This is the accepted version of a paper presented at 1st Symposium des Forschungsnetzwerks „Tacit Dimensions of Pedagogy“ zum Thema „Tacit Dimensions of Pedagogy“ an der Freien Universität Berlin.

Citation for the original published paper:

Kraus, A. (2011)
Learning as Transformation.
In:

N.B. When citing this work, cite the original published paper.

Permanent link to this version:
http://urn.kb.se/resolve?urn=urn:nbn:se:lnu:diva-70408
Learning as Transformation

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Käte MEYER-DRAWE (2004) demonstrates clearly the significance of our topic in writing: „The How of learning retreats into darkness.“¹ „Just what one wants to see stays invisible [scil. I add: for a direct observance], such as: the beginning of learning, it’s course, it´s dramaturgy.“²

Learning is nevertheless, she continues, accessible to an oblique, lop-sided observation.³ An oblique perspective - obliquus in Latin means at an angle, lap-sided - as MEYER-DRAWE puts it, tries to understand and to attain the pre-rational, the pre-predicative and the pre-reflexive aspects of phenomena, it is to say the not-yet-rationally-reflected of being.⁴

At first this seems to be an effort to conquer an invincible fort.

In order to qualify the concept of an oblique observation, I will reconstruct its body-phenomenological context also by making the detour thematizing what Iso KERN (1975) calls “reflection on acting”.

The starting point is the idea of the human body as an intentional structure: According to Maurice MERLEAU-PONTY in our body “I” and the “life-world” merge, even before our thinking which is always belated established an order.⁵

¹ Meyer-Drawe, 2004: 90, translation by the author
² Meyer-Drawe, 2004: 77, translation by the author
³ Meyer-Drawe, 2004: 2
⁴ Meyer-Drawe, 2004: 118
⁵ Merleau-Ponty, 1986: 43, translated by the author
That means we answer to the things we experience even before we reflected on them. This special kind of responsivity is, according to MEYER-DRAWE (1999), dependent on our very way of life. – We become aware of this fact, when for example a disability, a disease, an injury, a fateful event, our ageing or our encountering of a stranger or a puzzling weird situation changes our way of living and our mode of existential orientation in a fundamental way.⁶ Think for example of the communication with a person who suffers increasingly from deafness: Then, irritations are easily emerging, his or her perception focuses more and more on special happenings, his or her movements are successively slowing down etc. Here it becomes obvious that bodily dispositions rule us. Our way of being not only determines our spontaneous responses, understood in a wide sense. Bound to a special way of our being are also the means of which we grasp reality, our vocabulary that serves us to describe reality etc. By this it is implicated that reality is not directly represented by language. – Let me illustrate this by an example I found in Bernhard WALDENFELS´ „Das leibliche Selbst“ (2000): About 50 years ago a three-year-old boy signifies a train arriving at a station as a “forward-engine“; a “backward-engine” for him is an engine shunting backwards. The boy obviously primarily perceives the qualities of the movements of the train. The distinction he made may be important, even vitally important for him standing on the station platform. Anyway, for adults this distinction is false; we consider other differentiating factors of trains as more adequate. Sooner or later, the boy will adapt to the adult way of thinking – together with a changed way of life...– Another example for the dependency of our thinking and judging on our way of being is learning a foreign language. By doing this we are not at least adapting ourselves to another way of being. The three given examples show that by perceiving the dependency of our speaking and judging on our bodily constitution in a special situation, by understanding the experiental horizon of the little boy or by realizing that a certain context familiar to us is seen completely different in a foreign language, we take over an oblique perspective. An oblique perspective grasps the way in which a statement makes sense to another person or to us. This context is not only formed by our acting or by our mental representations of our life-world, but also by our life-world itself.⁷ That is to say, each statement is codetermined by external contexts. For example during a lesson the teacher asks a pupil „what are you doing?“, de facto he means „be attentive!“. The same question might have a completely different significance in the case that it has no ambiguous sense. The sense may also be completely different, when the answer of the child differs significantly from the expectations

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⁶ Cp. Meyer-Drawe 1999
⁷ Cp. Kurt Lewin 1936
of the asking person. A situational change may modify the sense and so on. Thus, the oblique perspective shows that all we do and think has more sense than we know and are aware of. – To come back to the example of the little boy given above: The sense the child makes of the shunting train is new to us primarily, because we would make a completely different sense of a moving train. Our empathy and oblique comprehension allows us to understand the child. By taking over an oblique perspective we bring something to our mind that we did not consider before. Then we realize a certain surplus of sense, comparing to our original concept.

The oblique perspective implicates a third aspect as well: It goes along with a rupture, with a kind of crisis, with a switch in our store of knowledge. MEYER-DRAWE (2004: 116) shows that ruptures play a major role in each process of learning. This becomes clear in the notion that a learning person principally cannot exactly know right from the start what he or she will know after having reached a certain learning target. Dietrich BENNER & Andrea ENGLISCH (2004) point out many different aspects of negativity in the process of acquiring education, more precisely “Bildung”. Thus, this process for example also implicates the anticipation of still unknown development: it implicates that something might come to one’s mind (in a kind of passive status) which one cannot surely reckon on etc. Moreover, to learn something means to unlearn respectively to relearn something. In our example of the little boy, after a certain time the child will unlearn to denote the train a „forward-engine“ and a „backward-engine“.

To assume: It’s the dependency on context as well as the surplus of sense and the negativity of learning processes and such of formation that make learning retreat into darkness. At the same time these aspects constitute the very center of learning and formation processes. Anyway, as the given examples might have shown, these aspects themselves are not completely beyond access. The subject of my contribution, the interpretation of learning as transformation, brings together these three aspects, i.e. the dependency of the processes of learning and formation on their contexts, their surplus of sense and their negativity. To work on this hypothesis I will continue arguing before the horizon of bodily phenomenology (WALDENFELS) to which on one hand MEYER-DRAWE (see above), on the other hand KOKEMOHREN stick to. I will turn then to

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8 A scientific interpretation for example is determined by it’s theoretical frame, by the hypothesis, by it’s aim, by the methodology used, by methods of collecting data and of interpreting them etc. The other way round the interpretation can also effect the subject or even the field of research.
9 Merleau-Ponty (1993: 66, footnote)
10 Cp. Jean LAVE 1998
11 Cp. BENNER 2005
12 BENNER, 2005: 13
13 Cp. MEYER-DRAWE
social pragmatism (DEWEY and MEZIROW) by which some praxeological aspects of this learning concept can be introduced into the discussion. Then I will come back to didactics that are grounded in bodily phenomenology (SAVA, ØSTERN) and give an example for the application of this didactics. Learning implicates, as Bernhard WALDENFELS (2000) puts it, „[...] that we are enabled to react to [scil. different] typical, but not identical situations with variable means, that means not always repeating oneself or engraving something on our minds.“¹⁴ Thus, neither acquiring available knowledge nor practicing behavioral norms stand in the foreground of learning. Learning is not taking place in a merely cognitive way and cannot be reduced to a constant, measurable output. Above all it is defined as practicing transformation or as a restructuring of former knowledge as MEYER-DRAWE (2008) puts it. Thus, learning transforms not only its own contexts, but also our previous knowledge about ourselves and about others. In short, a restructuring of our knowledge about ourselves and the world is taking place.

Rainer KOKEMOHR (2007) puts “Bildung”¹⁵ in the sense of Wilhelm von HUMBOLDT as an empirically ascertainable transformation of a person’s relationship to the world and to herself. This process is described as based in the figurative and imaginary¹⁶ surplus of symbolic systems on which someone refers to when old patterns of orientation do not fit anymore to deal with an actual challenge. Following KOKEMOHR (2007), Bildung is a process of imaginary-symbolic con- and refigurations on the ground of a confrontation with something puzzling and at the same time it is menaced by repressions, defamations, reinterpretations, negations etc.¹⁷ KOLLER (2009) points out the desideratum of a more detailed description of such a (habitual) transformation regarding its initial point, its process and its outcome.

Regarding our conceptional frame I will stick on the concept of an imaginative dimension of a transformation described above. Just there is a deep gap between the phenomenological approaches of KOKEMOHR and MEYER-DRAWE: Whereas MEYER-DRAWE (2007) stresses the alien aspects within each experience, also inside the transformative experience, KOKEMOHR (2007) concentrates on the development of the (symbolically mediated) concept of oneself and the world in view of the alien outside the subject.

John DEWEY’s (1947) understanding of education as a transformation of experience in this regard is a little nearer to the phenomenological approach. I will sketch his understanding and then contrast it with the MEYER-DRAWEs

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¹⁵ For KOKEMOHR (2007: 16) the transformation of a person´s relationship to the world and to herself is a distinctive feature of “Bildung” to a learning process. In this case his argumentation would be displaced in our context. Moreover, his view is to be confronted with the critique that the change of attitude is a common definition of learning, while Bildung in contrast to learning includes social-societal engagement.
¹⁶ Cp. LACAN
¹⁷ KOKEMOHR 2007
concept. DEWEY considers education as "[...] the direct transformation of the quality of experience. Infancy, youth, adult life, - all stand on the same educative level in the sense that what is really learned at any and every stage of experience constitutes the value of that experience, and in the sense that it is the chief business of life at every point to make thus contribute to an enrichment of its own perceptible meaning".\textsuperscript{18} Thus, the aim of learning and formation lies in the increasingly differentiated ability to perceive the relations and circumstances of the activities in which we are involved. - What are these circumstances? Also Jack MEZIROW (1978, 1991, 2000) presented a didactical theory on transformative learning based in experience. He characterizes processes of learning by four fundamental modes of transformation, that is: 1. the adaptation to already existing frames of reference, 2. the alteration of these frames, 3. the constitution of new frames of reference, and 4. changes of one’s attitude. Consequently, we actively – for example by words and gestures – adapt to already fixed frames of reference. Hereby, they are signified in a special way. According to MEZIROW learning is initiated by commenting, interpreting and modifying these frames as well introspectively as reflexively. In such a process divergent connections are fixed and new frames of reference are created.

MEYER-DRAWE points out that these processes of generating sense in a transformative learning process are maybe accompanied by cognitions, but they do not follow the cognitive order and they are not controlled by cognitions. The imaginative plays an important role in the transformation of a person’s relationship to the world and to herself (KOKEMOHR). As such processes are potentially visible, they are empirically comprehensible, but they are not identical with the seen things, one has to look at them obliquely.

My hypothesis is that the application of this notion of learning becomes clear in the didactical concept of learning as a process of \textit{multimodal} transformation introduced by Anna-Lena ÖSTERN (2008, 2010):

\begin{itemize}
  \item Movements, voices, gestures, mimics, symbols, images, the impact of a room etc. mediate a full spectrum of meanings on the pre-reflexive level. Especially in the transition of one form of expression to another, for example from a spoken word to an action, from an action to an image, etc. meanings can be concisely condensed, altered, moderated, fortified, simplified, complicated and/or styled.
  \item We all agree that scientists might tend to regard language as the most important instrument, but however, there are things that are better expressed by an image, by music etc. – To give an example: Imagine that during a speech the orator would suddenly look around in an irritated and fearful manner, as if he saw somebody entering the room with an evil intention. The audience would presumably try to get an information from the orator by intensively following his further explanations, gestures, mimics etc. Maybe the audience would even find an explanation without the orator changing his script. The meaning of his script
\end{itemize}

\textsuperscript{18} DEWEY, 1947: 53
would change, dependent on the situation. Here it becomes evident that our actions comment our speech, independently of cognitive processes and they provide it with meaning. When on the other hand the context and the contents of a speech do not correspond at all, it stops making sense to us.

Additionally to this: Kay O’HALLORAN (2005) points out the bodily bondage of our speech. The possibilities of the visual, the impacts of a room e.g. could be used and combined in a way making the semiotic value more significant than the sum of meanings deriving from each of the single resources.

We know from the field of art: A work of art gets its meaning from the impacts of the room itself, from associations, from actual happenings etc. Such contexts are in a way evident. At the same time they are not, they elude evidence. We can grasp them only by applying the oblique perspective.

This implies the idea that ways of insight and learning can be arranged multimodally – whereby we arrive at didactics.

Especially digital media make it possible to juxtapose films, images, texts, audio – media already at hand, to combine them and to proceed with them. Hereby, informations are not only mediated multimodally, that is to say through different sensory channels. They can also be recalled multimodally, by movements, even in a tactile way.

In the context of media analysis Gunther KRESS (2009: 54) explains that multimodality delivers devices for findings, insights, as he writes: „The term [scil. multimodality] maps a domain of enquiry“. Referring to this statement Kay O’HALLORAN & Bradley A. SMITH (2011) regard multimodality as an adequate means for the acquisition of expert knowledge. This acquisition they regard as concrete, explorative, descriptive as well as theoretically well-founded and critical. Anna-Lena ØSTERN (2008) deepens this thought by referring to a concept of Inkeri SAVA (1993). SAVA interprets learning as a way of understanding and making understood phenomena and processes by means of different modes of - verbal as well as non-verbal - expression. An item is transformed by being repeated and by being differently connoted. Hereby it is more and more grasped in its complexity. The means of comprehension here is not cognition, but attention. The term of attention used here accentuates the explicative character of attention. That is to say, attention here is not regarded as mapping reality, but as an interpretative perception. The impulses and the handling here is dependent on the means of expression at hand. The central task of didactics then is to make processes of transformation possible, to initiate them and to further them.

Hence, the task is empirically to explore manifold, multimodal, technological interdependencies and processes of transformation and to make them manageable. For this task I developed a means of instruction and research which I call „Sensitive Threshold“.(Cp. KRAUS & ØSTERN 2008) Proceeding

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19 Cp. KRAUS 2008
from the following reflections, I will essayistically sketch the concept of this means.

Locations where learning takes place, as for example the school building, usually cause a very special initial situation for learning. In general a setting of associations that is primarily bodily mediated involuntarily imposes upon us when we enter a room. We perceive sensual stimuli typical for this special location and we interpret them emotionally, mainly by spontaneously activated individual memories. Therefore, these associations differ from person to person or from one state of mind to another. Entering for example a public swimming pool to visit a beginner’s course a person who loves water has certainly very different associations from those of a person who is afraid of water. Likewise, other public, half-public or private locations affect us: A person on a threshold very often is seized with certain feelings, expectations, anticipations, misgivings or imaginations and so on. Generally, one sort out one’s associations automatically and in a split second adjusts oneself to the coming events. Regarding this moment, we can imagine the possibility of an intuitive, pre-reflexive and associative reinterpretation of the situation by bodily means. A phantasy might occur, eventually making the person wonder about whether he or she really enters a well-known room crossing the threshold, or whether the individual interpretation of the location might be completely different. Thus, one could imagine a change of the inner representation of this location on account of new experiences. By entering the school building, for example at the start of the lessons, one generally perceives a babble of voices, feet scratching, doors banging, · from the kind of echoing one can conclude the size of the corridors etc. Imagine, these sounds would interfere with other sounds or even be predominated by them. Then the flow of the well-known would be interrupted. Eventually one could experience a surplus of meaning: At least, the situation would suddenly be ambiguous. In an oblique way, that is to say mediated by an intuitive interpretation of this ambiguity, maybe completely other contexts are then displayed or realized inside the perceiving person.

The concept of the recordable sound installation „Sensitive Threshold“ is to cause this effect. – I will shortly explain the technical idea and it’s realization:

We all know the operating mode of audio-guides in museums: in the frame of an exhibition. Here an audio-guide (also JPS) mediates a broad knowledge e.g. about cultural significant contexts by means of casted sounds. Principally, a huge amount of cultural events or images could be acoustically mediated and explained by atmospheric sounds, verbal explanations, music etc.

A camera and six loudspeakers are built into the ceiling of a room. The camera is connected to a computer which runs a special software. This software analyses and extracts the movement data out of the streamed camera pictures. With the help of the software interface one can freely distribute up to six zones that are sensitive to the movements within the room. For each single zone the software contains parameters for zone position and size, fade-in and fade-out time and
again. So, every time a person walks through such a zone, a sound is triggered and will be played back by the loudspeaker that is related to that zone. Every zone can trigger up to eight different sounds.

The “Sensitive Threshold” runs as an automated installation in diverse schools, mainly installed in the foyer. It is used in all grades. In short, by arranging the different sound-stations of the “Sensitive Threshold” analysing a certain topic concerning the sounds connected with it, looking for sounds and gathering and coordinating them the pupils make different topics audible. Thereby free writing can be initiated or actions can be caused etc.

Referring to the „open architecture learning model“ by Terry WRIGLEY (2001), our installation is regarded as an open situation for learning projects in school. According to this esthetical concept of incompleteness, „vital“ design the user is provoked to engage himself in the architectural construction in a creative way. The digital system of this so called „open architecture“ can also be expanded by means of additional elements. In this respect it can be regarded as DCBL (Design Challenge Based Learning) according to Eli BLEVISs (2010) which enables an explorative and creative examination of everyday-topics as well as school-topics. It provides a ground for individual, cooperative and competitive activities and for public presentations and critique. Challenging topics are not only grasped in an explicit way. The aim is to accept also implicit approaches and supply them. That
is to say, even if there are no words to describe a thing, it can be expressed acoustically.

To go a little more into details, by doing research in different media the pupils examine topics such as “Middle Ages”, “Love”, “The Fabrication of a Tin” etc. By transforming such a topic into a sound carpet they affiliate their own funds of experience to a high degree with outer contexts. This is performed, supported and materialized by the manifold translations and transformations connected to the process of working with the “Sensible Threshold”. It may start with a free association to a certain topic by connecting it to former experiences, after that these associations might be translated into sounds. Then the sounds are combined in order to transform them into a coherent audible scenery by drawing on imaginations etc. The finalized audio-installation can be complemented by manifold other media such as pictures, objects, performances, other sound carpets etc. A surplus of meaning going far beyond the verbal skills and possibilities can be expressed here. Thus, children who have only a poor knowledge of the major language in school can get a chance to explore a topic autonomously. Seeking for possibilities to articulate some aspects of a topic also verbally that have at first been expressed non-verbally the pupils can improve their vocabulary and terminology at the same time as they get a deeper knowledge of a topic that is maybe staying in their memory. By working with these auditive sceneries and optionally by referring to diverse immersive didactical practices also a second language can be acquired.

The empirical study on this means of instruction and research still is a desideratum. Anyway, all these pedagogical intentions, as I want to show in the following paragraph, can be reflected back to the theoretical outlines described above.

The learning process initiated by the setting of learning in fact retreats into darkness. Anyway, there is the chance to document the ongoing transformations by diverse material (verbal or pictorial associations, verbal interactions, outputs of an investigation etc.). This permits an oblique view from different angles by which the changes that accompany the translation or transformation of a certain manifestation of sense into another medium can be profiled. In other words, beside verbal explanations or measurable outputs in this setting of learning, multimodal e.g. material, practical, performative, iconic, spatial, inter-subjective/social aspects become visible that are tracing learning processes (cp. ØSTERN and others). This argument is mainly based upon the notion of MERLEAU-PONTY (see above) that all these pre-reflexive aspects meet and influence our intentional structure even before we start to think. MEYER-DRAWE (see above) stresses the alienation inside our experience facilitating our responsivity as the essential ground for our learning. Thus, the multimodal, such as material, practical, performative, corporal, experiental, iconic, imaginative (cp. KOKEMOHR), spatial, inter-subjective and social aspects of a learning situation worked out of an oblique perspective can be regarded as factors that might bring
out a transformation of a person’s relationship to the world and to herself. That is to say, (only) the *chance* of a learning process can be grasped. Also by taking over the oblique perspective, the learners themselves can get aware of this chance of their own situated learning. In doing so, they form and improve their ability to perceive the diverse challenges of learning. In a way, they learn about their learning by experiencing its traces (cp. DEWEY). Then, they retrace (cp. MEZIROW) their own adaptation to already existing frames of references: they grasp the alteration of these frames and the constitution of new frames of reference during their work; and maybe they also get a hint of the changes of their own or other’s attitude. The latter concerns the practical and material side of this transformation taking place in a learning process.

**Acknowledgements**


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Areas of Research: school development and classroom research, theories of learning and competence, integration of artistic positions in didactical concepts and research, tacit
dimensions of pedagogy respectively corporality in school, heterogeneity in pedagogics, anthropological questions, empirical phenomenology, documentary method, videography

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