Bernd Fichtner: Activity Revisited as an Explanatory Principle and as an Object of Study – Old Limits and New Perspectives [1]

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Activity designates a general way of looking at things, viewing something as an activity, and, at the same time, a concrete process such as playing, learning, working. The Soviet philosopher Eric Grigorievich Yudin (1978) was the first to differentiate between activity as a "perspective" – he calls this an explanatory principle – and as an "object of study." In my view, this differentiation leads to the following consequence: We can only develop a cultural-historical theory of activity further if we study concrete activities on an empirical level by making activities the subject of our investigation. But in order to do this, we require activity as an explanatory principle.

If this principle is to help explain anything, if it is to make a sphere of reality accessible in certain ways, then it is not simply to be equated with a tool. Its methodological potential is not simply, as with a tool, a quality of the term itself, but, quite to the contrary, results from its conceptual context – more precisely, from its connection to fundamental philosophical problems.

Activity as an explanatory principle is not a self-explanatory concept, but is to be developed as a philosophical theory of activity. To this end, it is necessary to generalize the findings of individual sciences, although this is by no means the final step in the process. Philosophy is not a science of science, only concerned with generalizing the data of the individual scientific disciplines. Philosophy is concerned with discovering in which way the concept of activity describes the relationship of human beings to the world and to their knowledge of the world.

Individual sciences such as psychology, history, and sociology deal – in the sense of an approximation – with a predetermined, more or less conceptualized world as Otte (1994) has pointed out in his study about philosophy of mathematics. For philosophy, reality is in a certain way fundamentally indeterminate. In philosophy, a theory deals in an absolute and precise manner with an ideal reality – similar to a work of art. Benjamin (1963) has demonstrated in his preface of *Ursprung des deutschen Trauerspiels* how a work of art is realizing this function by means of representation.

For me, the particular methodological potential of the cultural-historical school lies in the fact that its basic concepts constitute three levels simultaneously: a philosophical level, one of an individual science, and a pedagogical-practical or clinical-therapeutical level. These levels cannot simply be reduced to or deduced from one another; usually, they are sharply opposed to and contradict one another. Each level encompasses its own logic and legitimation.

Especially the often incomplete works of Vygotsky's final creative period demonstrate an entirely unusual productivity of the simultaneity of these three levels. Precisely because of

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their fragmentary nature, they provide a closer look at the "workshop" (i.e., at the process of the simultaneous work on these three levels). In the very same study, their differences and contradictions remain dynamic and effective.

Philosophy or, rather, the philosophical level does not mean metaphysical speculation, but a form of reflection which Vygotsky (1927/1997) calls dialectics in his book *The Historical Meaning of the Crisis in Psychology*.

Dialectics cover nature, thinking, history – it is the most general, maximally universal science. … In order to create intermediate theories – methodologies, general sciences – we must reveal the *essence* of the given area of phenomena, the laws of their change, their qualitative and quantitative characteristics, their causality, we must create categories and concepts appropriate to it, in short, we must create our *own das Kapital* (p. 330)

At the same time, Vygotsky criticizes relentlessly any attempts to already discover the basics of such a science in Karl Marx's *Kapital*:

It should be known what one can and must be looked for in Marxism. … We must find a theory which would help us to know the mind, but by no means the solution of the question of the mind, not a formula which would give the ultimate scientific truth. ... Neither Marx, nor Engels, nor Plekhanov possessed such a truth. … I do not want to learn what constitutes the mind for free, by picking out a couple of citations, I want to learn from Marx's whole method how to build a science, how to approach the investigation of the mind. (p. 331)

In this sense, philosophy (dialectic or methodology) as the "most general and universal science" is without any prerequisites for Vygotsky. Within the scope of its explorations in the realm of thought, philosophy attempts to apprehend those prerequisites that are hidden in this original beginning without any prerequisites – and precisely for this reason, philosophy is historical. But with this form of reflection we call philosophy – as also with art – historical can never mean that there is any such thing as progress, that Aristotle would be better or more advanced than Plato or that Marx would be more exact and more advanced than Spinoza. Philosophy ignores every possible authority apart from itself. It does not adhere to anything except itself.

One element accounting for the topicality, freshness, and vigor of Vygotsky's thought is surely to be seen in this connection. Whenever he is concerned with the child, the youth, or the relationship between learning and mental development, he always takes an original standpoint regarding these objects. The basic concepts he uses to reflect on these objects are similar to works of art. They are related to an ideal reality (i.e., they are objectively indeterminate). But their relationship to their object itself is, as with a work of art, precise and absolute.

In the studies on the "mental development of personality" from Vygotsky's final productive period, the "seven-year-olds," for example, are introduced by a mention of Charlie Chaplin. Chaplin plays the roles of adults, serious persons, but demonstrates a very childish sort of naiveté and immediacy in his behavior. Here, as with children, external and internal behavior are the same. The most essential characteristic of the "crisis of the seven-year-olds" is the differentiation between internal and external.

At the age level of seven years, we are dealing with the onset of the appearance of a structure of experience in which the child begins to understand what it means when he says: "I'm happy," "I'm unhappy," "I'm angry," "I'm good," "I'm bad," that is, he is developing an intellectual orientation in his own experiences. (Vygotsky, 1933-34/1998, p. 291)

The individual science, in this case psychology, must proceed from certain prerequisites with respect to the seven-year-olds. What a seven-year-old is, is determined by the particular procedures and methods of individual approaches to research within psychology. Here, Vygotsky always goes into a very exact and detailed discussion of the current state of research.

With respect to the pedagogical-practical level, there is a conspicuous absence in Vygotsky's work of any didactics or school pedagogy in the modern sense of the word. There is no methodological discussion of how to act pedagogically, how to instruct, and so on – but there are some studies of a certain diagnostic breadth, primarily related to special education. In my opinion, the pedagogical-practical level of Vygotsky's thought becomes apparent in an exemplary fashion in his "Lectures on Psychology." He delivered these in March and April 1932 at the A.I. Herzen Pedagogical Institute in Leningrad. The topics of the lectures range from "Perception and its Development in Childhood" to "Imagination and its Development in Childhood" and "The Problem of Will and its Development in Childhood." Within the scope of these lectures, Vygotsky (1932/1966) strictly refrains from any direct practical implementation related to teaching. Instead, he traces certain lines of development as perspectives. Here, perspectives are views that are not implemented, but rather views with which one can act. They provide a certain openness for one's own practical experiences and their development.

I will end this sketch here, as it would have to be more concretely and systematically developed on the basis of the work of Metraux (1996), Jantzen (1996), and Lompscher (1996). I consider the problem of the unity of the three levels to be a perspective that can help to oppose the current tendencies of a positivist reduction of the cultural-historical approach to a sociocultural or socio-interactional approach.

Let us return to the theoretical concept of activity. Activity as an object of study and activity as an explanatory principle are complementary; they are mutual prerequisites of their individual development. I would like to point out some issues, problems, and perspectives relevant to this context. First, I wish to inquire into the systemic character of activity. Then, I would like to substantiate a proposal to conceive of development as directedness. Finally, I will formulate a few theses on the communicative or language-like quality of human action and its significance for the concept of activity.

On the Systemic Character of Activity

Leontiev (1959/1971) devised the concept of activity from the analysis of the most elementary life processes: "*The fundamental 'unit' of the life process is the activity of the organism*" (p. 29). Here, the specific processes a living system engages in are considered as activity, indeed as a systemic formation. This description is related to a concrete phenomenon and is, at the same time, an explanatory principle. Its essential aspects are as follows:

Activity is not what an organism does. Rather, the organism consists in its activity. Activity is the mode of existence by which organisms establish themselves as subjects of their life

processes. Equally, in this perspective the object of activity is nothing the individual relates to, it should rather be considered as something the organism constitutes by its activity. Only objects relating to its activities are actually objects for an organism.

Only within and by means of the life process does that which we refer to as subject and object of this process originate. What we call the "subject" and "object" of life processes only comes into being as a result of two different perspectives on a developing system, the system of subject–activity–object.

For the elaboration of his own model, Leontiev draws from the most up-to-date model of the origin of life among his contemporaries, from that proposed by Oparin. Now, my question is: Do current explanations of the origin of life allow or perhaps necessitate a modification of Leontiev's conception?

At present, there are a number of competing models which all explicitly refer to the worldview consequences of their approaches in their initial inquiry: Why did life originate at all? Is life on Earth an extremely amazing and chance phenomenon, or did it originate with some necessity? The current debate reminds one of the worldview conflicts about Darwinism more than a hundred years ago and thus calls to mind the fact that our models for explaining the origin of life always reflect modes of discourse by which society implicitly discusses itself and its praxis.

I will restrict myself to the model put forth by. Eigen (1971), who was awarded the Nobel prize for his research on this topic a number of years ago. It is a physical-chemical theory of biogenesis.[2] I will sketch only those aspects that, in my opinion, are relevant to the conception of activity as an explanatory principle.

1. The hypercycle model demonstrates how cycles of macromolecules that reproduce themselves are generated. For the first time, linear chains of cause-and-effect become circular. Effects influence their own causes.
2. The qualitatively new feature of these systems is their functional expedience. Living systems contain a structure that has the purpose of maintaining itself.
3. This expedience is totally directed by information. Whatever is functional (i.e., directed by information) in a living system has a certain *value*.

With this perspective, information originates with the development of life. Information exists only as an aspect, a quality and result of expedient processes (i.e., of those of life). But what exactly is information in this context?

The concept of information was developed by branches of telecommunications interested in the transfer of information. As a consequence, the focus of attention for the original, mathematical theories of information is on measuring the amount of information.

2 He formulated a mathematical model for this, the main postulates of which can be checked experimentally. So this is not a model of how life actually originated, but, rather, one of how life can originate.

However, with regard to biogenesis, the emphasis is not on the transfer of information, but, rather, on its origin, its function, and, above all, its storage. Here, information is something like a pattern that allows the construction of a pattern. Information has meaning, but only if it is capable of surviving the ongoing processes of generation and deterioration. Thus, not the amount, but rather the value of information for a living system is of the greatest significance.

In this way, the concept of information becomes a "highly-charged" theoretical concept. Such a concept makes it evident that living systems can no longer be adequately described from a causal perspective, as is usually the case in physics or chemistry. Living systems react to certain external conditions, not simply in accordance with chemical or physical laws. Living systems convert external conditions selectively into activity. They achieve their objectives by evaluating something.

Leontiev described elementary life processes as a nondistinguishable union of activity and reflection. Only on a further level does reflection develop as an activity in its own right, namely, as an internal one in relationship to external activity.

Now, we can either provide a more precise formulation of this stipulation or we may have to correct it. Is not something physical in its original forms necessarily inherent in every life process? What sort of relationship exists between the information and the processes (functions) in which a living system maintains its structure? Is it a relationship between one level and a higher metalevel (Russell)? Is information a pattern that forms a connection (Bateson, 1972/1980)? Which changes result if we structure the union of external and internal activity with the figure of the "connecting pattern?" Why is activity's development a necessary result of the systemic formation of activity?[3] My suggestions will have to be evaluated in light of how much they further our understanding of activity as a system of relationships (and not of characteristics).

Development as Directedness

Biological evolution, individual development, socialization, but also history have been and still are understood as a linear process, as an advancement from the simple to the complex. The tendency from simple to complex, from immature to mature, from asocial to social is considered to be the fundamental mechanism which guides this development. Likewise, the increase in differentiation, complexity, and structure is regarded as the directedness of the development.

Today, this perspective seems to be more and more of a myth which was primarily influenced by the understanding of biological evolution in the 19th century, by bourgeois society's ideology of progress, and by certain variants of a vulgar Marxism.

3 Our language is not very well suited to comprehending the dynamics of the *subject*-activity-*object* system. Our European languages are not very well prepared to describe and represent relations developing in a complementary way. We are accustomed to begin by naming the parts of a relation, for instance, "subject" and "object," and according to this procedure the relations between the parts will surface as predicates that are tagged to one of its parts, rather than connecting the two parts of the relation. Consequently, our language suggests that relations are properties of their parts.

From the perspective of the classical theory of evolution, development has always already taken place. Thus, in order to comprehend this, it is above all necessary to reconstruct development. Discovering its laws means reconstructing the phases, segments, and sequences of development. In phylogenesis, the living organism always develops in the direction of a functional, adaptive form. This form exists as a result and functions as the criterion of the optimum in the reconstruction of the phases and stages of its development.

However, in ontogenesis, development is something that develops at each stage from the immediately preceding stage. Development is brought about by processes that are currently taking place.

On the whole, it seems rather doubtful that a simple reconstruction of phases and stages can already be considered to be a real explanation, an understanding of development. The issue of development has a much wider range of implications than a reconstruction of its sequences and phases.

What differentiates development from a simple course of events, from a simple sequence of conditions which might repeat themselves? Development is a process that for a number of reasons is affected by the impossibility of maintaining the available forms of functioning. Here, the organism is, in a sense, forced to move on to another level of functioning which beforehand was not available or not possible, or rather, forced to develop this new, unfamiliar level in the first place. Exactly the elements of such a process are what is expressed by the directedness of the development.

I see the key to a more precise understanding of directedness and thus of development itself in this impossibility to maintain previous structure and previous life forms. One arrives at a mechanistic idea of development if causes are looked for only in the alteration of external, objective circumstances and conditions. If these are seen exclusively within the organism, then development entails nothing further than self-discovery, the momentary implementation of an internal, preexisting available potential.

This dilemma can be clarified using, as did Hegel, the philosophical category of contradiction as the principle of all self-development. For Hegel, contradiction is not a logical or temporal (i.e., temporary) deviation, but rather a universal relationship applying to all of reality. In the famous concluding chapter of *The Science of Logic*, he describes the process in which differences become opposites and, finally, a contradiction, which is the "inherent pulse" of all self-development and liveliness.[4]

Thus, contradiction is not a source or driving force outside of development and alteration. The specific effects of the contradiction depend upon the intensity of the interaction between the opposites. Their mediation determines to what extent development processes are set in motion. Thus, development consists in setting up and solving contradictions; it is the form of mobility, the realization of the contradiction.

Using the category of contradiction, Hegel radically criticizes the idea of development as a continuous enlargement or reduction, as simply a quantitative decrease or increase. Development is not primarily an alteration, a transformation, but, rather, setting up and

4 "Something is only alive to the extent that it contains a contradiction within itself, and, indeed, this is the power to grasp the contradiction in oneself and endure it" (Hegel, 1832/1971, p. 59).

solving contradictions, “becoming otherwise” – breaking off gradually formed conditions and becoming qualitatively different in comparison to one’s previous existence (cf. Hegel, 1832/1971, 48 ff.). Every qualitatively significant change establishes a “new standard” in comparison to the previous situation.

At this point the question arises: How can the main element of development, its directedness, be formulated more precisely by means of these stipulations (contradiction as a driving force, development as becoming otherwise, as a qualitatively new change)?

I suggest not comprehending directedness as a specific type of sequences, but rather comprehending it as a specific organization of these sequences. In that case, directedness is something like a logical type which is not to be found on the same logical level as the change itself. Directedness is a metalevel that contains the scheme or pattern of the sequence of conditions in a certain way.

I think a position expressed by. Bateson may help to clarify this relationship. He assumes that such metalevels, schemata of processes, or patterns of patterns in extremely diverse forms characterize life as a phenomenon in general. Playing, for instance, is not a particular type of activity, but, rather, a type of organization of activity. A game is a sort of context in which the same activities attain a certain relevance and meaning which they do not have in other contexts. According to Bateson, patterns of patterns, metalevels, represent a unique type of generality which is simultaneously consistent and inconsistent with the individual and just for this reason reminds one of the logical relationships between elements and sets – a set, defined by a certain number of its elements, can never be an element of itself (cf. Bateson, 1972/1980, p. 252ff.).

Accordingly, directedness would not be a general quality, a formal characteristic common to individual qualitative changes, phases, and stages. Rather, it would be a particular way of organizing their sequences – directedness as a temporal context. In this view, directedness does, then, indeed function as a “frame” that includes and excludes by establishing premises, allowing for certain possibilities, and, on the whole, provides the changes, phases, the process of becoming different in development, with coherence, meaning, and relevance. This context is not given as a static frame of conditions for development. The frame is more of a sort of “story” that the living system itself writes as a dialog with its surroundings.

Development is a context different from the sequence of phases on the same level. The inherent intensification of opposing forces leading up to their contradiction makes it impossible to maintain previous forms of functioning, and forces the individual to move on to another level.

I wish to explain the problem of the directedness of development processes by considering the development of perception during infancy. Here, directedness is traditionally understood as an increasing specification and structuring of the perception system (i.e., as a certain sequence of individual steps). The issue at stake here does not concern the sequence of the steps, but, rather, their organization. So the question is: Which pattern, which context does the organism itself produce in the course of a dialog with the conditions of its existence?

In a fascinating study written during his final productive period, Vygotsky characterized infancy as a unique and unrepeatable situation in social development in which a fundamental contradiction materializes between a maximum social relationship and minimal communication possibilities. All of the relationships between the infant and the surroundings

and the infant's relationship to himself/herself are mediated by an adult who serves as the psychological center of every situation. The first new mental formation that corresponds to this developmental stage is an "elementary collective consciousness" (*Ur-Wir-Bewußtsein*). The child is not able to separate itself, its mental experiences, from the perception of material objects. Mental life is an undifferentiated, unstructured experience, an amalgam of affects, drives, and sensations. Recent research on infants, associated with researchers such as Bruner (this volume), Schaffer, Trevarthen, and above all Stern, has confirmed this perspective and put it into more concrete terms.

Having emerged as a new mental formation from the specific and unique circumstances of the social situation, this elementary collective consciousness (*Ur-Wir-Bewußtsein*) then goes on to alter this social situation, above all with the development of the fascinating pattern of face-to-face interaction. These effects are so diverse and significant that they embrace the entire life of the child. In comparison to other activity systems such as gesturing and motor functions, there are two partners interacting here with approximately the same possibilities for application and control, and of these two, one of them is only three months old.

During the last month of the first half-year a radical change occurs that introduces a process of becoming otherwise within development. With the development of eye-to-hand coordination that is formed within the old context, the previous pattern of interaction between mother and child is fundamentally transformed. It now has three poles and becomes a matter between child, object, and mother. The previous situation in social development disintegrates. The contradiction which had functioned as the motor of the child's development inevitably leads to the destruction of the actual basis of development and creates a new situation in social development.

The Communicative or Language-Like Structure of Human Action

In Leontiev's conception, activity is of a social character. Activities are literally produced by society. In activity, humans put their social relationship to the world and to themselves into practice. An individual activity is implemented by action which, in turn, is organized by conscious aims.[5]

Within the development of small children, long before language acquisition we encounter phenomena that cannot readily be integrated into this theoretical conception: movements and actions of small children develop a language-like, communicative structure.[6] Correspondingly and simultaneously, a symbolic structure of their perception originates. Human actions are language-like, not because they are more or less molded by a social milieu, but, rather, the reason is much more profoundly related to their structure.

Movements of animals reach a mature stage very early and then have an absolute and definite motor function. The world they perceive demonstrates a fixed and stubborn

5 Davydov (1991) effectively refuted the assumed opposition between activity and communication: "People's activity is the *only possible method* of their social existence and development" (p. 33). "People's *communication* is a judicial expression of these relations. Communication can only exist in the process of different kinds of activity realization by people" (p. 34).

6 Gehlen (1940/1986) was the first to develop this aspect in detail.

indifference regarding all sorts of perceptions that are not immediately related to vital functions or drives. Furthermore, cooperation between eye and hand is unknown to animals.

The early phase of childhood which we think we have already understood by labeling it the "sensorimotor period" is actually full of movements by which the child engages in dialog with the objects surrounding him, treating them in a communicative manner. An object is seen, touched, felt, tasted, and smelled. By means of this communication, the child experiences heaviness and lightness, hardness and softness, wetness and dryness, and so on. In these processes the hands work together with all of the senses, but especially with the eye. This coordination displays an unbelievable diversity in its abundance of combinations.

All of this is not directed by any physical needs or desires. The actions are in no sense purposeful, but neither are they reflexes or innate. They have a more or less theoretical quality. They stem from the child's own initiative and seem to be limited solely by physical exhaustion. They are performed in a social and relaxed atmosphere and, with regard to the amount of activity, are extremely dependent upon the presence of familiar adults who represent closeness, trust, and security.

All of these communicative movements and actions have a fascinating circular structure; they are circular processes. They do not only deal with the objects, but also with oneself, with one's own movements and perceptions. Tactile sensations occur simultaneously when performing tactile movements. The tactile system of the hand makes movements possible that are oriented to the active and objective pole (grasping an object) and, at the same time, to the subjective pole. The movements themselves can also be felt; they are sensorily reflective. The movements are reflected in an immediate sensory manner. Evidently, these repercussions provide an impulse to further develop the movements.

With increasing pleasure, the child produces babbling sounds. The child articulates sounds actively; the product of this activity returns effortlessly to the ear and further develops the child's sense of hearing. Apparently, self-awareness of one's own activity directs the further development of this activity.

The eye and the hand cooperate with each other. At the intersection of these two heterogeneous senses a peculiar sort of intimacy establishes itself – an intimacy which constitutes the objectivity of the world that we adults take so much for granted. The production of objectivity is apparently contingent upon its being reflected in self-awareness.

Finally, before actual language acquisition takes place, we encounter a phenomenon with a new quality going beyond that of the activities sketched above concerned with coping with the world in a communicative manner and discovering one's own abilities. We encounter the initial stages of representational behavior. Upon hearing church bells ringing, a child at the age of one or one and a half will begin to mimetically portray the movements of the bells with his upper body.

This is more than simply a superficial imitation. Independently of the given situation, the child portrays the behavior of someone (or something) else and by doing so realizes a particular relationship to himself. If there is no direct relationship to himself, the child discovers himself via the portrayed behavior alien to him.

New Perspectives

The elements sketched in the previous section can be found in all cultures, manifested in different ways and varying according to the particular fundamental patterns. From these elements, a series of questions that deserve further investigation can be raised.

1. Why have they been developed and to what end?
2. Could it be that their origins are to be found in the phylogenesis of the human race?
3. Does the development of the first activity simultaneously include two different types of action that cannot simply be reduced to one another?
4. Can the first type be adequately characterized as the entire ensemble of instrumental, technical actions oriented to changing reality, to effecting, making and producing something?
5. Can the second type be adequately characterized as the entire ensemble of mimetic, representational actions oriented to producing a meaningful context for a society or a community? Then, instrumental, technical actions would be mediated by tools and signs as primary artifacts. Mimetic, representational actions would be mediated *in vivo* and *in materia* by a variety of ritual representational means such as dances and pictures as secondary artifacts (Wartofsky, 1979).

(Translated from German by Thomas La Presti)

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