

Toward an Organic Theory for the Cultural-Historical Sciences

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Abstract

In present-day cultural-historical sciences, explanations of activity are provided in terms of thing-like, independent, and self-actional entities including subject, object, tool, sign, mind, culture, meaning, and community. In this theory-building contribution, I instead suggest an organic theory to theorize activity in terms of events, characterized by actuality and becomingness. Organic theories have radical consequences for the cultural sciences in that cherished notions—e.g. mediation, identity, intersubjectivity, and cause-effect relation—no longer have a place in organic theories of human activity. This study describes the foundations of an organic approach, provides an analysis exemplifying an organic view, and develops some of its implications for the cultural-historical sciences.

Keywords Organic theory; event; transaction; occasion; pragmatism; James; Whitehead; Mead

The purpose of this contribution to theory is to present an approach to theorizing social, cultural, and psychological phenomena that is radically different to the common ways, which reduce activity to agential subjects, tools, meanings, signs (including

words), and the likes that are said to interact. Such entity-things proliferate even in the works of scholars, who on the surface develop and explicate a transactional approach (e.g. Garrison 2001). In an alternative organic theory, which theorizes events as events, all these entity-things are abstractions of and from events and arise as recurrences recognized across events despite different circumstances. Here, events are taken to be

the relata of the fundamental homogeneous relation of “extension.” ... The relation of extension exhibits events as actual—as matters of fact—by means of its properties which issue in spatial relations; and it exhibits events as involving the becomingness of nature—its passage or creative advance—by means of its properties which issue in temporal relations. (Whitehead 1919, p. 61)

In contrast to objects (entity-things), which “enter into experience by way of the intellectuality of cognition,” “events are lived through [and] extend around us” (p. 63–64). Important in the definition of events is the fact that any two are external to and independent from each other when there is no third event that is common to both. To bear any relation at all, any two events have to extend over (overlap with) each other. This overlapping may be spatial or temporal in nature. Time and space, thus, are derivative and not a priori and constitutional as Kant (1956) described them to be: They are expressions (manifestations) of the relations between events.

Historical Context

In the early 1930s, Lev Vygotsky suggested that there was a crisis in psychology, which he variously addressed in terms of the psychophysical (body–mind) problem or the incompatibility of the scientific (physiological) and interpretive approaches characterizing the field of psychology. An editorial note appearing in a recent publication of Vygotsky’s personal notebooks suggests that today—90 years after Vygotsky talked and wrote about this crisis—“we cannot say that psychology solved its problems”

(Zavershneva & van der Veer 2018, p. 484). But until the end of his life, Vygotsky himself, on his own account, did not manage to overcome the problems. During the last months of his life, he likened himself to Moses, who had seen the promised land—in Vygotsky’s case, the route out of the psychophysical problem—but was not given the opportunity, and thus “failed[,] to set foot in that new territory” (p. 495). Only one month prior to his death, the psychologist gave a lecture in which he outlined the category of *perezhivanie* [(felt) experience, feeling], the unity / identity of individual and environment, which was to include intellectual and affective dimensions (Vygotsky 1994). At the time he concluded: “the criterion of the unity of intellect and affect is the fundamental relationship with the situation in the sense of constraint and freedom” (Vygotsky, in Zavershneva & van der Veer 2018, p. 488). Throughout the notes of his final months, the term “dynamics” and “flüssig [Ger. for fluid]” appear. The way out of the psychophysical problems were to have a focus on the dynamic activity that encompasses the events of thinking and doing, where “*the role of thinking in activity consists in the introduction of new dynamic possibilities in activity*” (p. 496).

Vygotsky was not given the time to work out his solution generally and the category of *perezhivanie* specifically. However, if he had had the opportunity to read the works of the American psychologist and philosopher W. James (e.g. 1912)—which was systematized in the organic theory of A. N. Whitehead (e.g. 1929/1978)—he might have realized that the key to what was stumping him existed in his substantivization of phenomena and the resulting “entitative point of view” (James 1912, p. 136). Substantivization is the result of turning events into actors/agents and their actions/agencies. It is precisely such substantivization that has been recognized as the heart of the mind–body (psychophysical) problem (Bergson 1908; Dewey & Bentley 1949/1999; James 1907); and this problem continues to plague the cultural-historical investigations to this day (Garrison 2001; Zavershneva & van der Veer 2018).

The subject, mind, word, meaning, consciousness, and sign all were and are treated as entities—flagrantly apparent in the stick models of mediation (Figure 1a) that appeared, for example, in “Concrete Human Psychology” (Vygotsky 1989) dating to about 1929. This idea of mediated action is taken up in the Helsinki interpretation of A. N. Leont’ev’s activity theory (Figure 1b), where entities proliferate (subject, object, tools, rules, community, division of labor), each pair of which is understood to be mediated by one or another third. In both approaches, entities and their mediational relations are theorized substantively, that is, in terms of substances, their properties and movements (e.g. object → outcome). The substantivizing approach to activity cannot but fail because, by “distinguishing its elements and parts, it gives them separate names, and what it thus disjoins it can not [sic] easily put together” (James 1912, p. 92). In the same way, the so-called transactional approach is defined by the fact that it does not decompose activity into detachable and independent entities (Dewey & Bentley 1949/1999).

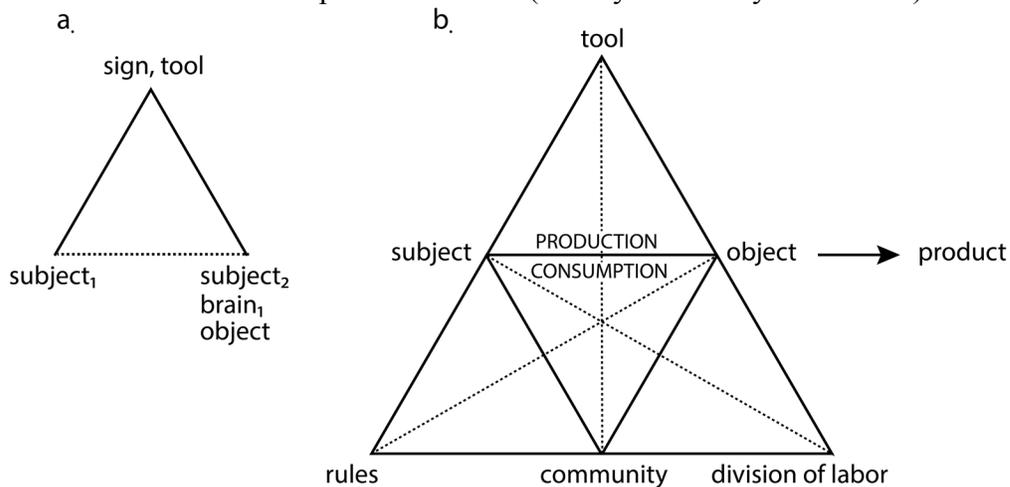


Figure 1. Representations typical of those used in the cultural sciences. a. Mediation triangle of the type used by Vygotsky. b. Expanded mediational triangle as it appears in the Helsinki version of cultural-historical activity theory

Near the end of his life, Vygotsky considered the bulk of his own work to be intellectualist and parallelist (cf. Zavershneva & van der Veer 2018). However, he was on the verge of coming up with something new. An alternative way of theorizing is hinted at in his personal notebooks, though, in his own words, never was provided the opportunity

to overcome the “sins” of his earlier, nevertheless highly acknowledged and frequently referenced work. And this alternative is pointed to in *Toward a Philosophy of the Act* (Bakhtin 1993), where we find expressions such as world-as-event, Italy-as-event, and event-context (i.e., context as event). These expressions, too, were written in 1929 when such a theoretical approach already had been assembled and systematized in the works of James and Whitehead, respectively.

The present study goes beyond an earlier critique of the cultural-historical sciences¹, which recommended following J. Dewey in taking a transactional approach and thereby overcoming certain problems, including the remnants of Cartesian dualisms (Garrison 2001). The critique was not understood, as apparent in a rejoinder in the same journal:

I cannot see a contradiction between the concept of *transaction* and the activity-theoretical idea of subject-object dialectics mediated by artifacts in human activity. In the latter, a human subject, an object, rules, tools, and community co-evolve *interactively* and are constantly changed by their very *interaction*. (Miettinen 2001, p. 305, emphasis added)

In this quotation, problems abound when read from the perspective of a transactional approach: (a) the two concepts are treated as synonyms when they are not (Dewey & Bentley 1949/1999); (b) concepts (e.g. mediation and dialectics) are used that are incompatible with and rendered superfluous by the transactional approach (James 1909); and (c) the cultural-historical take is described in terms of substantivized entity-things (e.g. subject, object, rules, tools, and community), which are mere abstractions in a truly transactional approach (Whitehead 1919). The failure to understand some of the important points of Garrison’s critique may derive from the fact that this very author maintains entity-things (e.g. tools, meanings, signs) all the while pointing out that “every

¹ I use the term cultural-historical sciences and cultural-historical theories to refer to the complex of communities and theories that somehow anchor their origins in Vygotsky, Leont’ev, Luria, and others using varying labels to distinguish themselves from others.

individual ‘thing’ is really a spatially and temporally extended event” (Garrison 2001, p. 286) and that it is the functional relation that matters. In the organic theory of Whitehead (e.g. 1919), as in the theory of Bakhtin (1993), there are only events; and stable entities are abstractions in the same way that photographs (individual video frames) are with respect to the events during which they were taken. Thus, although some current scholars emphasize the importance of thinking cultural issues in terms of events (e.g. Dayton & Rogoff 2013; Rogoff 2016), the present study emphasizes the need to do so by thinking the event as event rather than as difference between time points or as process that changes the characteristics of an entity-thing of interest (e.g. person, culture, society). It is into this latter direction that the present contribution seeks to encourage the further development of cultural-historical theories. Of all the scholars cited in this article, Whitehead (1919 1920) provided the most extensive and detailed account of a theory that has a primacy of the event. The present article goes beyond what others have offered (e.g. Garrison 2001; Rogoff 2016) in (a) developing a way of writing research that moves away from substantivization and (b) in exemplifying how such an analysis might unfold when it focuses on events rather than things.

Substantivization and the Cinematographic Illusion

The world is a world of events. (Mead 1932, p. 1)

A philosophy of nature as organic must start at the opposite end to that requisite for a materialistic philosophy. The materialistic starting-point is from independently existing substances, matter and mind. (Whitehead 1926, p. 189)

The two opening quotations summarize the problem and solution articulated in this article. In this text, they are way markers in the development of an approach that builds on Vygotsky’s intuition of developing psychological theory of the “flüssig type” (in

Zavershneva & van der Veer 2018, p. 488). The world, as the first introductory quotation states, exists in the form of events; even the perception of this world is an event (James 1890; Whitehead 1919). This may be captured in the expression “world-as-event” (Bakhtin 1993, p. 32). The expression presupposes an organic perspective, whereby the world as a whole is living like an organism. Such an organism cannot be understood, as the second quotation states, by analyzing it as if it were composed of independently existing substantive things, including that of mind. These substantive things are the results of processes from which are abstracted “special groups of sensible qualities, which happen practically or aesthetically to interest us, to which we therefore give substantive names, and which we exalt to this exclusive status of independence and dignity” (James 1890, p. 285).

The substantivization, which turns events into substances with attributes (e.g. act, change, have properties), is a problem common to most languages.² For example, in saying “the lightning flashes,” one and the same event is once posited as subject (i.e. lightning) and once as an action. The phrase surreptitiously suppones a thing-like subject to an event. This is where the problem arises: “In approaching the happening as doing and the doing as being: here lies the *double* error, or *interpretation*, of which we make ourselves guilty” (Nietzsche 1922, p. 43). Similarly, using “hunger” as explanation and cause of the search for food also manifests substantivization, for “to create an entity out of this active relation of the self to objects, and then to treat this abstraction as if it were the cause of seeking food is sheer confusion” (Dewey & Tufts 1936, p. 322). Or, development is reduced, for example, to the subject-thing (“child”) with a predicate (“becomes a man”) when we say, “the child becomes a man”; we could indeed have made thematic the event by saying “there is becoming from the child to the adult” (Bergson 1908, p. 338), where “child” and “man” are like photographs in the stream of

² In some indigenous languages, animals, for example, are named by what they do, like a fish taking bate easily or disappearing into the woods quickly.

life. Here, *becoming* is not an entity-thing, but, as the verb form (present participle/gerund) indicates, is to be thought as a spatially and temporally extended event. The two prepositions *from* and *to* are further indication that there is an event of passage that includes both phases of the life of the person.

Substantivization works by supposing independent substances (e.g. tool, sign, meaning, word, or subject) that exist at specific points in time and space, both, according to Descartes and Kant, external to the substances; and because two substances are external to each other, a third is required such that it *mediates* between the two and, purportedly, thereby connecting them. But, “when you try to make two other concepts continuous by putting a relation between them, you only increase the discontinuity. *You have now conceived three things instead of two, and have two gaps instead of one to bridge over*” (James 1911, p. 89–90, emphasis added). Near the end of his life, Vygotsky, too, rejected the interaction of parallel substances—e.g. body and mind (Zavershneva 2010). That is, any theory operating with mediators is inconsistent with the organic approach that places primacy on the event. Events intersect, overlap, or have no relation, but they do not mediate two or more other events (Whitehead, 1919). Thus, an event itself, “as a whole cannot be transcribed in theoretical terms if it is not to lose the very sense of its being an event” (Bakhtin 1993, p. 30–31). This means the event needs to be thought *as* event, for substantivization precludes continuity by reducing the evental world to interactions between entity-things. Substantivization is possible only after the fact when an event has come to an end and closure has been achieved so that experience has an individualizing quality (Dewey 1934/2008).

Substantivization works in an analogous way to photography in congealing an event into fixed images. Series of photographs are taken as consecutive states of the event, a view that leads to a cinematographic take on social phenomena (Bergson 1908). Thus, for example, learning is conceived as the difference between student knowledge prior to and following an intervention. The core of the student subjectivity, conceived in a thing-like

entity, remains constant but undergoes some change in characteristic, like a square that is transformed into a parallelogram (Figure 2). Some scholars thus say that “learning activity” “*analyzes and connects*” “discrete elements with their systemic activity contexts” (Engeström 2014, p. 99, underline added). Depending on the theoretical framework and the methodological commitments of the researcher, the student’s own agency (constructions) or the curriculum (objects, organization) is responsible for the change in the characteristic (i.e. learning or development) or the *elements*. In learning process studies, an episode may be divided into smaller pieces so that the researcher records images of the different stages (states), ending up with something like the different images in the noted transformation (Figure 2). In this take, process phenomena are described and explained in terms of the consecutive images, which, when played quickly enough, appear to reproduce the movement as it has been. Learning and development are then explained, for example, in terms of some force acting on the entity (the subject of the proposition, element), thereby changing its attributes (captured in predicate).

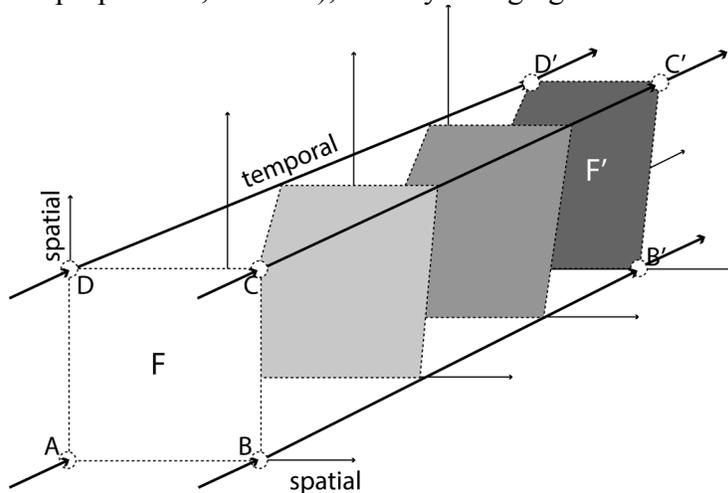


Figure 2. Conceiving the even FF' (a transformation) in transactional terms—i.e. with event as the minimal unit of analysis—does not allow the reduction of what is happening to what at one point is fixed as square F and another time as quadrilateral F', and fixed external forces that deform the former into the latter. F and F' are to be understood as photographic fixations of an aspect of a world in continuous flux

The cinematographic approach, however, constitutes a mechanistic illusion (Bergson 1908). This is so because the movement is in the projector not in the *self-movement* of the

event so that “with immobility, even if it were set beside itself indefinitely, we could never make movement” (p. 330). That is, even if we increased the number of slices in the becoming from time the abstraction looked like a square to looking like a parallelogram (Figure 2), we would never get at the evolutionary movement that makes for the passage $\overrightarrow{FF'}$. “Instead of attaching ourselves to the inner becoming of things, we place ourselves outside them to artificially recompose their becoming” (p. 331). The cinematographic approach thus fails because it does not take into account the fact that life exists in transitions as much as in recurrent stable forms (e.g. square, parallelogram) that may be abstracted from the transitions (James 1909; Whitehead 1919).

The cinematographic approach is present in Piaget’s theory, where logical thought—i.e., a new form of thinking—supplants the child’s earlier thinking. Logical thought comes from the outside and somehow seems to take root and is deformed in the present mind (Vygotsky 1987). As a result, Piaget fails to show development as a self-movement because he replaces one thing in his theory by another thing. In this way, he evacuated the very phenomenon he was after: “where there is no self-movement, there is no place for development in the true sense of the word” (p. 89). The later Vygotsky subsequently criticized his own work for failing to establish precisely that self-movement inherent in development and therefore the *internal* connections between successive phases that manifest themselves as different conceptual or thinking forms: “In retrospect, it is clear that we should be criticized because we provided for the self-development of concepts while simultaneously deriving each new stage from a new external cause” (p. 229).

The second introductory quotation to this section gestures toward another approach, which is opposite to substantivization: by focusing on living occasions considered in terms of events as the minimal unit of analysis and theoretical category. Such an alternative approach, for example, considers the entire becoming-of-a-square-into-a-parallelogram (Figure 2) as a single event within a larger event in which square and parallelogram are but momentaneous takes (photographs); it may only be decomposed

into overlapping phases that retain the eventual quality. That is, there is nothing smaller than an event, always and already extended in space and time. This excludes (eternal) entity-things as theoretical entities. Such entity-things are theorized as recurrences perceived across events, inherently requiring a disregard for contextual particulars, from which the things derive through abstraction (Whitehead 1919). In the event unit “*becoming-of-a-square-into-a-parallelogram*,” the material appears in contradictory form, featuring now this (e.g. square) and now that shape (e.g. some parallelogram). The question “What is it?” thus yields contradictory answers depending on when and where we look. Thus, the becoming from square F to quadrilateral F' (i.e. $\overrightarrow{FF'}$) manifests itself in different shapes (Figure 2). In that becoming, there is therefore antinomy because the entity initially conceived of and fixed as “the square F ” appears as something else. In a Marxian approach, such antinomies are not surprising, for any “developing system includes contradictions as the principle of its self-movement and as the form in which the development is cast” (Il’enkov 1977, p. 330). But in a theory where there are only events, the contradictions between parts (e.g. subject and tool) are not, as some believe, “the *driving force* of change and development” (Engeström 2014, p. xv, emphasis added). Instead, because the analysis moves from wholes (events) to parts (events) where things are only abstractions (Whitehead 1926), contradictions and antinomies exist between abstractions. They thus manifest rather than cause self-movement (i.e. events) (James 1909).

Social scientists are familiar with apparent contradictions when considering an event, such as a commodity exchange. In such an exchange, each commodity *is* both use-value and exchange-value (Marx & Engels 1962). Traditional either-or logic rejects such a statement as non-sense; and dialectical logic emphasizes the identity of *opposite things*, thereby retaining the dualism of traditional logic. In a theoretical approach where events are primary, the dualism does not exist because of the supposition that the event cannot be reduced to entitative things without losing its self-movement. Quantum physicists

have solved this problem by distinguishing event-based descriptions of a phenomenon (e.g. where Schrödinger's cat is both dead and alive) from the observation, which yields a substantive, thing-like fact (e.g. the cat is alive *or* it is dead depending on when we look—like when the larger event in Figure 2 is said to be a square *or* a parallelogram).

A psychological parallel to the commodity exchange exists in the question of the object of thought. In the statement “Columbus discovered America in 1492,” anyone asked might identify Columbus, America, or at best “the discovery of America” as the *Object* of thought (James 1890). Here, the object of thought is correlated with the substantive aspects of the phrase. But the “*Object* of your thought really is its entire content or deliverance,” such as in “Columbus-discovered-America-in-1492” (p. 275) or “the-pack-of-cards-is-on-the-table” (p. 278). The Object thus is a temporal event, and taking away any one part will destroy the whole. Thought therefore becomes in speaking and is available as a whole only when the phrase and the associated event of thinking are completed; thought thus is an abstraction from the event of thinking (Peirce 1878; Merleau-Ponty 1945; Vygotsky 1987). The different phases of the phrase meld by passing over into each other, later parts emerging in and from earlier ones that are still present though already fading away. There is unity because in each phase of the event the whole is felt “in a unitary undivided way” (James 1890, p. 279).

In the cultural-historical sciences, a conception of cultural artifacts (e.g. the novel) similar to that analogically modeled in Figure 2 already exists, though it has not found much resonance in the current (psychological, educational, sociological etc.) literature on learning and development. Thus, for example, to understand the cultural evolution of the novel form it is inappropriate to investigate the structural properties of different types of novels as they appeared in the history of literature: “the novel has been living a life that is distinctly its own, a life that is impossible to understand from the point of view of stylistic categories formed on the basis of poetic genres” (Bakhtin 1981, p. 43). The different novel forms are not the dialectical contradictions that drive development. Each

novel is part of and reflects the living society, its stratified and heteroglossic language at the time of the composition; and “this stratification and heteroglossia widen and deepen as long as language is alive and developing” (p. 272). Each novel is an *image* of the times, thus an abstraction like the square and parallelogram above, relating to the ever-developing reality as a portrait photograph relates to the living person. Instead, the driving force exists in the *living* vernacular language—living because it changes in being spoken (i.e. dialogue); together with its central contemporaneous topics, language is taken up and addressed in each period-specific novel. As a result of the abstraction that occurs in the take-up, “everything that becomes an image in the literary work, and consequently enters its chronotope is a created thing and *not a force that itself creates* (p. 256, emphasis added). Everything in an image no longer embodies the creativity that is characteristic of every passage from past to future (Dewey 1929; Mead 1932; Whitehead 1920). The development of the novel is unavailable by a mere consideration of the novel forms and the poetic genres these represent.

Toward the Event as Unit of Analysis: A Paradigmatic Example

Language is conceived as an *auditive event*, bound to a sensible perception taking time and happening in a concrete space, and is not viewed as a visible structure or as a product one can fixate and contemplate. (Bertau 2014, p. 249)

In an organic theory, everyday life, activity, and human behavior are thought from the perspective of the event. How would we look at and analyze a stretch of conversation from an evental perspective? The event-based approach outlined in this text, just as the German Romantic tradition described in the opening quotation, focuses on

communication as event rather than on language as structure.³ The purpose of this section is to contrast a classical, entity-thing-based way of describing and theorizing an event of empirical interest to one in which there is a primacy of the event. The latter is not an easy task because our familiar (Western) language inherently privileges entity-things; and texts that attempt to communicate event-based approaches (those of Whitehead, Heidegger, or Badiou) often are considered impenetrable.

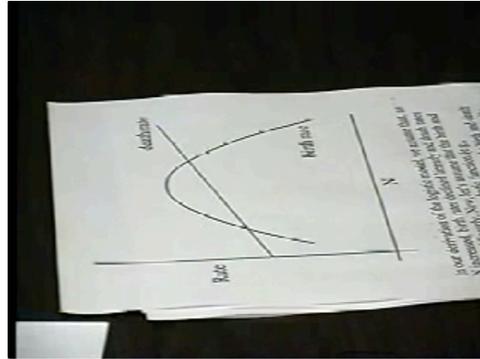
Events and their parts are theorized as living organs in relation to the living organism of which they are part. When thought in this way, a relation may be termed transactional. An *interaction* is based on two or more entitative substances with simple locations in time and space that are brought to act upon one another (Dewey & Bentley 1949/1999). *Transaction*, in contrast, refers to the irreducible inner relation of a whole action-as-event of which the parts, themselves events, adjust themselves: “the relation of part to whole has the special reciprocity associated with the notion of organism, in which the part is *for* the whole” (Whitehead 1926, emphasis added). Transactions cannot be reduced to “‘elements’ or other presumptively detachable or independent ‘entities’” or from “‘presumptively detachable ‘relations’” (Dewey & Bentley 1949/1999, p. 133). To exemplify and clarify the distinction between interaction and transaction, I draw on a fragment that derives from a research project in which an undergraduate physics major (D) in his role as a research assistant has invited professors and postdoctoral fellows from his department to participate in think-aloud sessions concerning graphs. In one instance, a professor (A) quickly is stumped and asks the research assistant for help—so that, eventually, the think-aloud passes over into a tutoring session. A traditional gloss of the fragment may go like this: D tells A to begin with Region 1—below (left of) the first intersection (see insert)—of a graph that describes the relation of the birthrate and death

³ Involuntary remembering similarly is to be understood as event that arises from and accompanies the events of material life, in which it has an organic function, as *living memory*, rather than being some static form: memory (Zinchenko 2008).

rate curves and invites A to state what will happen to a population where the two rates relate in the stated way. A then provides an appropriate description.

Fragment 1

- 1 D: so=so (0.7) so if you're starting out in region one (0.6) and the birthrate's lower than the death rate (2.2) what (do you) think's happened to the population.)
- 2 A: SO
- 3 (1.4)
- 4 A: the birthrate's lower than the death rate is (0.4) the population's dwindling.
- 5 (0.3)
- 6 D: ok (ay:?)
- 7 A: right



A classical case of mediation and scaffolding

In the classic interactional approach, each speaker is taken as a self-acting unit. The participants—each with their own (thing-like) mind, word-meanings, and intentions—contribute to the conversation after having interpreted what the other has said. In this give-and-take fashion, they produce an interaction, which is the source of their social relation and the conversation. In turn 4, then, we find the first-time statement concerning the effect that the relation of the two rates depicted in the graph would have on a natural population. The offered reading is accepted in turn 6. The episode as a whole might be glossed in this way: D has taught A to read the graph.

Such occasions, where one person (often an adult) teaches another (often a child) in acquiring reading “skills,” have been explained in the cultural-historical sciences in terms of mediational triangles (Cole & Engeström 1993). For the teacher (D in the fragment), the text (graph) already mediates the relation to the world; and in their relation, the

teacher mediates the learner's (A in the fragment) relation to the world (Figure 3a). The purpose of the instruction is to establish a mediational relation between child and world by means of the text (here graph and caption) (Figure 3b, broken-line triangle). In the learning activity, as pointed out above, the various "discrete elements" come to be connected (Engeström 2014). The concept of the *zone of proximal development* is often invoked in such situations to suggest that the teacher (here D) is *scaffolding* the learner (here A), who thus performs at a level at which she has not performed on her own. It is also typical in interactional approaches to attribute actions to individual speakers, for example, by stating that D "asked a question" (turn 1) that A subsequently "answered" after having "interpreted" the question in a particular way. Such give and take, "where thing is balanced against thing in causal interconnection," represents a quintessentially interactional view (Dewey & Bentley 1949/1999, p. 132). In other words, researchers might claim that A had constructed new meaning (e.g. the "meaning" of the graph in a specified region) and thereby arrived at new knowledge. If the child (A) were subsequently tested and provided a correct reading (interpretation), researchers might claim that what was constructed *between* the teacher (D) and learner (A) was then internalized on the part of the latter.

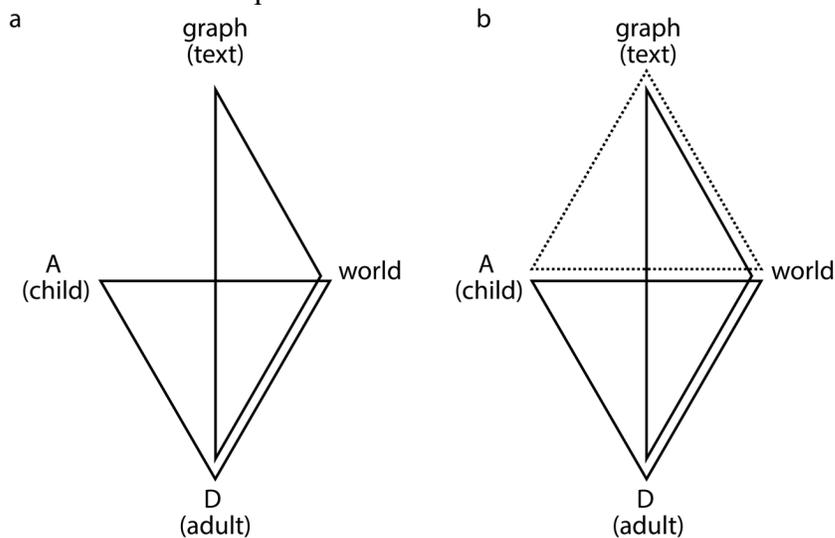


Figure 3. Mediational triangles connecting different elements that appear in the learning activity are used to theorize reading acquisition. a. The existing relations. b. The relation to be established (broken line) between child, graph, and world.

In readings and explanations of this ilk, thing-like entities (substances, including subjects) are assumed to be real. Such entities are external to each other so that third things can come to stand between them to achieve mediational activity. This approach thus reproduces the historical dichotomy of knower (subject) and known (object), which are treated as discontinuous entities existing next to each other. The solution to establishing a connection between the two exists in “put[ting] a mental ‘representation,’ ‘image,’ or ‘content’ into the gap as a sort of intermediary” (James 1912, p. 52). But this approach now creates two gaps, one between subject and sign, the other between sign and object, each being an entity discontinuous with all other entities. The interactional approach, even when it introduces mediation by third entities, does not get us out of the quagmire of discontinuity.

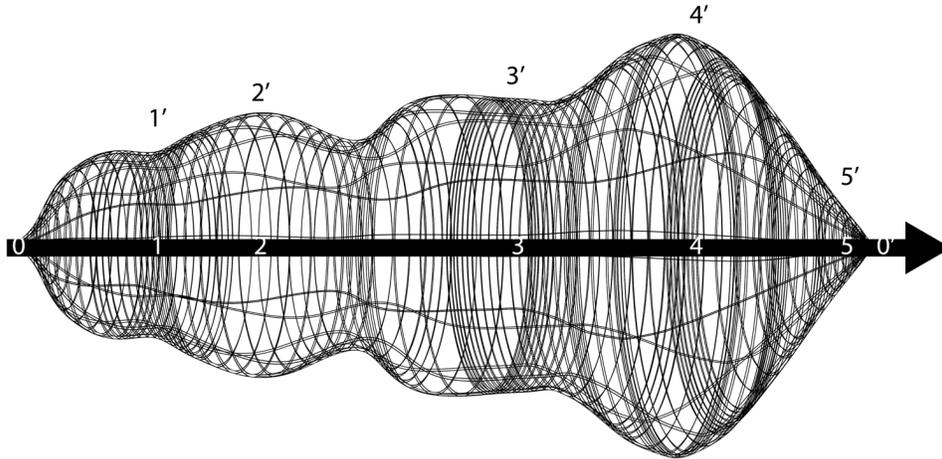
An organic theory is focusing on events

Events, such as those including the part event represented in Fragment 1, can be read differently. In the following, I move from the substantivizing (cinematographic) approach underlying the interactional take toward an analytic method consistent with an organic theory of the world and the idea of transaction. Thus, *conversing* is a paradigmatic case illustrating some of the fundamentals of the organic transactional approach. The non-finite grammatical form (i.e. -ing form) is used to mark that *conversing* is an ongoing event—to be theorized *as* event rather than as a thing-like entity. The form is the present participle or gerund of a verb, which, because it refers to something in the process of happening, retains focus on the event. In conversing, there is no gap between two subjects because the same aspect of living experience—e.g. the same word or phrase event—appears in two different streams of life (events) that together make for the rudiments of a family of events or *nexus* (Whitehead 1929/1978). Each living subject and

its living object (e.g. word, phrase) only exist as a single eventual unit (Mead 1932). This is so because “at the instant that a sensation is produced, the sensible reality and the sensation that we have thereof are absolutely identical” (James 1912, p. 211). Thinking and the actual world-as-event inhabited by a living person “are made from the same fabric, which is the fabric of experience in general” (p. 216).

From the organic (transaction) perspective, each (temporally unfolding) phrase-in-the-making of an exchange such as that appearing in Fragment 1 constitutes something like a fluid mini-event in the flow of life. In the event of conversing, this part of the flow is intersecting with the different flows of which each participant consists. For any one participant, speaker and recipient alike, conscious awareness passes on as the phrase unfolds (James 1890).⁴ Extending James’ two-dimensional example to three dimensions, this unfolding what is in the mind may be exemplified in diagrammatic form, here the cross-section of a volumetric (Figure 4). The different parts of the phrase appearing in turn 1—i.e., parts 0–1, 1–2, 2–3, 3–4, 4–5, and 5–0’—“melt into each other like dissolving views, and no two of them feel the object just alike, but each feels the total object in a unitary undivided way” (p. 279). The area of a cross section at any instant (e.g. 1, 2...) symbolizes the Object in awareness at instants 1 and 2. But at the instant, neither thinking nor thought exist; thinking is only passing through. Thus, the volume of the figure between 1 and 2 represents a segment of the flux. The thinking that would have produced the thought manifested in the phrase would be the entire volume of the figure from 0 to 0’.

⁴ Conscious awareness itself is theorized in terms of the specious present, that is, as a temporally extended phenomenon in which the past and future are part of the present.



The birthrate is lower than the death rate is, the population is dwindling
 0 1 2 3 4 5 0'

Figure 4. A way of representing the passing of thinking in the course of a phrase from the think-aloud session

The event of conversing may be theorized in terms of two part events, *corresponding* and *responding*, each of which requires conjoint action on the part of both participants (Roth 2019). A conversational turn cannot be attributed to the speaker but belongs to both, speaker and recipient; that is, it is characteristic of the relation. An unfolding turn (an event) truly is transactional, each part exhibiting typical functional relations with other parts and the whole as expressed in adverbs and prepositions associated with verbs (c.f. James 1890).

Corresponding

Fragment 1 bears an asymmetry in the sense that it attributes words and phrases to speakers. It omits to make explicit that for any conversation to exist, the words also have to ring in the ear of the recipient. In fact, ringing in the ear is insufficient, for the recipient has to be actively *attending to* and open to be *receiving from* the speaker. The recipient also has to act for the event of *conversing* to be possible. From an organic perspective that takes events as its smallest unit of analysis, we therefore have to say something like “there is saying *for*, attending *to*, and receiving *from*,” where the prepositions mark the relational nature of the events. The relation between the two subject-based events is

established by a third event: the sound intersecting with both. This framing therefore is consistent with the above-stated definition of events whereby two events relate when they have a third event in common.

In the present instance, the simultaneous evental phases involve the *joint* living work of at least two persons. The spatiotemporal characteristic of the occasion is encoded in the descriptive language used here. Thus, speakers do not just pronounce words but they are speaking *for* the specific recipient (i.e. there is addressivity): speaking *for* the other, who is attending *to* and receiving *from* the speaker are simultaneous events intersecting with each other in the living sound-word. There are organic relations between one event and the whole or other events. Together, the mini-events make for a phase of conversing: *corresponding* (Figure 5). It is immediately apparent that the event of corresponding requires at least two participants who, in that act, are corresponding to and with the respective other. Individuals do not own the sound-words of the event of *conversing*, because their use implies the other as the co-owner (cf. Mead 1932; Vygotsky 1987). Anything that might be attributed only to one person does not exist *for* conversing. In conversing, we thus have an *event* of corresponding *to/with*, where the prepositions indicate that there is a *relation* (event) rather than independent (substantivized) parts (James 1890, 1912).

Turn	D	A
1	so if your starting out in region one (0.6) and the birthrate's lower than the death rate (2.2) what do you think's happened to the population.	so if your starting out in region one (0.6) and the birthrate's lower than the death rate (2.2) what do you think's happened to the population.
	CORRESPONDING WITH/TO	
4	the birthrate's lower than the death rate is (0.4) the population's dwindling.	the birthrate's lower than the death rate is (0.4) the population's dwindling.
6	okay	okay
7	right	right
	RESPONDING TO/FOR	

SAYING FOR ATTENDING TO, RECEIVING FROM

Figure 5. Event-based model of the transactional approach.

It might be argued that the individual “meanings” differ even if the material words are the same for the participants. But this would not be an argument against the organic (transactional) perspective. That this is so has been explained in terms of an analogy with binocular vision (Bateson 1979). Accordingly, when we think about the two parties to a conversation as two eyes, each giving a monocular view of the situation, the two views do not just add up. The two eyes give rise to “a binocular view in depth. This double view *is* the relationship” (p. 133). Sociality in and of the living world exists precisely because the same object (abstraction, like “the word”) can exist in two systems at once (Mead 1932). Thus, the event of *corresponding*, including two individual (monocular) points of views, is a living relation and therefore inherently social in nature predating any social construction. In the above-noted economic theory, the same object (commodity) exists in the form of use-value and exchange-value (Marx & Engels 1962). This is so not because the perspectives of two different participants, seller and buyer. The dual perspective of the exchange event *is* a binocular view in depth.

Figure 5 presents the different parts of the event of corresponding in black and white. But this does not mean that the relation and the associated binocular vision arise dialectically. This is so because in corresponding, the two parts are not independent of each other. Each is *for* the other. Taking away one, and the event (communication) disappears. Thus, the whole event is not the sum or product of two part events but an organic whole with part–whole relations defined in the introductory part of this section.

Responding

The preceding analysis emphasizes that when there is the event of conversing, the recipient (e.g. A in turn 1) is not turning off but doing something: actively attending to and receiving from the other. The conversational phase of replying arises out of, and is conditioned by, attending to and receiving from (cf. Vološinov 1930; Waldenfels 2006). Here, “arising out of” is a way of expressing that any earlier event of querying is not the

antecedent of the event of replying but it is an integral *constituent* of that event (cf. Dewey 1929).⁵ Replying and querying are not independent—as this might appear in many empirical studies focusing on ordered turns. If the two statements were disconnected thing-wholes, like consecutive frames on a video reel (or like the square and parallelogram above), then there could only be an external relation of one with the other. Then some form of mediation would be required to connect them. Instead, there is a passing-over: the questioning event still is part of the specious present when the replying event starts. There is a transition, a passing over of one event of speaking into another event of speaking: such “unions by continuous transition are the only ones we know of” (James 1912, p. 59). The passing-over occurring including the two turns, if these are *intrinsically* related, exists as living phenomenon as well. That passing-over here takes the form of an overlapping (intersecting) of the different phases of conversing. Such overlapping occurs in the very act of speaking *for* the other, the future event of replying is already anticipated and provoked; and in the event of replying, that of questioning makes itself known and thus is present as well (cf. Levinas 1978). From that perspective, therefore, turns 1 and 4 are not independent: they belong together. This fact has found its way into conversation analysis (Sacks 1992), where it tends to be treated as an external relation between pieces typical of interaction—e.g. the I-R-E routine in Fragment 1—rather than as an organic relation of co-present events.

But there is even more, for, from the perspective of A, turn 4 not only is orienting itself backward *to* the preceding turn out of which it has arisen, but it also is reaching forward, designed as it is *for* the original speaker D, whom it is to affect in some way or who is anticipated to act in a particular way. This future and recipient orientation of speaking—which implies the contribution of the future recipient to the form and content

⁵ Dewey (1929) uses the example of a bullet entering the heart of a person. He shows why “the mere firing of the shot” (p. 448) cannot be the cause of death; and the entering of the bullet in the vital organs (e.g. the heart) cannot be the cause of dying because it is a constituent of it.

of the Saying—rarely is considered in the literature, where there exists a greater concern for the *speakers*' "meanings." On the other hand, the organic perspective "insists on understanding forward also, and refuses to substitute static concepts of the understanding for transitions in our moving life" (James 1912, p. 238). The three turn events then are part of an event here designated by the term *responding to* and *for*, where the two prepositions mark the backward (past) and forward (future) orienting relations of turn 4 (Figure 4). The two orientations are present in the speaking so that all three phases need to be thought as parts of one event. The experience of speaking *for* another manifests the fact that being alive means continuously transitioning into what is to come, and experiencing this transitioning itself. We are always "expectant of a 'more' to come, and before the more *has* come, the transition, nevertheless, is directed *towards* it" (p. 237). Thus, rather than thinking about and theorizing each turn as a thing-like phrase with an intelligible content (the *Said*), a transactional analysis considers it to be a transitioning (passage) from what has been (preceding turn) to what will be in the impending future (next turn). The entire transitioning is available to experience because of its existence in the specious present.

The implication of the unit of turns 1, 4, and 6 is shown in two ways (Figure 5). From the perspective of D, turn 1 is designed as an event of solicitation of a reply in the form of an answer to a question (see shading from speaking to listening); and from the perspective of A, replying arises out of actively attending to and receiving from D (see shading from receiving to speaking). Figure 5 also shows that the two phases of responding intersect and thus bear an inner relation that are the core of the evental approach (Whitehead 1919). As in the case of binocular vision, two phases of an event have an aspect in common, which makes for its sociality and for the sociality of mind (Bateson 1979; Mead 1932). Turn 4, conceived of as event, is oriented and develops toward turn 6, which is that turn out of which another event of responding to/for arises. That is, the part event when A is speaking and D is listening is conditioning the occasion

that will then condition a subsequent event of replying to the situation that now has developed into the future. The ground of the subsequent event of responding to/for has changed, and turn 7 thus responds to a different historical reality.

In the event of conversing, therefore, any two phases of speaking are related to each other—one either arising in and from or leading into another, the later phase inheriting its conditions from the former. The upshot is that two (phases of) events associated in this manner cannot have a cause and effect relation: they overlap and therefore implicate each other within a common whole (Dewey 1938). They cannot have a causal relation because the two acts of speaking are not independent even though the former (turn 1) is the historical condition for the latter (turn 4): the latter is arising in, *as part of*, and from the former. The former event is not a separate antecedent to the latter one because it is an integral constituent of the whole. And the *continuity* of experience can only exist if an earlier event passes over into a later one, that is, if the two consecutive events overlap so that later phases always arise in and out of earlier ones (Whitehead 1919).

An event has two forms of extension

The compound events *corresponding* and *responding* exhibit the two forms of relation that issue from “the fundamental homogenous relation of extension” (Whitehead 1919, p. 61): a spatial (“lateral”) dimension characterized by relations such as *with*, (*spatially*) *next*, and (b) a temporal (longitudinal) dimension characterized by adverbs and prepositions of historical (biographical) continuity. Rather than conceiving of life in an assembly of spatiotemporally distributed points (here, now), the organic approach makes thematic life as a temporally and spatially extended experiential flow. More specifically, the organic analysis essentially manifests “a *social* philosophy, a philosophy of ‘co,’ in which conjunctions do the work” (James 1912, p. 194). In the preceding analysis, for example, conversing is shown to require the co-existence of speaking to/for together with attending to and receiving from so that each turn belongs to and requires work from both

interlocutors simultaneously. The conjunctions in the present situation consist of the routes (lines) of becoming—here the biographies of human beings conjoined by the conversational event—that intersect because of a third event common to both: conversing.

The spatial quality is apparent from the fact that conversing exists for both participants, each understood as a family of events: breathing, moving, thinking, perceiving, and so on (Whitehead 1920). The foregoing analysis shows that there is a living event, conversing, that intersects two, normally externally (i.e. spatially) related lives. If there is an event that is part of (intersects with) both lifelines, then are constitutive parts of a single event characterized by *internal* relations (Whitehead 1919). And in the inner relations of the total event there are contradictions between any two abstractions. The living conversing-as-event thus *is* the (inherently social) relation between two people, which is associated with the above-noted binocular vision of depth (Bateson 1979). Because the two lives unfold simultaneously, they are normally relatively separate events. Conversing is an event in which the two continuities come to intersect—and thus is common to—both lives and biographies (i.e. routes of becoming). The intersecting event is common to both lives, but it is asymmetrically so, because any speaking for requires the attending to and receiving from of the other. As the occasion involves the participants jointly, it is immanent in the two continuous lifelines once the meeting has ended. There is evidence at the end of the meeting that A now can do the graph reading without exchanging with D; and for D this session was an opportunity to become more experienced in conducting research or, perhaps more so, in tutoring. In the course of the exchange event (consisting of a total of six separate graph readings each participant did), a little bit of each (A, D) is becoming immanent in the respective other (D, A). The same type of analysis can be conducted between any one participant and the graph (text). In these situations, the intersection between person and graph (text) exists in the form of percipient events.

The temporal quality is apparent from Figure 5, which reflects the workings of consciousness. There is an active window—the specious present—where some of the present thought 0 1 2 3 passes into the next thought 1 2 3 4, which passes into 2 3 4 5 (James 1890). Earlier parts drop off into the recent past, and new parts emerge into it from what has been an indeterminate future. Thus, for example, turn 1 still is ringing on as the sound-words of turn 4 begin to emerge, new sound-words (events) emerging as talking lays its garden path in saying. (Even if an hour was passing between turn 1 and turn 4, the latter is a reply if it had arisen out of, and co-exists with turn 1 that would have been made present again in the event of remembering.) There is always a certain temporal thickness to the present duration, containing aspects just about to drop off and new ones entering the fray of those that make the current reality (Varela 1999; Whitehead 1920). The sense of the continuity of experience arises precisely out of this structure of the specious present in which some aspects are passing away as other aspects emerge. The sense of the continuity of a conversation, and the relation between one's own contributions, depends on the extended nature of the specious present.

Toward a Theory of Activity Appropriate for an Ever-changing World

In this text, I exhibit and exemplify an organic approach to the study of mind, culture, and activity. The organic approach also is implicit in the work of Dewey, who used the adjective transactional to distinguish his way of thinking and analyzing from interactional approaches. A transactional approach, in contrast to common, mainstream ways, theorizes events as events rather than drawing on substantivized entities (subject, object, tool, sign, mediation). A transactional approach not only recognizes the ever-evolving nature of the universe but also uses units that are transactional, such as *corresponding* and *responding* in the case of the event of conversing, where transactional also means requiring the joint relational work of two or more participants and their living

environment. These concepts thereby do theoretical work analogous to those of “world-as-event,” “context-as-event” (Bakhtin 1993), or “the Great Pyramid throughout the day as an event” (Whitehead 1920, p. 74). In this perspective, nothing is stable; everything is event and thus to be understood as occurring only once. Therefore, “in so far as I am actually experiencing an object, even if I do so by thinking of it, it becomes a changing moment in the ongoing event of my experiencing (thinking) it” (Bakhtin 1993, p. 32). Such a perspective becomes truly historical—as aspired to in the cultural-historical tradition—because every part of the whole changing world is an internally connected, historic route of occasions (e.g. Whitehead 1926). This also means that the subject of activity (Figure 1)—which is also one of the subjects of psychology—needs to be theorized differently and the related notion of felt experience (*perezhivanie*) (e.g. Roth 2018).

The cinematographic image of the subject at one instant differs from that of another, however brief the interval may be. It is therefore incorrect to assume a stable subject, as the representations in Figure 1 lead us to believe—where, for example, the same term subject pertains to the beginning of the activity to its end. In an organic theory, on the other hand, theorizing the actual subject means focusing on a real, living person in a concrete occasion of its life.⁶ As each occasion of life passes over into another occasion thus constituting a continuous flux, “the life of man from birth to death is a historic route of such occasions” and “the man-at-one-moment concentrates in himself the colour of his own past, and he is the issue of it” (Whitehead 1926, p. 27). All concurrent occasions, each bundling lifelines of people and things, together make a living society. Because each occasion constitutes a passage from past into an inherently open future, there is always novelty. There is a movement whereby every doing in some occasion in itself changes the

⁶ The self-avowed intellectualism of Vygotsky’s work likely was one of the conditions why he never realized the aspirations of a “concrete human psychology” outlined in an eponymously entitled, fragmentary text (Vygotsky 1989).

person—in manner similar to the conception that individuals are in the manner of what they produce and how they produce it (Marx & Engels 1978). The person then “is at once the subject experiencing and the superject of its experiences. It is subject-superject, and neither half of this description can for a moment be lost sight of” (Whitehead 1929/1978, p. 29). Because living means irreducible connections with the environment, in the course of an occasion, the subject continuously is becoming someone else. As in this view there is a unity of person and environment, any attribute is that of the relation (the unity) rather than of the subject abstracted from the event (Bateson 1979).

In the consideration of the individual person, the subject of activity, an important concept is that of *experience* (Dewey 1934/1938; James 1912). This also is the case for at least some of the various subfields in cultural-historical studies. Thus, only weeks before the end of his life, Vygotsky gave a lecture on the role of the environment in which the category of *perezhivanie* [(felt, living) experience, feeling] takes a central place (Vygotsky 1994). Recent scholarly articles and exchanges debate the “meaning” and use of this category (see *Mind, Culture, and Activity*, vol. 23, issue 4). In that issue, only one of the papers refers to the pragmatic tradition (i.e. Dewey), whereas other scholars reject or do not treat any meaningful connection between the two scholars on the person–environment relation. However, whatever appeared in Vygotsky’s lecture pertaining to the relation was already formulated and developed much further in the work of W. James (e.g. 1890), who emphasized felt experience, feelings, the unity of the person and environment, and the need to theorize the phenomenon using the event as the minimal unit. This is so because “in a world of pure experience . . . transitions and arrivals (or terminations) are the only events that happen” (James 1912, p. 63), where *pure experience* “is but another name for feeling or sensation” (p. 94). In this definition, both English terms for *perezhivanie* are contained.

In the organic approach, experience is an event rather than a definite finite thing—as in “an experience” or “that dinner in Paris” (Dewey 1934/2008). Dewey focuses his

analysis on “*an* experience,” which exists as a thing and does not delve into experiencing as a living phenomenon. When we do so, person then is thought in terms of a continuity that arises because of the conjunctive experiencing between any two phases of experiencing viewed as a whole. Each event of experiencing does not exist for itself—as Dewey’s “*an* experience”—but functions as a passing-over *from* and *into* other phases of experiencing. There is a *continuity of experiencing* precisely because the endpoint of one phase of experiencing is inherited to be the beginning of the next phase of experiencing—a continuity that exists even if and especially when there is “boundary crossing” (Akkerman & Bakker 2011) or an entering into a “third space” (Gutiérrez 2008). Only abstracted, once an occasion has taken its course and has come to an (at-least-temporary) end, does *an* experience exist in substantive and substantial form: it then is “*an* experience” (Dewey 1934/2008). At that point it becomes possible to postulate boundaries, which are boundaries between different abstractions from the continuity of experiencing. But as such, *an* experience no longer corresponds to participation in real life, captured in the category of “participative-effective experiencing of the concrete uniqueness or singularity of the world” (Bakhtin 1993, p. 13). On the other hand, “aesthetic contemplation,” which presupposes abstract concepts that fix subject and predicate, “is unable to grasp once-occurrent Being-as-event in its singularity” (p. 14).

Classical cultural-historical theories are determinist in postulating some cause-effect like relation between thought (motive) and outcome—e.g. Vygotsky (1997) taking up Marx’s distinction between a bee and a human builder or Leont’ev’s (1978) merging of object, motive, and product of activity. The organic perspective recognizes that novelty and indeterminism characterize *being alive* as we actually feel it. This perspective is enacted in a “science of pure experience,” that is, a science of “the immediate flux of life” (James 1912, p. 93). Whereas Vygotsky was only at the beginning of his deliberations concerning the concept of *perezhivanie* [(felt, living) experience, feeling], there already existed in his day a more fully worked out theory that already had gone

beyond the substantive approach of the Russian scholar by using the event as the minimum unit of analysis. Such an organic theory is described here with reference to the transactional nature of relations between concurrent and consecutive events. It is one possible way of extending the very last ideas that Vygotsky was pondering and sketching in his notebooks. This text, therefore, also is to be understood as extending the legacy of Vygotsky in the light of the fact that he was moving away from much of what he had created during his brief life.

Coda

This text should not be read as claiming that an object-centered view is inherently wrong. Indeed, the object-centered view developed because it provided those cultures holding it with certain powers (e.g. science)—which is why Nietzsche (1922) considered it to be an expression of the will to power. Western metaphysics had its starting point precisely when Plato's entity-centered view won out over Heraclites' flux-centered view. Taking such a view, however, came with a price. Because object-things are abstractions from the flux of life, thus *externalities* (e.g. body and mind), any relations between them are spurious (e.g. Hegel 1807; Whitehead 1919). This then leads to the well-known fact that both in experimental (causal) and epidemiological (correlational studies), individuals and subgroups may actually exhibit trends that are very different from the trend in the population (Ercikan & Roth 2014). The events of life, however, *are* the facts of life (Whitehead 1919). The evental view, because a relation only exists when two events actually intersect, the relation is an organic (integral, inner) part of the larger event in which the two are constitutive parts. It may be just such a realization that underlay the intuition that “all attempts to surmount—from within theoretical cognition—the dualism of cognition and life, the dualism of thought and once-occurrent concrete actuality, are

utterly hopeless” (Bakhtin 1993, p. 7). The present text contributes to the attempt to overcome the technological thinking that continues to reign in much of psychology.

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