio-cultural thought systems. In other terms— the dialectics of Vygotsky (with its hierarchical, «higher»/«lower» distinction) is more of a «foreigner» in the contemporary North-American based systems of cultural psychology than the emphasis on dynamic coordination of Dewey's. In a similar vein, Dewey's struggles with dualities are relevant in our contemporary disputes in the area of currently developing "dialogical perspectives" (Markova, 1990, 1992; Hermans, 1995, 1999; Lyra, 1999) are similar to the obstacles

Dewey encountered. In charting out these perspectives, a differentiation of the opposites is imperative. Yet the opposites remain related to each other. So, if one looks at these "dialogical perspectives" as distinguishing opposites, a "diagnosis" of "dualism" is a likely result. Yet one cannot seriously claim to be "dialogical" (or even "dialectical") *without* such distinguishing of the opposites. This tension can be observed in those perspectives in contemporary psychology that build upon the dynamic relatedness of the person with the environment (including that of a partner in a dialogue).

My claim here is that even if the general ideas of pragmatism may have survived into our present time (or become re-invented) in different new perspectives—such as activity theory—the intricate texture of the ideas of pragmatists themselves—in their individual versions—have not been developed further. All the three pragmatists I have briefly analyzed here—James, Peirce, and Dewey—were struggling with intellectual problems which have not gone away in amidst the avalanche of empirical research activities of our time. So, the question of continuity of human experience from past to future that Peirce and Vygotsky attempted to deal with still remains not only unsolved, but even out of theoretical focus. Maybe their solutions—through abduction, or through "zone of proximal development"—were insufficient, incomplete. Maybe there need to be a different solution to this problem of development into the future (or of the processes of coordination that Dewey provided as a solution to dynamic development)—yet those would not be sought unless scientific discourse is oriented towards looking for such solutions.

Acknowledgments. I am very grateful for the critical feedback on an earlier version of this paper that Thomas Dalton and Alberto Rosa provided.

REFERENCES

- Allport, G. W. (1951). Dewey's individual and social psychology. In P. A. Schlipp (Ed.), *The philosophy of John Dewey* (pp. 265-290). New York: Tudor.
- Apel, K.-O. (1981). *Charles S. Peirce: From pragmatism to pragmaticism*. Amherst, Ma.: University of Massachusetts Press.
- Baldwin, J. M. (Ed.) (1901). *Dictionary of philosophy and psychology*. New York: MacMillan.
- Baldwin, J. M. (1906). *Thought and things: A study of the development and meaning of thought, or genetic logic*. Vol. 1. *Functional logic, or genetic theory of knowledge*. London: Swan Sonnenschein & Co.

- Baldwin, J. M. (1915). *Genetic theory of reality*. New York: G. P. Putnam's sons.
- Biesta, G., J. J. & Miedema, S. (1996). Dewey in Europe: A case study on the international dimension of the turn-of-the-Century educational reform. *American Journal of Education*, 105, 1-26
- Bowden, H. (1904). What is pragmatism? *Journal of Philosophy, Psychology and Scientific Methods*, 1, 16, 421-427.
- Brickman, W. W. (1964). Soviet attitudes toward John Dewey as an educator. In D. E. Lawson & A. E. Lean (Eds.), *John Dewey and the world view* (pp. 64-136). Carbondale, Ill.: Southern Illinois University Press.
- Cole, M. (1996). *Cultural psychology*. Cambridge, Ma.: Harvard University Press.
- Commager, H. S. (1950). *The American Mind*. New Haven, Ct.: Yale University Press.
- Dalton, T. C. (1997). Dewey's hegelianism reconsidered: reclaiming the lost soul of psychology. *New Ideas in Psychology*, 15, 1, 1-15.
- Daston, L. (1992). Objectivity and the escape from perspective. *Social Studies of Science*, 22, 597-618.
- Diaz Martinez, F. (2000). Culture at all points, including militarism. *Culture & Psychology*, 6, 3, 333-352.
- Del Río, P. (1996). Building identities in a mass-communication world. *Culture & Psychology*, 2,2, 159-172.
- Dewey, J. (1887). Knowledge as idealisation. *Mind*, 12, 382-396.
- Dewey, J. (1891). *Psychology*. New York: American Book Company
- Dewey, J. (1896). The reflex arc concept in psychology. *Psychological Review*, 3, 3, 357-370.
- Dewey, J. (1897). The psychology of effort. *Philosophical Review*, 6, 43-56.
- Dewey, J. (1903). Logical conditions of a scientific treatment of morality. *Investigations representing the departments, University of Chicago*. First Series. Vol. 3. (pp. 115-139). Chicago: University of Chicago Press.
- Dewey, J. (1907). The control of ideas by facts. *Journal of Philosophy, Psychology and Scientific Methods*, 4, 10, 253-259.
- Dewey, J. (1908). What does pragmatism mean by practical? *Journal of Philosophy, Psychology and Scientific Methods*, 5, 4, 85-99.
- Dewey, J. (1923). The pragmatism of Peirce. In C. S. Peirce, *Chance, love and logic* (pp. 301-308). London: Kegan Paul, Trench, Trubner & Co..
- Dewey, J. (1923). The pragmatism of Peirce. In C. Peirce, *Chance, love and logic* (pp. 301-308). London: Kegan Paul, Trench, Trubner & Co.
- Dewey, J. (1934). *Art as experience*. New York: Perigee Books.
- Herbst, D. P. (1995). What happens when we make a distinction: An elementary introduction to co-genetic logic. In T. Kindermann & J. Valsiner

- (Eds.), *Development of person-context relations* (pp. 67-79). Hillsdale, N.J.: Erlbaum.
- Hermans, H. J. M. (1995). The limitations of logic in defining the self. *Theory & Psychology*, 5, 3, 375-382.
- Hermans, H. J. M. (1997). Science between cooperation and competition. *Culture & Psychology*, 3, 2, 137-141
- Hermans, H. J. M. (1999). The innovative potentials of agreement and disagreement. *Culture & Psychology*, 5, 4, 491-4b8.
- Hermans, H. J. M., & Kempen, H.J.G. (1995). Body, mind, and culture: the dialogical nature of mediated action. *Culture & Psychology*, 1, 1, 103-114.
- Hofstadter, R. (1963). Introduction: The meaning of the progressive movement. In R. Hofstadter (Ed.), *The Progressive Movement 1900-1915* (pp. 1-15). Englewood Cliffs, N.J. Prentice-Hall.
- James, W. (1895). The knowing of things together. *Psychological Review*, 2, 2, 105-117.
- James, W. (1896). The will to believe. *New World*, 5, 327-347
- James, W. (1904a). The Chicago school. *Psychological Bulletin*, 1, 1, 1-5.
- James, W. (1904b). Does 'consciousness' exist? *Journal of Philosophy, Psychology and Scientific Methods*, 1, 18, 477-491
- James, W. (1904c). A world of pure experience. I. *Journal of Philosophy, Psychology and Scientific Methods*, 1, 20, 533-543.
- James, W. (1904d). A world of pure experience. II. *Journal of Philosophy, Psychology and Scientific Methods*, 1, 21, 561-570.
- James, W. (1905). How two minds can know one thing. *Journal of Philosophy, Psychology and Scientific Methods*, 2, 176-181.
- James, W. (1907a). *Pragmatism: A new name for some old ways of thinking*. London: Longmans, Green & Co.
- James, W. (1907b). Pragmatism's conception of truth. *Journal of Philosophy, Psychology, and Scientific Methods*, 4, 6, 141-155.
- James, W. (1979). *The will to believe, and other essays in popular philosophy*. Cambridge, Ma.: Harvard University Press.
- Josephs, I. E. (1998). Constructing one's self in the city of the silent. *Human Development*, 41, 180-195.
- Josephs, I. E., Valsiner, J., & Surgan, S. E. (1999). The process of meaning construction. In J. Brandtstädter and R. M. Lerner (Eds.), *Action & self development* (pp. 257-282). Thousand Oaks, Ca.: Sage.
- Lang, A. (1993a). Non-Cartesian artifacts in dwelling activities: steps towards a semiotic ecology. *Schweizerische Zeitschrift für Psychologie*, 52, 2, 138-147.
- Luria, A. R. (1976). *Cognitive development*. Cambridge, Ma.: Harvard

- University Press.
- Lyra, M. C. D P (1999). An excursion into the dynamics of dialogur. *Culture & Psychology*, 5, 4, 477-489.
- Marková, I. (1990). A three-step process as a unit of analysis in dialogue. In I. Marková & K. Foppa (Eds.), *The dynamics of dialogue* (pp. 129-146). Hemel Hempstead: Harvester.
- Marková, I. (1992). Structure and dialogicality in Prague semiotics. In A.H. Wold (Ed.), *The dialogical alternative* (pp. 45-63). Oslo: Scandinavian Universities Press.
- Peirce, C. S. (1877/1923) The fixation of belief. In C. Peirce, *Chance, love and logic* (pp. 7-31). London: Kegan Paul, Trench, Trubner & Co.
- Peirce, C. S. (1878/1923). How to make our ideas clear. In C. Peirce, *Chance, love and logic* (pp. 34-60). London: Kegan Paul, Trench, Trubner & Co.
- Peirce, C. S. (1892/1923). The law of mind. In C. Peirce, *Chance, love and logic* (pp.202-237). London: Kegan Paul, Trench, Trubner & Co.
- Peirce, C.S. (1898/1992). *Reasoning and the logic of things: The Cambridge lectures of 1898*. Cambridge, Ma.. Harvard University Press.
- Peirce, C. S. (1903/1997). *Pragmatism as a principle and method of right thinking*. Albany, N.Y.: SUNY Press.
- Peirce, C. S. (1905a). What pragmatism is. *Monist*, 15, 2, 161-181.
- Peirce, C. S. (1905b). Issues of pragmatism. *Monist*, 15, 4, 481-499.
- Popkewitz, T. S. (1998). Dewey, Vygotsky, and the social administration of the individual: constructivist pedagogy as systems of ideas in historical spaces. *American Educational Research Journal*, 35, 4, 535-570.
- Prigogine, I. (1973). Irreversibility as a symmetry-breaking process. *Nature*, 246, 67-71
- Ratner, C (1996). Activity as key concept for cultural psychology. *Culture & Psychology*, 2, 4, 407-434.
- Ratner, C. (2000). A cultural-psychological analysis of emotions. *Culture & Psychology*, 6, 1, 5-39.
- Rodriguez, C., & Moro, C. (1999). *El mágico numero tres: Cuando los niños aún no hablan*. Baelcelona: Paidós.
- Rogoff, B. (1990). *Apprenticeship in thinking*. New York: Oxford University Press.
- Safford, J. L. (1987). *Pragmatism and the progressive movement in the United States*. Lanham, Md.: University Press of America.
- Smedslund, J. (1995). Psychologic: common sense and the pseudoempirical. In J. A. Smith, R. Harré, & L. van Langenhove (Eds), *Rethinking psychology* (pp. 196-206). London: Sage.
- Su, Z. (1995). A critical evaluation of John Dewey's influence on Chinese education. *American Journal of Education*, 103, 302-325.

- Turrisi, P. A. (1997). Introduction. In C. S. Peirce, *Pragmatism as a principle and method of right thinking* (pp. 1-20). Albany, N.Y.: SUNY Press.
- Van der Veer, R. & Valsiner, J. (1991). *Understanding Vygotsky: A quest for synthesis*. Oxford: Basil Blackwell.
- Valsiner, J. (1988). *Developmental psychology in the Soviet Union*. Brighton: Harvester Press
- Valsiner, J., & van der Veer, R. (1993). The encoding of distance: The concept of the zone of proximal development and its interpretations. In R. R. Cocking & K. A. Renninger (Eds.), *The development and meaning of psychological distance* (pp. 35-62). Hillsdale, N.J. Lawrence Erlbaum Associates.
- Valsiner, J., & van der Veer, R. (2000) *The social mind*. New York: Cambridge University Press.
- Vygotsky, L. S. (1925/1971). *Psychology of art*. Cambridge, Ma.. MIT Press.
- Wertsch, J. V. (1991). *Voices of the mind*. Cambridge, Ma.. Harvard University Press.
- Wertsch, J. V. (1998). *Mind as action*. New York: Oxford University Press.