

Steps towards a sociocultural theory of learning

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Sociocultural theory has become a powerful and competing paradigm in today's landscape of social and cultural sciences. The core of the sociocultural theory goes back on the ideas of Vygotsky who developed his cultural historical theory of human development in the twenties and early thirties of the 20th century. Later his seminal ideas inspired many people all over the world, who started to elaborate these ideas and even combine them with the theories of others. Wertsch and many others combined Vygotsky with Bachtin, Wells with Halliday, several people tried to combine ideas of Vygotsky and his followers with the works of John Dewey.

Through so many creative efforts, sociocultural theory has yielded many interesting claims and productive ideas. Despite all this, however, there is still not a consistent conception of learning. In this paper I want to address the problem of learning within sociocultural theory and demonstrate that the available theories about conditions, outcomes and processes are at best partial theories that are not integrated in a encompassing whole. I will offer a possible integration and discuss some of the new issues that emerge through this theory of learning.

As a start I will explain how the sociocultural community became split into different research interests. It is a well-known fact that Vygotsky was very prolific with ideas during his relatively short life. This fact has a number of consequences:

Many ideas were proposed by Vygotsky but many of them were not systematically developed. Ideas like 'the zone of proximal development' are spread over Vygotsky's work, often in different wordings and defined with slightly different concepts. Vygotsky never had got the time to integrate these different explanations in a systematic theory (in a recent publication Seth Chaiklin tried to give an overview of Vygotsky's thinking with respect to development,

including this famous notion of ZOPED). Due to this fragmented characteristic of Vygotsky's work, different readings and interpretations can originate from Vygotsky's work, depending on where one begins. Like Courtney Cazden in an article in 1996 already said: multiple readings of Vygotsky are possible, due to the selectivity of the authors who make use of his ideas. And all of them can refer to the original sources in Vygotsky's work, and still come to different conclusions. Although this is true to some extent with respect to all the great minds in psychology, particularly to Vygotsky's work this selective reading seems to have flourished in the West. The first translation in English of his main work was published in 1964 as 'Thought and Language' but it was a strongly reduced version from which many essential philosophical and political issues were eliminated. This made it very hard to understand what Vygotsky really meant to say. Even the title was inaccurate. This is later re-translated as 'Thinking and speech' which more properly expresses Vygotsky's interest in mental processes as real life activities.

Several concepts are introduced by Vygotsky that were not analyzed at all, but that were picked up by his followers who developed those concepts in their own research programs. Alexander Lurija, for instance, developed the *psychoneurological concepts* especially with regard to language and the *culturalhistorical dimension* with his cross-cultural research in the southern republics of the former Soviet Union. Moreover, the notion of 'activity' is often used by Vygotsky, but it was his colleague Alexej Leont'ev who elaborated this activity concept in a theory of activity that described the cultural historical status of activities and their psychological potentials and structure. Similarly, Vygotsky used the notion of *leading activity* in his article on play, but never clearly explained what it was. This notion was also picked up by Leont'ev who gave a theoretical analysis in his famous 'Problems of the development of the psychic'. Later the notion of leading activity was further developed and analyzed (both theoretically and empirically) by El'konin.

These circumstances have raised many obscurities regarding the interpretation of Vygotsky's work that can even be felt today within the sociocultural theory. Michael Cole, who first brought Vygotskian ideas to America (in his famous edited volume that he published with Maltzman) had studied with Luria and brought a strong cultural anthropological interest to America, regarding Vygotsky's theory. One sees this approach continued in the works of Jim Wertsch, Jane Lave, Etienne Wenger, John Lucy, Sylvia Scribner, Maya Hickman, Benjamin Lee, Luis Mol and many others (see for example Mertz & Parmentier (eds, 1985).

On the other hand, Vygotsky himself used many European sources for the development of his theory, like the works of Janet, Piaget, Kurt Lewin, Heinz Werner. Characteristically, these works have a strong activity oriented view on human beings. And many other European psychologists have been drawing from these same resources. So it is not strange that in Europe, many people discovered familiarities with the Vygotskian approach. Many of them (like for instance Henri Wallon in France or van Parreren in the Netherlands) picked up on the old philosophical notions of activity and action, and hence turned out to be quite similar to the works of Leont'ev and Rubinstejn, who were also drawing on these central European notions. Rubinstejn, who is almost unknown in America, spent much of his work in explaining the dynamics of consciousness as an ideal form of object oriented activity. His *Being and consciousness* is one of the main works in this area and especially for Russian psychology he was one of the grand old men. Rubinstejn's thinking was deeply rooted in European philosophy and strongly influenced by Kant and Neo-Kantian philosophers like Cassirer. European psychologists who studied for some time in Moscow mostly studied with action psychologically oriented academics. E.g.: Serena Veggetti from Rome studied with Leont'ev, Jacques Haenen (from the Netherlands/Utrecht) studied with Ga'perin. So in short: Europe traditionally is more action oriented.

Two lines from Vygotsky:

This brings us nowadays in the situation that there are two main stream interpretations of Vygotsky's work:

- an **anthropological interpretation**: that focuses on culture, cultural meaning, symbols, interaction, communities etc; culture is seen as a system of signs and a matter of *meaning* and meaning exchange; this approach has strong connections with linguistics and it is no surprise that Bakhtin was picked up so enthusiastically in America. Remarkably, Bakhtin was discovered in Europe already in the 1960s by the French linguists (like Julia Kristeva), but for a very long time his ideas were practically unknown in European cultural-historical psychology (except for a small number of people interested in both psychology and linguistics). The cultural anthropological approach with its close relationships with linguistics is still very popular in America.

- an **action theoretical interpretation**: that focuses on action, activity, sense, goals, motives; culture is seen as a system of meaningful *objects for action*; this approach used to be popular in Europe, and is originally a product of a European history of thinking.

With the growing influence of American psychology on European psychology, we can find both the anthropological and the action theoretical approach in Europe. The International Society for Cultural and Activity Research (ISCAR) is the living proof of the hybrid situation in Europe with regard to Vygotskian interpretations.

Despite the attempts to integrate both approaches by Jim Wertsch (in his *Mind as action*) and by Michael Cole (in his *Cultural Psychology*) the integration of both sides of Vygotsky is still not convincingly achieved. There are still discussions popping up that try to argue that even Leont'ev was a renegade who did not properly develop Vygotsky's work when concentrating

almost exclusively on activity and (material) action rather than signs, meanings and communication. There are people who interpreted these events as a schism in cultural historical psychology, and this interpretation is supported by the fact that Vygotsky, Leont'ev and Luria separated in the early 1930s (see van der Veer & Valsiner, 1991, p. 289 – 292). It is clear that Vygotsky, Leont'ev and Lurija had different interests by then and they had different strategies in mind for the elaboration of the cultural historical approach to human development. In addition, it is not unreasonable to suppose that the political situation also forced Leont'ev and Luria to keep some distance from Vygotsky's approach (that was forbidden for a long time). Nevertheless in the follow up of his own work, Leont'ev very clearly pursued the goal that was so clear in Vygotsky's work: finding a cultural historical explanation of human development. The issue of signs, cultural meaning, personal meaning (sense), consciousness, personality and identity remained core issues in Leont'evs work, alongside his work on activity theory (see his *Activity, Consciousness, Personality*). In his essay on *'The acquisition of scientific concepts by pupils as a problem for pedagogical psychology'* (1935) he writes:

“Behind the development of meaning lies a development of activity as a relationship to reality” (see Leont'ev, 1983, vol. 2, p. 245).

However, Leont'ev is definitely not speaking exclusively about material activity here. He refers to speech and frequently uses the term psychological activity and –even more significantly- *discursive activity* (see Leont' ev 1983, p. 333, 340, 345, 346). Although Leont'ev and Vygotsky might have had different insight and interests that might have had disturbed their relationships, it is not convincingly clear that they are divorced at a theoretical level. His son, A.A. Leont' ev wrote a book about Vygotsky in which he also tries to refute this idea.

The bottom line of this whole affair now is that sociocultural theory still has to bring together

the two approaches, or better: the two ways of looking at psychological development of identities. In the following sections I will demonstrate this for the case of learning.

Learning from two perspectives:

'Learning' from a cultural anthropological perspective

In the American sociocultural community the notion of learning has been developed in close connection with cognitivism and nowadays situated cognition. It would be quite interesting and informative to write the history of the concept of learning since the 1950 and demonstrate the shift towards a cultural anthropological view learning. The work of Jerome Bruner would be an excellent paradigm case. Starting out from a cognitivistic view on learning and information processing Bruners view evolved over more than 50 years into a position that defines learning primarily in terms of acquisition of meaning through negotiation. The major factors for the promotion of this learning in pupils is the realization of learning communities in classrooms, the creation of a learning culture, and the formation of transformative teachers (see Bruner, 1996, chapter 3).

Recently the theory of *situated learning* of Jane Lave & Etienne Wenger (1991) and Wengers (1998) own version in the theory of *social learning* formulated a similar view on learning in greater detail. Their theories have attracted the attention of many people and have become very popular in the communities of social academics. In 1991 Lave and Wenger write:

“Learning activity appears to have a characteristic pattern. There are strong goals for learning because learners, as peripheral participants, can develop a view of what the whole enterprise is about, and what there is to be learned. Learning itself is an improvised practice: A learning curriculum unfolds in opportunities for engagement in practice. It is not specified

as a set of dictates for proper practice” (p. 93).

I think this is a key part in their theory of situated learning. First of all, it is clear that they identify the learner as a participant in an activity, and learning as an improvised practice. Secondly, instead of defining what learning actually is, they define the contexts that promote learning. Learning takes place through engagement in practices and not through the imposition of specific forms of behavior. Wenger (1998) elaborates this position in ever greater detail. He writes that learning is not a separate activity (p. 8), but a process that is always embedded in a practice and in the activities of a community. He writes: ‘for individuals, ... learning is an issue of engaging in and contributing to the practice of communities’, and for communities: ‘...learning is an issue of refining their practice and ensuring new generations of members’ (p. 7). But in both cases learning is not directly defined, but just referred to through what it brings about. Lave and Wenger contributed important insights to our view on cultural development through giving detailed analyses of the *conditions that most likely promote identity development*. Their focus is mainly on meaning communities and identity. These are central issues in a theory of cultural development. However, they did not give a clear theory of learning itself, which clarifies what exactly is taking place in the individuals (participants) that we might call learning and that explains the new competences that are yielded by participation. Their theory produces tools for designing environments that may be expected to produce meaningful learning, but does not explain what happens at a psychological level when people are learning. The frequently used and fashionable phrase ‘*learning as social participation*’ (Wenger, 1998, p. 4) is just a sloppy utterance, that at best defines a condition for meaningful learning and tells us very little about the learning itself. A theory of learning should not only specify the conditions and the outcomes, but also specify the processes that occur while a person is learning.

'Learning' from an action theoretical perspective

The action theoretical perspective in Europe tends to see learning as a **change of human object oriented actions**. This seems to be a view on learning that is deeply rooted in the European view on learning. Precursors of an activity approach to learning, that tries to clarify learning as a psychological process can already be found in the works of Comenius (17th century) who says that learning is based on activities and can be explained through activity. This idea was picked up and elaborated by many other educational thinkers, psychologists and sociologists in France (Maurice Blondel (1893); L-V. Bujeau (1941), H. Wallon (1942), J. Piaget (passim)), in Germany (K. Lewin), in the Netherlands (van Parreren, 1951), in Russia (Leont'ev; Rubinstejn, see also Payne, 1968). There are some big differences among these authors with regard to the nature of their psychological theories, but they do have in common the aspiration to develop a theory of learning in terms of actions and transformation of actions.

The Dutch psychologist Carel van Parreren developed an action theoretical theory of learning on the basis of the action theory of Kurt Lewin. According to van Parreren learning is a process of transformation of action structures. Imagine for example how a person learns type writing. At first he is searching for the letters one after the other. Suppose he wants to type the word 'Dog'. He searches for the letters on his type writer and finds the required letter. He types: d , but then thinks, no it must be a capital; how to make a capital. He asks his teacher or starts a trial and error process. Finally he has D. The he ask himself: what do I do now? O yes an o. Where is the o? After some searching he finds the required letter types and sees: Do (or maybe DO, when he made the capital D with the caps lock). And so on. In terms of analysis of the actions we see that the beginning type writer is performing in a very extended and insecure way. He carries out a series of actions (pushing a letter) separated by orienting actions. However, after some time we can see that the intermediate orienting actions

become shorter and disappear altogether, which speeds up the process. The structure of the typing action then changes. The writer is still pushing keys on the type writer but the structure of the whole action has essentially changed. From a slow series of actions with two fingers, interrupted by moments of intermediate orientation the actions has changed into a fast smooth ten-finger process monitored by an attentional process and with orienting moments in the beginning of an utterance and after completion of one or more utterances (when he reads back what he has written).

Van Parreren discovered in his research that every action is basically regulated by both field factors and intentions. The intentions are the plans and objectives that a person has, an image of what he tries to achieve, what he intends to do; the field factors are autonomously working factors that influence the structure of the actions beyond the person's control. Imagine you have to check a text for spelling errors, your intention is to detect spelling errors and correct them, but as you know against this intention we always tend to slip into a process of reading for meaning, and forgetting about the spelling errors. Every action proceeds in a field of tension between intentions and autonomously working field factors. Most of the time we experience these field factors as distracting factors that work against your intentions.

In the 1950s van Parreren did a number of experiments to demonstrate empirically this theory of acting and learning. However, by that time he was unable to specify precisely the qualities of actions that change during the process that we call learning. Then he discovered the work of the Russian psychologist Pjotr Gal'perin. Gal'perin did exactly what van Parreren has been looking for. He elaborated an action based theory of learning, specifying the important parameters that change during the learning process. In Soviet psychology Leont'ev (1957), by that time collaborating with Gal'perin, had already made some important steps regarding the action based theory of learning. He pointed out that human learning is essentially an elaboration of the fundamental process of orientation. Pavlov had already done his famous

studies in which he demonstrated that at all levels of life orientation is of crucial importance to stay in contact with the environment and detect dangerous events or changing conditions.

But for Pavlov the orienting reflex was based on biological-physiological processes.

However, through the use of language (or: symbolic sign systems) can code the environment and his own actions, and create a new symbolic world (and a second signal system, to use Vygotsky's words) in which he can orient and anticipate events through the use of adjusted actions. Orientation and the adjustment of actions accordingly were considered the core of human acting and learning.

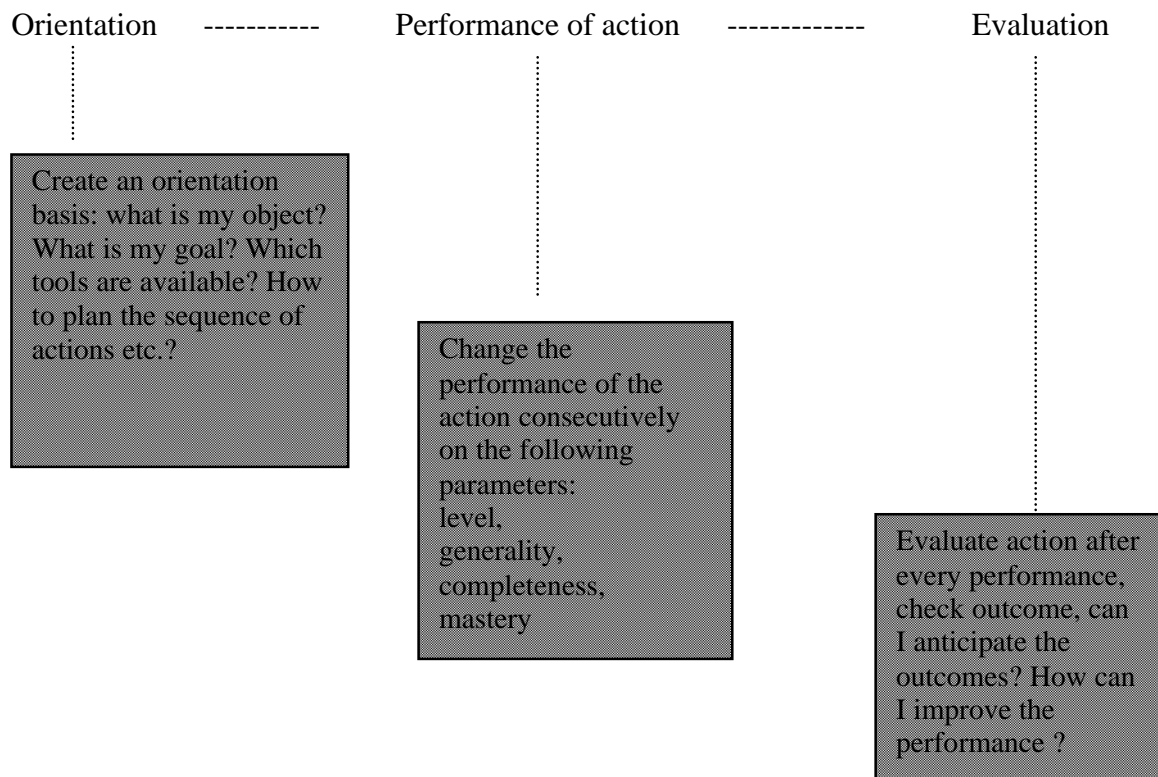
Gal'perin constructed a theory of learning based on the following model of action (see also Haenen (1996), for an elaborated treatment of the theory):

Orientation -- Performance of action -- Evaluation

First a person orients him or herself in the environment: what do I have to do? What is my goal? What is precisely my object? Which tools are available? How do I plan my action?

After this orientation he carries out the action according to the plan, and finally the action is evaluated. After this a new orientation starts and a performance of a new action can take place etc. Basically, in his view learning is a process of transformation of human action in any of the constituent parts (orientation, execution, evaluation).

On the basis of this starting point Gal'perin developed a teaching-learning theory in which he specified how an optimal learning process should take place, what kind of parameters of the action must change in order to achieve a fully developed mental action. Schematically this theory can be sketched as follows:



The orientation and evaluation part create the optimal conditions for performance and change.

The core of the learning process is the middle part (execution), because it specifies the changes that occur during the learning process.

The parameters are:

level: first start out performing the action on a material level (with a material object, and explicit structuring of the action); when this material action of carried out without mistakes (the first step in mastery!), then perform the action combined with verbal descriptions of the actions. Then pass to a verbal execution of the action (verbal level). If this is mastered to a satisfying extent, shift to performance of the action by speaking for your self, and finally by just thinking of the performance of the action and its anticipated outcomes (mental level).

Completeness: this parameter changes gradually from a complete (and sometimes even redundant) performance of all the steps of an action to an performance that skips some parts of the actions. E.g. when making a repeated addition $2+2+2+2$ we ask the pupils to say $2 + 2$

makes 4, 4 + 2 makes 6, 6+2 makes 8, but after some time this changes into: 2+2 makes 4, plus 2 makes 6, plus 2 makes 8. This is the very important process of abbreviation that can continue until the actor immediately sees the answer after the task is presented. Finally he sees: 4 times 2 makes 8. In that stage the person cannot resist thinking 8 when he sees 4x2. The action has then changed into an automatic operation, which works like an event that is triggered by the task and needs no special intention for its performance. It just happens.

(c) **Generality:** the pupils at first learns to perform an action with one specific type of objects, but during the learning process it is important that also the range of objects increases so that the action can be performed on different objects. When learning to count, we learn to count blocks, but this later changed in flowers, cups, houses, words, and even numbers. This aspect has been elaborated especially by Davydov (1972) through the introduction of theoretical models that focus on the structure of actions with generalized objects that can be applied to every situation or category of objects. With regard to counting for example Davydov demonstrated that this can be seen as a special form of measuring. This can be carried out with a real material unit (e.g. measuring stick), but is can also be symbolized in a theoretical model that can be applied to every situation: the count (C) is then the number of elements to be counted per unit:

$$\text{Count} = \frac{\text{collection of elements}}{\text{units}}$$

(d) **Mastery:** During the whole process the pupils improves the performance through the repetitions, and a growing conscious mastery of the actions.

Gal'perin demonstrated his theory of learning in different areas with success and this was repeated later by many other educationalists in different parts of the world. For our argument

now it is enough to see that Gal'perin demonstrated how learning can be seen as a process of change of actions. This is what really happens during the process of learning.

Through later discussions Gal'perin and his colleagues realized that the process of orienting is a crucial part in the learning process as it helps the learner to gain a deep understanding in his own actions. They pointed out that it is important that pupils participate in the construction of the orientation basis for the actions. Through this participation the pupils gain insight in the reason for acting, in the various ways of performing, in the quality of the tools, in the structure of the objects etc. It is clear that constructing an orientation basis is a collaborative process in which both teacher and pupils participate.

Gal'perin's theory is an important stage in the development of a sociocultural theory of learning. However, the theory can also be criticized as it focuses exclusively on the changes in the **structure** of actions, and gives no account for the meaning of actions. When learning is to be seen as a cultural phenomenon embedded in cultural activities, it is necessary to explain the aspects of meaning in learning as well. A sociocultural explanation of learning can only be complete when it can account for the process of meaningful learning. In short: *learning is a process that describes the changes in both the structure of human actions and the meaning of human actions.*

Learning as a process on embedded actions

A number of developments contributed significantly to the further development of a sociocultural theory of learning

(a) Gal'perin himself already pointed out the importance of the orienting activity for the development of consciousness and the formation of the person. In his excellent 'Introduction to psychology' (Gal'perin 1976) he explains that orienting activity is the basis of all human

consciousness. It is through orientation that the person prepares his or her actions in the world; orientation is the core business of psychology.

(b) Orientation is more and more seen as a form of reflection on human activity, its objects, tools, goals, outcomes. In the process of orientation there are different voices to be heard (it is a distributed process). As such orientation benefits from cultural experiences and is embedded in practice and dialogues;

(c) Academic learning is a process of collecting cultural and historical experiences to improve the process of orientation in practices. This is essentially a polylogue, i.e. a sociocultural collaborative process in which different participants of the practice pool their experiences and action proposals (plans).

(d) Collaborative reflection on actions and meanings leads to changes in actions and meanings in individual participants.

On the basis of (c) and (d) we can see learning on an individual level (action structures and meanings change) and on a collective level (the collection of shared meanings changes); there is a reciprocal relationship between individual learning and collective learning.

The process of construction of shared meaning in a polylogue is the construction of cultural meaning. By definition, this way of learning (construction of meaning as here defined) is inherent to community and practices.

Theoretical and practical implications

The above described approach to learning (combining the cultural and action theoretical approaches) has several implications for the development of classroom practices and for the development of theory.

Theoretical developments needed:

It is essential to develop an action-based theory of meaning. Gal'perin introduced cultural meaning into his conception of learning through the level of verbalization. However, this verbalization in Gal'perin's theory is mainly a way of coding the actions in symbolic forms to make them objects for mental activity. It is however, not clear from Gal'perin's theory how material actions are transformed into new types of objects that are accessible for new types of analyses and that may contribute to the development of meanings beyond real performance of the actions on which they are based.

The emergence of a form of discursive learning from material actions must be explained. In my view this requires at least two theoretical additions to the theory:

(a) *explaining how a basic vocabulary is formed that relates the communicative world with the world of material actions.* My hypothesis is, that this is based on the creation of **immediate identifications**. Some words (symbols, terms) must be recognized immediately, i.e. the reference must be acknowledged by another member of the community without extended explanation or identification. Like a mathematician immediately understands where the terms 'limit' or 'calculus' refer to, or like a biologist immediately knows where the terms 'DNA' or 'virus' refer to, or like every citizen immediately understands what you mean by 'table', or 'mobile phone', in a similar way it is essential to create a shared pool of terms that can be taken to be shared. Without this pooled of shared vocabulary, there is no communication possible. This is not to be interpreted in an epistemological sense, as if it is suggested that a form of universal primitive language can ever be developed (like the positivists suggested). This basic vocabulary is founded on extensive identification actions that are abbreviated into an immediate form through learning (with the help of Gal'perin theory). Imagine how we identify a new bird when we walk through the woods. With the help of a book we determine the color of the bird, its height, and its niche and by checking step by

step we finally find the name of the bird. After some time, however (when we have gone through this identification process several times), people start abbreviating the process (e.g. not dealing with the features one by one, but with several features at a time). Finally we immediately see what bird it is. This learning process is based on abbreviations in the identification process (see for further explanations, van Oers, 2000)

(b) *Explaining the transformation of action into communicative meaning*: this problem can be addressed when we go back to Vygotsky's *Thinking and Speech*, especially when he explains the interiorization of external language into thinking. Vygotsky follows here the general linguistic idea that communicative and mental actions can be restructured as topic – comment structures. Every action has a purpose and a value, and can be specified by an utterance that states what the action is about. For instance: as an answer to the question: “What are you doing?” So every such utterance is focused on a topic and the elaboration of the topic is based on additions of new qualities to the topic (“comments”) that have two functions: on the one hand they specify the topic at hand, and on the other the comment distinguishes the topic from other topics. Take the action of measuring as an example. This can be carried out as a material action where we count the number of units in the object that we measure. When we measure a table in terms of match boxes we count how many of these boxes go into the length of the table, we ‘measure’ and in the end we conclude: the table is 21 match boxes long. But we can also take measuring as a topic (assuming that other people have the basic vocabulary to understand my term ‘measuring’). We can discuss the about this measuring (without really performing it) and say: ‘it must be very precise’. This comment specifies our ‘measuring’ but also distinguish this ‘measuring’ (as we see it, from guessing, or estimating). But we could also comment this topic with (like Davydov): ‘we determine the ratio between an object and a unit’. Or: ‘measurements may vary between events’ (introducing notions like ‘error’, ‘reliability’ etc). Through the development of topic-comment structure the notion of

measurement develops: it may eventually contain the comments that we suggested, so that we do not necessarily have to repeat these all the time. In that case all members of the community understand (and take as shared) that when talking about measurement, for instance, the small variations are implied. *Discursive learning in a community of practice (i.e. through participation) is always a process of discursive learning where the meaning changes through changes in topic comment structure. Changed meanings lead to new orientation activities that finally will change the structure of the actions within the practice.*

Practical applications:

The practical applications of this approach are obvious. It refers to a process of discursive learning in a community of practice or a community of learners. Several conditions can be specified for making the communication an optimal form of discursive learning. For young children, for example, the activity in which they are engaged should be formatted as a play activity, in order to make the inquiry and discourse meaningful for the children (see van Oers, 2003a; 2003 b). For the older pupils Wells' book on '*Dialogic Inquiry*' is an appropriate example of how this learning could proceed in practice. Wells' analysis does not follow the above mentioned theory, but from a semiotic point his analysis is sufficient for arguing that dialogic inquiry is a consistent elaboration of Vygotskian theory. However, from a psychological point of view his argument is unsatisfactory. It is my opinion that Wells' argument for an inquiry-based curriculum provokes processes of learning in pupils that can be better explained with the sociocultural theory of learning than the mainly linguistic explanation that Wells gives (wherein he remains closer to the sociosemiotic and anthropological approach than to the action theoretical approach, or psychosemiotic approach). I will not dwell too long on the practical applications here, as many examples of the inquiry based curriculum can be found in the literature (see for example Wells, 1999, or

Tharp et al., 2000; van Oers 2003b). This is not to say that the strategy of an inquiry based curriculum is definitely unproblematic. There are lots of aspects that need further attention, critical analysis, and empirical foundation. However, our present explanation of a sociocultural theory of learning does not gain much now from a clarification of the practicalities of inquiry-based curricula.

So I leave it at this theoretical narrative.

To be continued.....

It is impossible to end the story here. My main claim was that an anthropological interpretation of ‘learning as participation’ tends to lose sight on what learning really is. The action theoretical approach to learning, on the other hand, tends to lose sight on the sociocultural (especially: institutional) embeddedness of all learning. When we try to combine both approaches, a number of new questions come up (vocabulary, topic –comments structures) that need further empirical and theoretical study. The available evidence is enticing so there is enough reason to explore further this version of a sociocultural learning theory.

Literature

Blondel, M. (1893). *L'action. Essai d'une critique de la vie et d'une science de la pratique.*

Paris: Alcan.

Bujeau, L-V. (1941). *Le schématisme. Psychologie de l'action.* Paris: Presses Universitaires de France.

Bruner, J.S. (1996). *The Culture of Education.* Cambridge: Harvard University Press.

Cole, M. & Maltzman, I. (1969). (Eds.). *A Handbook of contemporary Soviet Psychology.*

New York: Basic Books.

Cole, M. (1996). *Cultural Psychology. A once and future discipline.* Cambridge: Harvard University Press.

Haenen, J. (1996). *Piotr Gal'perin: Psychologist in Vygotsky's footsteps.* New York: Nova.

Lave, J., & Wenger, E. (1991). *Situated learning. Legitimate peripheral participation.*

Cambridge: Cambridge University Press.

Leont'ev, A.N. (1935/1983). Ovladenie u•aš•imicja nau•nymi ponjatiami kak problema pedagogi•eskoj psichologii. In: A.N. Leont'ev, *Izbrannye psichologi•eskie proizvedenija* [Collected psychological works]. Moscow: Pedagogika.

Leont'ev, A.N. (1957). Obu•enie kak problema psichologii. *Voprosy psichologii, 1*, 3 –17.

(Translated in German as: Das Lernen als problem der Psychologie. In: P.Ja Gal'perin &

A.N. Leontjew (eds.), *Probleme der Lerntheorie* (pp. 9 – 28). Berlin: Volk und Wissen.

Mertz, E. & Parmentier, R.J. (Eds.) (1985). *Semiotic mediation. Sociocultural and psychological perspectives.* Orlando Academic Press.

van Oers, B. (2000). The appropriation of mathematical symbols. A psychosemiotic approach to mathematics learning. In P. Cobb, E. Yackel, & K. McClain (Eds.), *Symbolizing and communicating in mathematics classrooms. Perspectives on discourse, tools, and instructional design* (pp. 133 – 176). Mahwah: Erlbaum .

- van Oers, B. (2003a). Learning resources in the context of play. Promoting effective learning in early childhood. *European Early Childhood Education Journal*, Vol. 11, 1, 7–26.
- van Oers, B. (Ed.). (2003b). *Narratives of Childhood. Theoretical and practical explorations of early childhood education*. Amsterdam: Free University Press.
- van Parreren, C.F. (1951). *Intentie en autonomie in het leerproces*. Amsterdam
- Payne, T.R. (1968). *S.L. Rubinštejn and the philosophical foundations of soviet psychology*. Dordrecht: Reidel.
- Rubinstejn, S.L. (1940). *Osnovy obšč•ej psichologii*. [Outline of a general psychology]. Moscow: Pedagogika (republished: 1989).
- Rubinstein, S.L. (1977). *Sein und Bewusstsein*. Berlin: Akademie Verlag.
- Tharp, R. et al. (2000). *Teaching Transformed*. Boulder, Colorado: West View Press.
- Van der Veer, R., & Valsiner, J. (1991). *Understanding Vygotsky. A quest for synthesis*. Oxford: Blackwell.
- Wallon, H. (1942). *De l'acte à la pensée*. Paris: Flammarion.
- Wells, G. (1999). *Dialogic Inquiry*. Cambridge: Cambridge University Press.
- Wenger, E. (1998). *Communities of practice. Learning, Meaning and Identity*. Cambridge: Cambridge University Press.