

## **Reading Activity, Consciousness, Personality Dialectically: Cultural-Historical Activity Theory and the Centrality of Society**

### **Abstract**

Cultural-historical activity theory, as A. N. Leont'ev articulated it, has received an exponentially growing interest over the past several decades, especially in the version in which the theory has been taken up in the Anglo-Saxon literature through the work of Y. Engeström. Whereas the theory has proven to be fruitful, providing a framework to those scholars interested in understanding human knowing and learning from a more holistic perspective, essential aspects of the original theory have either not been taken up or have been transformed in the take up. In part, the problems arise from the difficulties of translating Leont'ev – as the work of Marx on which the theory is built – into English, where several originally distinct pairs of (Russian, German) categories and concepts are conflated into one (English). As a result, the full potential of the theory has not been achieved. The purpose of this article is to bring into the foreground some of the fundamental aspects of cultural-historical activity theory that have disappeared during translation and uptake into Anglo-Saxon scholarship.

Cultural-historical activity theory – as A. N. Leont'ev (1983) originally framed it and as subsequently taken up in the Anglo-Saxon scholarship through the work of Y. Engeström (e.g., 1987) – has received exponentially increasing interest over the past 25 years (Roth, 2004; Roth & Lee, 2007). Explicitly grounded in dialectical materialism (Marx/Engels, 1962), cultural-historical activity theory is a *process* theory for understanding the human life form generally, and its concrete manifestations in human activity more specifically. In the translation from Marx's German and Leont'ev's Russian, some of the most interesting, key aspects have disappeared and are unavailable to Anglo-Saxon scholars who read *Activity, Consciousness, Personality* (A. N. Leont'ev, 1978). Leont'ev summarizes the core message of this book as an effort “to psychologically comprehend those categories that are essential for the construction of a consistent system of psychology as a concrete science of the emergence, functioning, and structure of the psychological reflection of reality, which mediates the life of individuals” (A. N. Leont'ev, 1983, p. 99). These fundamental categories, minimum units that retain the characteristics of the whole – i.e., society as a self-moving, internally contradictory entity mediating all of its parts – include “the category of object-oriented activity, the category of human consciousness, and the category of personality” (p. 99). The purpose of this article is to bring into the foreground some of the fundamental aspects of cultural-historical activity theory that have disappeared during translation and uptake into Anglo-Saxon scholarship. I begin with a concrete example of multi-levelled developmental change, which I subsequently use in the theoretically oriented parts of this paper. I conclude with a call for a re/orientation on the fundamental, currently underused aspects of cultural-historical activity theory.

## Developmental Changes at Work – in Society

During a five-year ethnographic study of life and work in a salmon hatchery (Roth, Lee, & Boyer, 2008), one of our main participants (“informants”) was Mike, a fish culturist not only known widely within his city, where he often comes to school to teach children, but also within the salmon culture community across the borders of his home province (British Columbia). In fact, he had received a national award for his contributions to the field, even though he had no special certification in biology, fish culture, and the like. Thus, for example, one federal fisheries biologist attributed to him the tremendous increase of chinook recruits (progeny) to the hatchery, which allowed scientific research on this species to be resumed. Trained as a plumber, with skills in carpentry and electrical work, he changed his job after fourteen years. He first became a part-time park naturalist and subsequently landed a job at the fish hatchery, where he has remained ever since.

Over the years he had developed highly competent practices in all areas of fish culture, including those that on the surface may be the most boring ones. For example, during the peak times of the year, more than 200 kg of fish feed have to be thrown by means of a scoop into the three ponds where about 1 million coho salmon are raised. The ethnographic study revealed that whereas highly repetitive, it is an art that machines cannot do. In fact, there had been an experiment with mechanical feeders. It was soon abandoned, as mechanical feeding tended to lead to uneaten food on the bottom of the ponds, creating an ideal environment for the emergence of bacterial diseases. The hatchery reverted to hand feeding. Inexperienced feeders do not know when to stop feeding, and, when they do know, they often abandon distributing feed when the fish do not seem to take it up. Mike, however, knows how to coax the salmon into feeding even though they initially do not “want to.” Due to Mike’s and others’ contributions, the facility became an “indicator hatchery,” a leading institution where numerous scientific studies were conducted, and which became an exemplary showcase for how a hatchery should operate.

It is not that Mike and (some of) his peers *caused* the hatchery to excel; the relation between personnel and institution is *mutually constitutive*. While we accompanied him completing hatchery tasks, “feeding” a nearby lake to stimulate the growth of algae that would support juvenile sockeye salmon, or (in the fall) while collecting dead salmon and data, he would often talk about his early years in the hatchery. He described a positive working climate with a manager who supported research designed by the fish culturists for finding ways of improving hatchery practices. During those years, Mike contributed to the emergence and development of many ideas for innovation, which, in collaboration with others, were developed into formal scientifically sound experiments that compared, among other things, different ways of (a) raising fish eggs to maturity, (b) using different sterilizing agents to protect the fertilized eggs from becoming infected with disease, or (c) anesthetizing juvenile fish when they had to be handled for taking (weight, length) measurements or marking (clipping a dorsal fin, injecting a tiny pin into the nose).

Mike described himself as giving “300 percent” during those years, to have been “a real keener.” But there have been changes. There was a new manager, and at about the same time, less support for attending conferences, designing and implementing experiments, or working on other innovations. Mike often talked about becoming disaffected, which led him to be decreasingly keen. At the time I met him, he “was putting in his hours,” coming earlier to be able to work on his own and thereby “avoiding management.” He sought out jobs that would take him away from the hatchery, such as lake feeding, capturing juvenile or adult fish in nearby rivers, doing other work that the hatchery completed for the Department of Fisheries and Oceans, or giving workshops to the public and to schools. By all means, he sounded “unmotivated” and was seen to be “unmotivated.” Although there might still have been funding to attend off-worksites workshops, Mike was opposed to sending only one or two individuals and suggested that “everyone” (i.e., the fish culturists but not the temporary [menial] workers) could attend and engage in the opportunities for professional development. Simultaneously, the hatchery had become but another hatchery: conducting hardly any experiments, having little exchange with similar hatcheries elsewhere in the province or in the U.S. Northwest.

But when he left work in the afternoon, Mike was very active. He was in the process of completing a house that he himself had designed and built. He owned a considerable amount of land, where he grew garlic and other vegetables that he sold at the weekly markets in town. He had built a greenhouse where he raised a variety of vegetables that required more heat than would normally be available in the climate – tomatoes, sweet and hot peppers, melon, and eggplants. Observing him at home or in his plantations did not provide any evidence that he was “unmotivated.”

Near the end of my fieldwork, substantive change could again be observed. Mike had taken on a younger fish culturist as a mentee (Erica), herself a very eager fish culturist. Erica had filled a vacant position but, after 13 years, lost it as the person who technically held it returned “because of budget cuts in the system.” However, Erica returned whenever a short-term position became available. When there was a vacancy, she filled it. While working with Erica, change was observable. Mike exhibited the same keen orientation that was characteristic of his early years, and he felt very positively about his work as a fish culturist. He liked coming to work and received a lot of satisfaction from it.

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The case of Mike is raising numerous questions, for which the current literature generally, and the one grounded in cultural-historical activity theory specifically, do not provide (easy) answers. As I elaborate in this article, this may be attributed, in part, to the fact that some essential aspects that characterize the original framing of cultural-historical activity theory are not used or are inappropriately used.

Over the course of Mike’s tenure as a fish culturist, there have been interrelated developmental changes in society, the local economy, the hatchery, and in Mike himself (analyzed in detail in Roth et al., 2008). On the one hand, the funding available to the hatchery has varied over time, its mission has changed, personnel generally and management more specifically has been turned over, the “work climate” has changed from being supportive to innovation to being opposed to innovation; the labor relations have worsened overall, though they have improved

for a few individuals who are said to “kiss up”; there are fewer experiments being conducted; and there were allegations of misconduct. There were also changes in technological aspects. Feeding machines were introduced, and abandoned again; and, with Erica, who had traded a feed blower for a few bags of feed with another hatchery, technology had returned without abandoning the observational and practical (coaxing) competencies of the person feeding. With respect to Mike, there have been changes in the forms of engagement in work and associated affective changes: “job satisfaction,” “motivation,” and distrust. These developmental changes at the individual level occurred against a backdrop, and were constitutive, of changes in the hatchery, which, in their turn were constitutive of, salmon enhancement in British Columbia as a whole – there was a mutual constitution of the developmental changes at the individual, institutional, and societal levels. The latter changes were integrally bound up with changes in the Canadian economy and the federal funding available for salmon enhancement programs.

When analyzing the situation, an often-observed tendency among those using activity theory would be to decompose the system at hand and to look for factors that somehow influenced or caused what was happening. For example, researchers pick out an individual part of activity – subject, object, tool, division of labor, rules, or community – and consider it as an entity that is affected by other entities. In such an approach, researchers might be interested in the “subject.” They might then attribute the “disaffection” Mike articulated to the changes in the hatchery, decreasing funding, and a hatchery manager opposed to innovation. A researcher interested in the workplace might have even focused on his “work attitude” and “lack of motivation” without considering what can be observed when Mike is in a different context. In fact, however, I was able to document changes in affect not merely on a day-to-day basis, but over the years, marked by initially positive to negative and a return to positive tonality (e.g., Roth, 2007). Researchers might attribute the changes in the hatchery to external forces, such as the amount of funding it received. The developments observed at one level - the hatchery as an institution, and that observed at another level - Mike as a practitioner who staffs the institution. Following him over the 25 years of his employment shows an increase in practical competencies, a deepening familiarity with fish culture, and an increasing competency in conducting formal experiments and producing technical knowledge in the field. Other researchers might focus on “identity” (e.g., Crafter & de Abreu, 2010; Vågan, 2011), and theorize about how Mike “constructed” it for himself *irrespective of the concurrent* – and, I argue here, constitutive – *developments of activity as a whole*. Moreover, scholars writing about “identity” might use developing competencies or knowledge as a resource (a building stone) in the construction of identity.

Traditional psychological approaches both within and outside cultural-historical activity theory generally fail to specify *what* underlies the movement and development of individuals and institutions. There tends to be something, some force on the *outside* of the analytic unit that drives development; or there appears to be some innate factor that drives individuals’ thinking or self-development (construction of knowledge, identity, competencies, etc.) – despite the fact that thoughts *cannot* drive themselves (Vygotskij, 2005). We might find, for example, an

explanation of the levels and quality of Mike's participation that focuses on the changes in the work context, such as funding, manager, relations to management, or perhaps "burn-out." But, to my knowledge, there is little or no attempt to understand such changes as *internal* to some system; and I am unaware of explicit attempts to use categories that contain change within themselves. For example, the very fact that Mike engages in the activity of producing juvenile salmon turns the positive tonality characterizing his participation into a negative one, and, conversely, participation marked by a negative tonality as the source for the development changes into a positive tonality. Rather than outside forces, *participation* in activity *itself* produces the change in participation (Roth & Radford, 2011). Similarly, the reflection in Mike's (conscious) awareness of the changes happening in the hatchery and in himself also is the *product* of his participation in the activity of salmon enhancement. That is, we then see working itself as the source of (changes in) affect, consciousness, and personality rather than requiring outside forces and causal antecedents.

In the ways cultural-historical activity theory is used, there tend to be either individual agency or outside forces, or agents using changing conditions as the reason for changing what they do. If we take the perspective from society, however, which is the approach Marx, and following him Vygotsky and A. N. Leont'ev take, then all the processes happen *within* it. From such a perspective, therefore, society is a *self-moving* entity that mediates and is mediated by movements from within. No outside influences or forces are necessary. This perspective means that relations within society mediate any of its identifiable moments, including those within and between the members that constitute society. The categories of activity, consciousness, and personality are the minimum analytic units that contain all of the characteristics of this whole: society. *This* appears to me the core of the theory that A. N. Leont'ev articulates and that is at the heart of cultural-historical activity theory. It allows us to understand the changes in human society from the moment of anthropogenesis, changes that are no longer of the evolutionary type but are of specifically human, cultural-historical nature.

## Activity

The first of the three basic categories that contain all the characteristics of society is *activity*. The difficulties for an appreciation of the theory Leont'ev presents arises from the fact that the English term "activity" actually conflates a pair of Russian and German terms that are explicitly marked to be kept distinct in the book: *dejatel'nost'*/*Tätigkeit* vs. *aktivnost'*/*Aktivität* (activity). Related to this category is the problematic translation of the adjective "*obščestvennyj* [societal]," which A. N. Leont'ev (1983) uses to render in Russian a key adjective in Marx's work, "*gesellschaftlich* [societal]," as distinct from "*sozial* [social]." The emphasis on the adjective societal [*obščestvennyj*] is important not only because it translates Marx's "*gesellschaftlich*" but also because it is consistent with the focus on society as that which makes *consciousness* possible and which determines *personality*. Thus, the analysis of the psyche requires an "investigation of the forms of societal

consciousness” and “the analysis of the being of society, its ways of production, and the system of *societal* relations” (p. 106). Finally, the category of activity is a category of *change* and, therefore, has to contain an inner contradiction that cannot ever be removed. In the following, I focus on five aspects of the theory of activity that are in danger of being misunderstood (a) because of translations from Russian/German to English (i.e., activity as irreducible unit, object/motive, society and societal relations, and subject) or (b) because of translations from dialectical logic to classical logic (i.e., inner contradictions).

### *Irreducible Unit*

The first clarification to be made concerns the distinction between two Russian/German concepts both of which are translated by the term “activity”: *dejatel'nost'*/Tätigkeit and *aktivnost'*/Aktivität. Only the former is a *category* and therefore constitutes a minimum unit that has the characteristics of the whole (society); the latter is a concept that refers to vital activity without the object/motive that orients the former. To anchor his usage in Russian, A. N. Leont'ev refers to the corresponding German words (i.e., Tätigkeit and Aktivität) while explaining that the stimulus response theory is unsatisfactory because “it excludes from the field of investigation the content-related process wherein the relationships between the subject and the objective world are realized, that is, the object-oriented activity of the subject (German Tätigkeit – as distinct from Aktivität)” (p. 137). Activity without an orienting *object* (defined below) makes no sense. But this activity-orienting object is not individual, as it may appear in some studies (e.g., Wong & Fleer, 2012). Individuals do not develop activity-orienting objects on their own but, because these are specific to society, these are an integral part of what is appropriated in societal relations with others. Thus, activity (*qua* *dejatel'nost'*, Tätigkeit) means that the subject actively and consciously orients in the world and towards its transformation for the purpose of meeting a generalized, collective (societal) need. When it appears as if there was no collective object, the researcher is required to uncover it. An example of an activity is salmon enhancement, concretely realized by the hatchery in which Mike works. Increasing salmon populations sustains commercial fishery, indigenous sustenance fishery, and sports fishery in the region. The latter brings tourists into town, a driver of the local economy.

A task in itself, such as using a scoop to throw food to feed the salmon in their ponds, on the other hand, is not an activity in the sense of *dejatel'nost'* (Tätigkeit) but activity in the sense of *aktivnost'* (Aktivität). This is so because *in itself*, throwing fish feed does not have a collective motive and therefore makes no sense. Though it does not exist in the way in which cutting through logs exists in lumbering competitions, one can envision fish-feed-throwing competitions. In this case, there would be two activities in which throwing fish feed with scoops makes sense. But the two senses would be different because the difference between the respective generalized, collective objects: producing salmon and competitive leisure.

The category of activity is the smallest unit that “does not lose any of the properties that are characteristic of the whole, but which manage[s] to retain, in the

most elementary form, the properties inherent in the whole” (Vygotskij, 2001, p. 76). Thus, to make sense of anything that happens in Mike’s fish hatchery in its specificity, the minimum unit would be the salmon enhancement activity in its entirety. In the way that consciousness is reflected in the word as the sun in a droplet of water (Vygotskij, 2005), society is reflected in an activity, including salmon enhancement. Moreover, none of the entities in the fish hatcheries taken on their own – Mike, fish scoop, fish feed, salmon eggs and milt, buildings, division of labor, etc. – reflects the whole. Their part-whole relations to the salmon enhancement activity give these entities their *specific significations*. Everything workplace-related that one can observe happening there is oriented towards the societal motive of maintaining and enhancing salmon populations at sufficient levels to sustain other, related activities including commercial fisheries, indigenous sustenance fisheries, and sports fisheries and related tourism.

The category of activity overcomes the traditional opposition between the agential (constructivist) individual and society as that which constrains the activity of the former. Instead, the societal conditions and the object carry within themselves the motives and goals of activity, its means of production and practices, so that society *produces* the activity of the individuals that, in turn, constitute society. Mike, through his participation in salmon enhancement as a fish culturist actively contributes to society (in the form of maintaining salmon stocks, as tax payer); but it is society itself that produces salmon enhancement activity. The category therefore is a dialectical unit that mediates individual and society, which come to stand in an irreducible, part-whole relation. Each part reflects, and therefore is a manifestation of, the whole. Each part can be understood only through the whole and, therefore, by considering all the other parts. Thus, “each moment is necessary . . . because each is itself an individual complete Gestalt and is viewed absolutely only insofar as its determination as a whole or concrete, or the whole, is regarded in the peculiarity of this determination” (Hegel, 1807/1979, p. 33). This leads to the fact that the explication of each moment – typically considered are subject, object/motive, means, product, division of labor, society, and rules/laws/practices (Engeström, 1987) – requires consideration of all the others. Any exposition, which begins with a particular term, has to be done in anticipation of all the other terms that determine it.

### *Object/Motive*

Activity is oriented toward an object, which A. N. Leont'ev characterizes as the true *motive* of activity. In salmon enhancement, the motive is the sustenance of economy and control over human life condition (food, income). With respect to the *object*, a further distinction is to be made, which is apparent in Russian and German but not in English. Leont'ev uses the term *predmet* (object), which, as he points out, has as its German equivalent *Gegenstand*. In cultural-historical activity theory, the object in the sense of *predmet/Gegenstand* (object) is to be sharply distinguished from the object in the sense of *ob'ekt/Objekt* (object) (A. A. Leont'ev, 1969).

The object (*ob'ekt*) is that which stands opposite to the subject; it is the transitive entity upon which the action of the subject acts. In Engeström's (1987)

structure-emphasizing triangle, the things that the subject operates on are objects of this kind. At the fish hatchery, where Mike is part of the collective subject, objects of this form include fish, eggs, milt, feed, scoop, or boat and tractor (when he repairs them). As such, each object in the sense of ob'ekt/Objekt could also be a moment in some other activity system – with different functions and relations to other moments.

An object in the sense of predmet, on the other hand, is the moving force that governs the processes of activity at the collective level; its image is a subjective product of activity that fixes, stabilizes, and contains it on the ideal plane (collective consciousness). In the salmon enhancement activity, the production of “a healthy brood to be released as salmon smolts into the river” constitutes the motive. In this sense of the concept, the object (predmet) includes the anticipated product, which, in the beginning, only exists ideally. The difference between the two forms of objects (i.e., the difference between ob'ekt and predmet) becomes most clear in formulation of the double transition that is realized in activity, which emphasizes the moving force of the object (predmet): “the transition *object [predmet] → process of activity*; and the transition *activity → its subjective product*” (A. N. Leont'ev, 1983, p. 144, original emphasis). This double transition occurs at the subject-pole of activity. At the other, the object (ob'ekt) pole, the transition is also noticeable but in a different way. Here, the material object (ob'ekt) is transformed until it is incorporated in the objective product that had been envisioned all along as part of the object (predmet).

The object (predmet) may be ideal or material; what distinguishes it from an object (ob'ekt) is that it corresponds to a societal and therefore generalized, common need. It is because of their orientating functions that need (motive) and its corresponding object form a unit: object/motive. This is significant because now the need expresses itself in the object, which, in turn, can create new needs. Thus, for example, when Mike's mentee Erica sees a feed blower that a fish culturist in another hatchery has designed and built, a new need is created. When she had an unexpected surplus of fish feed, she traded it for one of these devices thereby changing the means of production in her own hatchery. Without the mediation of the object (predmet), such a creation of new needs cannot be explained in a consistent and logical manner (A. N. Leont'ev, 1983). That is, the object always embodies and is accompanied by and implies a psychological motive. The subject therefore does not have to be conscious of the motive of activity; these may be objectified in, and as, personal interests, wishes or desires. What is important in cultural-historical activity theory is that they give personal, valuative sense to the objective conditions and actions of the subject (which does not have to coincide with the objective signification).

### *Subject*

The subject is a particular moment (part) of activity (whole), identifying the role of a person in opposition to the object (ob'ekt). The term “subject” etymologically derives from the Latin, *sūb(j)icere*, a composite of *sūb-*, under + *jacere*, to throw, cast. The subject not only is the agential moment of activity, but also literally, is what is subject to and subjected to activity. The subject is opposed to the object, from the



Latin *obicēre*, from the same verb *jacēre*, to throw, cast and the prefix *ob-*, against, in front of, toward. As an integral and irreducible part of activity, it is not the (unchanged) subject that moves into or comes from another activity. Rather, the development a person undergoes – qua subject of activity – is one that we may denote as *subjectification*. This process may be defined as “the production . . . of a body and a capacity for enunciation not previously identifiable within a given field of experience” (Rancière 1995, p. 59); this field, here, is understood as the activity system with its relations to the material world and other people. The identification of this body, which occurs “through a series of actions” in and by this body, “is thus part of the reconfiguration of the field of experience” (p. 59). Subjectification means being part of the developmental processes in which the anticipated product emerges from the specific activity – rather than being produced in another activity as Engeström (1987) suggests. Thus, the subject of activity also is *subject to* and *subjected to* his/her activity and, therefore, shaped by the environment (Vygotskij, 2001). In actual human praxis, the subject is changed in both material and ideal terms. This praxis is shaped by society. The process by means of which the *individual* becomes a member of society “can be understood only as the realization of societal development by means of individual development” (Holzkamp, 1979, p. 8). This leads to the situation that “it has to be possible to single out above all human ‘subjectivity’ as a characteristic of the total-societal process, that is, as ‘subjective factor’ or ‘societal subjectivity’” (p. 8).

### *Society and Societal Relations*

What is it that characterizes humans (“man”) as distinct from other animals? This is a fundamental question of cultural-historical activity theory, in the way Vygotsky began framing it following Marx and in the way A. N. Leont'ev developed it further. Both psychologists answer: society. In the case of salmon enhancement, the developments we observed all were *internal* to Canadian society. Salmon enhancement is only one part of a complex, cultural-historical network of activities that constitute Canadian society as a whole; it does not exist as such in many other societies. Salmon enhancement activity itself is a process in a system of relations that realizes, in a concrete manner, Canadian life form, which is characteristically *human* thanks to being life in Canadian society. Society thereby comes to be the result of relations, which themselves are the result of life in society. The relations we entertain with others and the world are shaped by the way in which needs come to be satisfied: no longer directly in engagement with the world but mediated through life in society, with its characteristic division of labor. What happens in the fish hatchery, when considered from the perspective of society, is not the result of outside forces but of *inner* forces that result from the self-movement of Canadian society. Thus, funding cuts happen elsewhere in society, for example, in the Department of Fisheries and Oceans. Its funding was cut by the federal government in response to the reigning economic situation. Every one of these processes is *internal* to society, which, therefore, becomes the overarching unit on which each individual activity depends, which in fact all constitute, and contribute to the reproduction of, society. Moreover, because salmon enhancement is connected to all

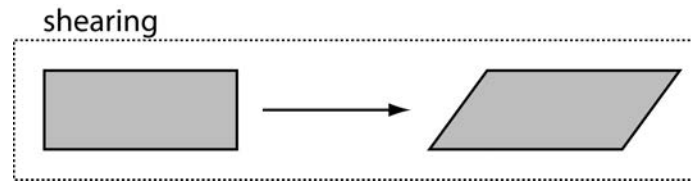
other societal activities, Mike participates in the collective control over life conditions in Canada, a participation that provides him, in the form of his salary, the means for the individual control over life conditions (i.e., food, shelter, clothing, leisure).

A focus on society entails a change of one of the moments in the mediational triangle Engeström (1987) presented: from community to society. This change would then also be consistent with the other concepts that appear in the original framing of the theory: exchange and distribution, which are characteristic of society rather than the community (of practice). It would be consistent with another other representation in Engeström, which shows how in the course of anthropogenesis, a simple triangle with three moments evolved into that characteristic of human activity with its six moments. This cell, which divides because of a division of labor, then leads to a network of activities, an *ensemble of societal relations*, that is a defining characteristic of society.

### *Inner Contradictions*

Perhaps the most important aspect that has been lost in translation is the idea of activity as a *self-moving* phenomenon of change. A minimum unit of change – because it includes the “same” entities before, during, and after change – inherently contains an *inner contradiction*. For Marx, interested in the historical evolution of society, the inner contradiction is the most important concept in a theory of a self-moving system. He applied it to exchange, one of the four fundamental activities (Marx/Engels, 1958). Most users of cultural-historical activity theory, however, focus on the structure of activity. As a result, the *diachrony* within the category activity disappears. Only a dialectical treatment can recover the self-movement of society generally and, being its minimum unit, activity specifically. The *inner (immanent) contradiction* is the core concept for understanding the movement in and of activity (Il'enkov, 1984; Marx/Engels, 1958). However, the term “contradiction” tends to be used in the sense of logical contradiction in classical logic rather than in the sense that is central to dialectical materialism and cultural-historical activity theory. Some clarification of the category, therefore, is required.

For A. N. Leont'ev (1983), the concept of an inner contradiction is required when we attempt to theorize the *self-movement* of a system: “Like concepts, our generalized sensual images include movement and therefore contradictions” (p. 135). Not sufficiently appreciated is the fact that the introduction of the category of contradiction to psychology requires a complete reconstruction of its categorical structure. The most fundamental inner contradiction of activity is the fact that it is a *unit of movement* (flow, change). A unit of change cannot be identical to itself. A simple illustration may serve us as an analogy to help understand this difficult idea. An action of shearing involves the transition of one form into another:



This entire transformation is a *unit*, including the initial state, the final state, and the action that transforms the former into the later via some trajectory. This unit (whole) of flow includes different moments, its parts. The moments (e.g., rectangle, parallelogram) are different *manifestations* of the same process. This example can be used as an analogy for commodity, which, in the exchange *process*, changes from exchange-value to use-value (Marx/Engels, 1962). In classical logic, the different manifestations (exchange-value, use-value) are understood to be the results of different perspectives (e.g., buyer and seller) or different commodities (the one with exchange-value is traded for the one with use-value). In the shearing analogy, exchange-value might refer to the rectangle and use-value to the parallelogram. The term commodity covers the transition between the two. For Marx, therefore, different perspectives or different commodities amount to differences that are external to the phenomenon. The true difference to be considered is that of the thing with itself, the non-self-identity of commodity (Il'enkov, 1959). Thus, a term such as commodity is analogous to the shearing process, referring to the before and after *simultaneously*.

Organic nature, life and its flow, are characterized by the *unity* of action, what exists in the beginning, and what exists at the end (Hegel, 1807/1979). The category activity (*Tätigkeit*) was designed to theorize this fundamental unit of change. Hegel explicitly states that to understand movement we have to eliminate grounding it in the difference of different elements, which, by means of an outside force, are transformed one into the other. To understand change, we have to understand manifested difference from inner difference. “We have *to think* pure change or *the opposition within itself, the contradiction*” (p. 130). This is so because “in the difference which is an inner difference, that which is opposed is not merely *one of two* – otherwise it would be a thing [*Seiendes*] and not something opposed” (p. 130). The relationship between movement, inner contradiction and self-relation is a generative aspect of a dialectical entity, including that of activity. Here, the inner contradiction hidden is “outwardly manifested in a contradiction of an external order” (Il'enkov, 1984, p. 265). In the case of value, the contradiction arises from the “inner relation of a commodity *to itself*, outwardly revealed through the relation to another commodity” (p. 265, original emphasis, underline added). In the case of our shearing analogy, the inner contradiction is revealed in the relation of non-identity between the entities at the two ends of the process.

In the case of the fish hatchery example, the inner contradictions of activity are precisely of the same nature because they contain at least three fundamental processes: the transformation of the object (*ob'ekt*) into the product of activity (fish eggs + milt → juvenile salmon); the transition of object into the process of activity (raising salmon stock → fish hatching); and the transition of activity into its image on the ideal plane (its subjective product). This inner contradiction manifests itself

most notably in the contradiction between outer, material activity and activity on the ideal plane (i.e., in consciousness). That is, activity refers to the entire transformation that begins with the raw product and ends with juvenile salmon, that is, it *simultaneously* refers to the beginning, middle, and end stages in the production. Each is but a manifestation of the whole, which cannot be understood in itself but only through its constitutive relation as part to the whole (salmon enhancement).

## Consciousness

Individual consciousness as *specifically human form* of subjective reflection of objective reality can be understood as *product of those relations and mediations that arise during the formation and development of society*. Outside of these relations (and outside of *societal* consciousness) the existence of an individual psyche in the form of conscious reflection, conscious processes is impossible. (A. N. Leont'ev, 1983, p. 170, emphasis added)

*Consciousness* is one of the three basic categories A. N. Leont'ev introduced that are minimum units that retain characteristics of the whole, which, as seen in the introductory quotation to this section, is society. Whereas objective reality may be subjectively reflected in animals as well, consciousness is the *specifically human* form of this reflection. Leont'ev grounds his theoretical work especially in the *Die deutsche Ideologie* [German ideology] (Marx/Engels, 1958), where the authors point out that “consciousness is never anything other than conscious being, and the being of humans is their real life process” (p. 26). The life process, that is, the production of and for human life is societal, produced and held together by human relations. Consciousness, which is the reflection of the real life process of human beings living together in society, therefore is societal through and through. Consciousness is related to language, for “language is the practical, also for other humans existing, also for myself existing real consciousness” (p. 30). It is because of consciousness (language) that humans actively *relate* to each other and to the world; and, most importantly, it is because of consciousness that the relation exists *as* relation. Leont'ev concludes: “thinking and consciousness are determined by the real being, by the life of humans, and only exist as their consciousness, as a product of the development of these systems of objective relations” (Leont'ev, 1983, p. 106). It was in Marx that Leont'ev, as Vygotsky<sup>1</sup>, discovered the foundations for a concrete psychological theory of consciousness. Both psychologists considered it impossible to create a consistent system of psychology outside of a concrete-scientific theory of consciousness.

Vygotsky had already flagged the category as an important issue. Consciousness – from Lat. *con-*, together, with + *scīre*, to know – literally is knowing-with. It is this

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<sup>1</sup> This is particularly clear in two chapters (Vygotskij, 2005) published in English as “Concrete human psychology” and “The historical meaning of the crisis of psychology: A methodological investigation.”

category that allows us to understand the relation between individual and society. It is a qualitatively new form of the psyche that emerges with and constitutes anthropogenesis (Holzkamp, 1983; Leont'ev, 1959/1981). This is so because consciousness is the reflection of practical activity in the subject; but because activity is a societal (collective) characteristic, individual (self-) consciousness always is a realization of societal consciousness. That is, initial reflection of reality *in* activity evolves into reflection *of* activity and *as* activity. For Mike, the hatchery, his work, and the workplace relations are not passively reflected in consciousness but arise from his participation *in* the hatchery work; and this consciousness, an activity, mediates how Mike participates in the hatchery. What he knows emerges in and for the concrete praxis of raising salmon populations before it becomes knowing about hatchery practice. This is consistent with a pragmatic approach, where, for example, a builder produces sound-words *in* building by means of which he gets a helper to bring slabs, blocks, pillars, and beams (Wittgenstein, 1953/1997). The sound-words are woven into the activity of building, and indeed arise from activity (Leontiev, 2005a). Later, these sound-words are used to talk *about* building; and such talk becomes an activity itself. Consciousness therefore is reflected in the word (language); and the word is possible in collective consciousness but impossible for the individual (Vygotskij, 2005). As a consequence, there are two fundamental planes or levels of activity: inner and outer. These form an organic, irreducible whole: “the normal movement of consciousness without the sensory fabric is fundamentally impossible” and “the sensory fabric present in any form of consciousness is one of the moments . . . of consciousness” (Leontiev 2005b, p. 18). This is so because (a) consciousness, the inner plane, is an activity itself developed in and reflects real practical activity (praxis, outer plane); and (b) humans actively relate to their material praxis in and through consciousness. Thus, the two planes constitute an *organic* whole only when there is a continuous coming and going between them, a continual exchange *process* (Mikhailov, 2002) – otherwise we would be dealing with an inorganic thing with *resting* properties of a *thing* (Hegel, 1807/1979). This is why inner activity, which arises from outer practical activity, is not separate from the latter, does not place itself above it, but exists with it in a mutually constitutive relationship. Despite its importance for understanding human cognition, the category has not generally been taken up in the research literature.

The introduction of consciousness as a category is required to understand the oriented nature of activity (*predmet*), which is in the direction of a product that does not yet actually exist. This product can direct (inner and outer) activity only under the condition that it exists, for the subject, in a form so that any current state in the course of the production can be compared to it, on the one hand, and that the subject can modify the psychological image of the product-in-the-making, on the other hand. These are conscious images, conscious representations, that is, phenomena of consciousness. In the salmon enhancement activity, everything is oriented towards the production of juvenile salmon. Although they do not yet exist at the beginning of the production cycle – i.e., when Mike and his co-workers take eggs and milts from the dying adult salmon. Rather, the image of the juvenile-salmon-to-be already orients what they are doing. Without this future salmon-to-be

present in consciousness, the fish culturists would be engaging in haphazard doings. Even more so, the future uses of the salmon once they return also are reflected in the activity of salmon enhancement – its value to commercial fisheries, aboriginal sustenance fisheries, and tourism. It would be a mistake, however, to think about the emerging product as a materialization of ideas into objective form. The problem of such a conception is that it reifies the subject-empirical and idealistic position typical of constructivism: “consciousness is necessarily presupposed – the presence of representations, intentions, mental plans, schemas, or models in the subject” (A. N. Leont'ev, 1983, p. 168). Consciousness gives rise to activity; but activity gives rise to consciousness. Because the product is the result of societally mediated processes, it bears the marks of society-constituting activity rather than merely those of psychological images. Mike could describe and explain intelligibly what he did and why, both to his hatchery manager, during reporting sessions and meetings, and to the media, which periodically featured his contributions (to fish hatching, outreach in schools). What Mike did, as his descriptions and explanations thereof, made sense in a system of societal relations; and his doing, descriptions, and explanations contribute to constituting these societal relations.

People consciously and actively orient to their practical world, and therefore do not simply react, but have their own reasons for engagement. What Mike does within the hatchery and outside of it, he does on the basis of what he is consciously aware of and on the basis of reasons that he can give and elaborate upon when required. His affective constitution also reflects the activity on the inner plane. Thus, he gives reasons for coming to work early, leaving early, for seeking out tasks that take him away from the facility, and for his disaffection with work. Consciousness is the lifeworld that the subject experiences in an immediate (unmediated) manner; it is the world in which the subject itself appears together with its actions, states and conditions. But it is not the world as given directly by the senses. Rather, “the psychological reality that immediately opens before us – this is the subjective world of consciousness” (A. N. Leont'ev, 1983, p. 166). Taking consciousness into account is important, for it is what mediates and controls both the subject's outer and inner activity. To understand what Mike is doing and why we need to understand what is present in and to his consciousness, because it is there that we find his subjective reasons for acting (“subjektive Handlungsgründe,” Holzkamp, 1984). Importantly, consciousness is *not* a projection of images and concepts. Rather, the ideal reflection of the movement of practical, world-changing activity in a concrete world. In the same way as he does for the category of activity, Leont'ev emphasizes *movement* and, therefore, *change* of consciousness. The main work to be done lies in the determination of consciousness as a *psychological* category, that is, to comprehend the real transitions that connect the individual psyche and (the forms of) *societal* consciousness.

The analysis of activity, therefore, is the lynchpin of a scientific approach to consciousness (Leont'ev, 1983). Thus, when societal consciousness is the object of interest, researchers investigate society, its modes of production, and the systems of societal relations that produce it. In the case of Mike and fish hatching, we have done such an analysis by tracing the 120-year history of salmon enhancement in Canada and its relation to national and local economies (Lee & Roth, 2008). When the

individual psyche is the object of interest, researchers analyze “the activity of individuals under the respective societal conditions and concrete circumstances in which they live” (Leont'ev, 1983, p. 106). In the case of Mike, we have done so in a series of studies that exhibit the dialectic of learning and development in individuals and their organizations (e.g., Lee & Roth, 2007).

## Personality

*Personality is a relatively late product in the societal-historical [obščestvenno-istoričeskogo] and ontogenetic development of man.* (A. N. Leont'ev, 1983, p. 196, original emphasis)

Leont'ev's third major analytic category, *personality*, though not generally taken up in current cultural-historical activity theoretic scholarship, has a lot of potential for explaining learning across the lifespan. For example, it provides an integrative category that explains an often deemphasized or absent continuity in the face of disjunctions a child may experience while participating in everyday practices across institutions (e.g., Flear & Hedegaard, 2010). That is, the category is useful because it resolves the logical contradictions in the notion of identity, and understanding differences in practices and performances when persons move through different settings (Roth, 2012). The integrative potential of the category of personality derives from the fact that it is theorized, following Marx/Engels (1958) and Vygotsky (2005), to be a unique and singular “ensemble of *societal* relations” and, therefore, consisting of characteristics inherently shared within society. Rather than emphasizing boundaries (that people experience) between activities (e.g., Jahreie & Ottesen, 2010), Leont'ev articulates a psychological model that explains the continuity and singular plural nature of human nature (being), the person as a non-self-identical, heterogeneous whole.

Mike, the fish culturist, participates in the course of his day not only in salmon enhancement but also in many other activities: During my fieldwork, he was fishing and hunting for subsistence, having a home and family life, volunteering, shopping for groceries, growing garlic and other vegetables to be sold in local weekend markets or frozen (dried) for his own consumption, and building a new home with his own hands. In each of these activities, he took the subject position, his role being defined by the operant division of labor. Consequently, across activities, he appeared to be *different*. Personality is a product of those processes of participation in different activities: “like consciousness of man, like his needs . . . personality of man is also produced – created in societal relations that the individual enters in his/her activity” (A. N. Leont'ev, 1983, p. 199). That is, personality is determined by the nature of those relations that produce it, which are precisely those relations in society that the person enters as part of its collective, practical, and collectively motivated activity. As Vygotsky, Leont'ev draws on Marx for understanding the person: “The essence of man is not an abstractum inherent in the particular individual. In its reality it is the ensemble of *societal* relations/conditions [Verhältnisse]” (Marx/Engels, 1958, p. 534). As a result, personality is not to be

understood biologically, as determined by genes, in terms of natural abilities and needs, or in terms of skills, competencies, knowledge, or capabilities. Rather, personality is to be understood as the result of those societal activities in which skills, competencies, knowledge, or capabilities are actually and concretely realized. As a consequence, when individuals enter new activities as part of their lives in society they also acquire/develop characteristics thereof. In fact, participation in the life of society means that our own lives are societal through and through. Characteristics of society thereby are characteristics of personality: “the psychological, when the subject is examined in the system of activities, which realize his life in society, the social, when we examine it in the system of objective relations in society as their personification” (p. 198–199).

We may understand personality therefore as a knot-work. It is formed when the societal relations that the individual entertains produce knots that connect activities. But, “the tying of these knots [uzly] is a latent process” (A. N. Leont'ev, 1983, p. 216). It is not apparent to the person – and this for good reasons: the unity of the knot-work that makes the person derives from the system of societal relations in which the person enters by participating in collective life. That is, “the hierarchical relations of activities that characterize personality of activities . . . these hierarchies of activities are produced by their own development, and they are what form the core of personality” (p. 203). The person then is the ensemble of object/motives that s/he contributes to realizing in and through his/her participation in societal life. Within the unique individual, the object/motives, all of which are societally determined, exist in some hierarchical order that determine their relative priorities for the person as a whole. Thus, if his family is the most important and life-organizing activity for Mike, and if the work of activity is only an instrument that secures the satisfaction of basic and extended needs, then we are likely to observe different forms and levels of “motivation” as the expression of his personality. On the other hand, while he was giving “300 percent,” the object/motive of the hatchery was of top priority. That is, although he continues to participate in both activities, the priorities of their object/motives change and, therefore, what appears as his personality (e.g., “workaholic” vs. “family person”). In Mike's case, changes at the workplace mediated a shift of the place the salmon enhancement activity took in the hierarchical network of the totality of activities. As a result, he was observed to be a lot, not at all, and then again very “motivated” in and at work. Thus, he must not be understood ideally, as an abstraction from the different ways in which he engages in the totality of activities of his life. The totality of object/motives in Mike's life forms a concrete whole that is neither the sum, nor the synthesis, nor an abstraction of commonalities from parts. It is a concrete whole that expresses itself in different ways depending on the relations and activity (Roth et al., 2004). In the course of his working day, Mike already talks (and thinks) about what work he will be doing on his house, or about what he needs to do to assure the maximal condition for the curing of his garlic so that he can make a profit. In fact, the form of his participation in the hatchery is the direct reflection of the other activities of his life. I was present when he received a call at work from a friend to talk about the curing of garlic and their projected sales on the following market day.



His actions may be denoted as “off-task,” but precisely as such are defining of what the hatchery-related task is and is not.

In summary, the study of personality cannot be conducted by looking at the individual itself, but one has to investigate the development of the systems in which the individual is part and which it, through its own development, develops in turn. We have seen how Mike, in the course of his life, entered new forms of activities. This does not mean that there exists a simple catalogue of activities that make his personality. The integration of new objects (a) changes the totality of objects, (b) changes their relative relationships, and (c) begins to centre around core activities and their objects. On the basis of personality lies the organization of coordinated societal activities, an organization and activities that themselves undergo continuous change – in part mediated by the membership of the person. Society is the crucial lynchpin both to individual activities and to personality. This makes the adjective societal more appropriate than the adjective social, which does not make reference to society.

## Conclusion

With society, we have found the entity that is self-moving, bears inner contradictions, and mediates every aspect central to cultural activity theory. The minimum units that retain the characteristics of society are the categories of *activity*, *consciousness*, and *personality*. Because society is a self-moving (self-developing) entity, the minimum units that have the characteristics of the whole also exhibit this characteristic. The purpose of this article is to bring to the foreground these key aspects of cultural-historical activity theory that are central to its nature as a comprehensive and consistent theory, but, as a result of contradictions in the translation process from Russian to English, have led to understandings that A. N. Leont'ev unlikely would have agreed with. The most important aspect of all may be that of society as the appropriate unit of analysis, which allows us to understand development as the result of *self-movement* that is at the heart of a *process theory* of human life generally, and its expressions such as activity, consciousness, personality more specifically. Once we take into account the mediation of all human activity by society, we are able to make major steps forward in studying and understanding really complex phenomena, such as the reproduction of the working class that occurs in and through everyday (mathematics, science, reading) tasks at school. By making thematic *society* and *societal relations*, we might be able to achieve the critical potential of Leont'ev's work, which has not been realized today in its Anglo-Saxon uptake.

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