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Towards a Constructivist View of Action Levels in Learning Processes – a Plead against Naïve Realism

The constructivist realism as developed by Friedrich Wallner is no naïve realism based on a simple copy theory. Like the interactive constructivism[1], which I follow, the constructivist realism also opts for a context related and culturalist view. We never just learn images in a situation which then can be programmed into us by instructions like into a computer. Even when learning by heart, we need to refer to a learning context which makes knowledge appear relevant and meaningful as well as significant to us and our acting (e.g. the act of learning by heart).[2] In the following contribution I would like to describe three action levels of learning[3] that can cause mutual strangification, a circumstance which can be well described by Wallner's theory of strangification. At the same time, this contribution shall point out why a sensuous and »real« starting position is necessary, yet, not sufficient for the constructivist part of learning.

What are the contexts of action that particularly foster an easy, efficient, extensive, and solid learning? Learning theories facing this question will immediately connect it to another question: What are the action levels like, that can be assumed and may be planned in order to stimulate successful learning? At least since Rousseau published his novel on education, *Emile*, education theorists have been discussing the question, if it is better to learn in an actual situation, in a practice from which learning tasks may emerge in a sort of »natural way«, or if it proves more advantageous to summarize and prepare things beforehand in such manner that the learner may quickly learn as much as possible in an artificially created situation as, for example, represented by school.

What point of view will a constructivist theory of learning assume when dealing with this problem today? I will try to analyze this question by offering a simplifying distinction of three action levels to be taken during the act of teaching or learning with regard to actual perception, sensory experiences or more abstract

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1   Cf. to http://konstruktivismus.uni-koeln.de

2   Cf. hereto e.g. John Dewey in: »Democracy and Education« (1985, 146 ff.); Dewey established in many works that cognitions can not be observed in an isolated way, but always presuppose a sphere of experience. This means an important basic attitude for learning: It can not only ask for contents and its conveyance, but also needs to pay attention to the action-related significance for the learner and the communication connected therewith as a frame of action.

3   Cf. Reich, K.: Konstruktivistische Didaktik. Neuwied u.a. (Luchterhand) 2004[2].

generalization. By doing this, I am going to introduce some distinctions that may help teachers and learners to critically observe and question themselves as to the level of acting they enter at a time.

Levels I will define as observer's constructions, i.e. perspectives we take when looking at a learning process. A level is thus meant to describe a field of actions placed in a similar observation sphere or context and showing common features which enable us to identify a structure, some kind of order, or special patterns that can be compared. For a survey of the levels that I am going to introduce, refer to diagram 1 (below).

Learning and teaching action levels	Communication (dialogues)	Objects	Contents	Relationships (behavior)
immediate sub-jective experi-ence (being there)	S – O	I see/perceive, so I know	appear as quasi-images	appear as quasi-images
conventional experience (regulated dia-logues)	S – IC – O	I see/perceive, as others see/perceive, so I know	are set up con-ventionally from outside and confined to a limited range of knowledge	are set up con-ventionally from outside and confined to a particular be-havior
discourses (open dialo-gues)	S – IC 1 IC 2 IC 3 etc. – O	I see/perceive, as is seen/perceived differently, so I know	are agreed upon openly as pos-sibilities within a variety of knowledge ac-cording to vi-ability criteria	are agreed upon openly as pos-sibilities out of varying forms of behavior ac-cording to vi-ability criteria

S = subject; O = object; IC = interpretive community

Diagram 1: Three levels of learning

a) Immediate subjective experience

When reflecting on the self-observations of a teacher or a learner, s/he first of all appears to be a subject facing reality *for herself/himself.* This reality seems to represent itself in the subject: In a given situation, s/he experiences objects in the world, things, events and other subjects in an *immediate subjective* way and *immediately* visualizes them. It is part of the realistic intuitions that we rather trust an actually experienced reality than one that has only been theoretically described, e.g. by being put in mere words, by being dreamed or pretended. This kind of realism always appears solid to us because since childhood we have been encour-

aged to make use of our senses in order to verify how real or certain things are »in reality«. We are supposed to permanently distinguish on an objective, relational and contents level what »really« happens in order to delimitate this reality from what has been only imagined, was based on deceptions or was meant but is not really significant. The claim of a subjectively perceived immediate experience of reality, i.e. a reality which is *real* to us, is meant to help us to distinguish actions which we are forced to carry out due to accurate perception and reasonable understanding and also help us to delimitate them from those that we can or should refrain from due to insufficient certainty or deception.

Yet, in such realistic expectations we experience day by day that we are placed in reality together with other people who all have a gradually different perception or ability of conception of this reality. How do we react to these subjective differences within a supposed objective immediate experience that actually should be equal to everybody? Our confidence in an objective perception seems to be solely based on looking very closely and exactly at objects, taking them up in an unfractured way and mirroring them in us in order to come close to reality and to what true reality is.

Within immediate subjective experience we are close to our individual perception and therefore close to the interface between ourselves and the world *out there*. This is what philosophers described as a subject-object-relationship (S – O). I see the world, I perceive something, and I immediately seem to know what *is*. According to Hegel, this is the basic step into consciousness. He called this step sense certainty.[4] However, this is a very subjective point of view; we assume that we can see a thing in private and that the world is exclusively at our disposal. If we claimed this, we would have to bear problematic consequences: Nobody will see anything except for what s/he sees the way s/he sees it, s/he will remain all on her/his own and will not understand anything but her/his individual immediate subjective experience that seems to be very limited if we take a look from outside.

If we took this subjectivity for granted, everything would end up being interchangeable. But when we critically view our action, is there any such interchangeability? To insist in such privacy or pure subjectivism is impossible when living within a cultural community. However, the private as well as the subjective can describe a borderline-condition of communication, conceding the subject to have *her/his* immediate subjective experience and perception, while at the same time demanding from her/him to communicate with *others* about how to interpret her/his singular experience in the context of generalizations. Thus, s/he is now able to state the fact that in this particular culture this or that or another phenomenon will be perceived predominantly in this particular way, but nevertheless I, as a special individual within this culture, do see something else in addition. Nowa-

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4 I use the term *sense certainty* (»sinnliche Gewissheit«) in my German publications to describe this level of acting.

days, I am granted to claim such subjectivity within certain limits which are regulated by communicative agreements on common interests– as, for example, language and other conventions.[5]

The constructivist approach stands in contrast to all copy or correspondence theories of knowledge. The subject-object-relationship (S – O) as a mere copy relationship is nothing but an illusion. For the act of perceiving (containing anything that has been perceived in terms of culture already) always implies claims, expectations, habits, preferences, sensations that enter into those perceptions and ideas. This is regulated by convention beforehand as well as during the act of perceiving. So I may see a table and I feel that it is beautiful. But how do I know about the table? It is due to cultural habit and to a world developed and transmitted within a culture, due to my situation in life-world and to language, due to preconditions placed far beyond my capacity of perceiving. Perception first of all is a means, a method of acquiring various contents of a culture. In a singular moment perception is even more, it is immediate subjective experience (what Dewey named *primary experience*) in the abundance of impressions, feelings, associations. The beauty of a table, however, I do not know until I have been initiated into the subtle cultural game of differences that produce different perceptions of tables as constructed distinctions.[6] This is why immediate subjective experience represents an important action level with learning: It grants a subjective sphere of experience for individual examination of facts and statements in order to create their viability in the actual experience.

If the comparison between subjective experience and the objectivation of life-world is supposed to take place from a mere realistic perspective and if it is expected that the fight will be decided only in favour of one's own perception against everything else, then constructivist epistemology sets in to disillusion our expectations. What can we put forward in particular against such realism and mere subjectivism as it can always be detected in learning theories? I am going to state some reasons:

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5 Though undermined during recent decades, judging according to the criteria of normal/abnormal does, still, serve as a conventional barrier between what may be and what may not be approved.

6 Bourdieu writes in his famous book *Distinction: A Social Critique of the Judgement of Taste:* »Taste classifies, and it classifies the classifier. Social subjects, classified by their classifications, distinguish themselves by the distinctions they make, between the beautiful and the ugly, the distinguished and the vulgar, in which their position in the objective classifications is expressed or betrayed.« Thus the language game about the table and the beauty is a construction of distinctions that makes distinctions. It shows limitations of the subjective experience, but it is a necessary step to give the subject a distinction it can work on.

- A realism that wants to make us believe that reality can be easily copied or mirrored, is unable to make us understand why human cultures have reacted so differently to the supposed pure nature out there. Why weren't we all supplied with the same understanding by images? In the succession and coexistence of cultures we need to admit that there are not only different versions of world creation within different cultures, but, in present times, also within one culture.
- Even the hard sciences were unable to establish a world image in which they achieved a concluding agreement on facts. At most, they managed to agree a little bit more in joint discourses for a certain time on a methodical level than, for instance, the cultural sciences which need to admit a larger spectrum of indeterminacy from the very beginning.[7] Yet, the venture of an unambiguous reconstruction also follows a methodical narrowness which constantly produces risks in other areas as a consequent effect.[8]
- Today, we can no longer fail to notice the postmodern offences inflicted on science. Nelson Goodman, for instance, talks about the loss of the one world also leading to the loss of the one correct version of world.[9] Nowadays, we need to engage into the idea that several »correct versions« of world exist successively and simultaneously. It does not matter which construction of world we look at, we will always discover and invent different, but at the same time – each for itself – correct (viable) solutions within them. Putnam has stated his conclusion from this understanding when examining Goodman as follows: Each construction of world can be formalized and each of the thereby developed formalisms represents a completely legitimate parlance; yet, Goodman would say (and Putnam would agree) that none of them can claim to be in such a way *as the things are independent of experience*. There is more than just one true description of reality. (cf. Putnam 1993, 254)

Immediate subjective experience, as a first level with learning, now appears conflicting against the background of this problematization:

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7   Some very restricted areas show a consensus, which, nevertheless, is regulated by conventions. Cf. thereto for instance from an interactive-constructivist perspective, e.g. the pedagogically relevant analysis on time by Hasenfratz (2003).

8   These effects have clearly emerged during the 20th century. The stronger scientific-technical progress was developed, the higher grew the risks, which were caused by it, as well as the perception of the risks (e.g. the risks of nuclear energy, nuclear weapons and other weapon technologies, gene technology, complex ecological crises; they also include the possibilities of mass murder and the destruction of life which show a scientific-technical background).

9   This loss is explicitly elaborated on and described from the perspectives of very different post-metaphysical theories of the 20th century. I also speak of movements of offended reason which, amongst others, lead to a genesis of constructivist thinking, cf. Reich (1998 a, b).

a) It is consistently part of our human experiences that we need to – and also can rely on immediate subjective experience, our own perceptions. In doing so, we experience the differences of theory and practice and consider it to be a realistic and viable attitude to believe in theoretical predictions and statements only then if there are practical clues of verification, that is, if we can find, see, and touch objects in our own experience, our perception and if, thereupon, these objects pervade our conscience as images and can therefore be counted as real. This also includes, for instance, experiences in which we see something as an eye-witness which we can report on. We are particularly scared if something has been hidden or concealed from us so far and is now revealed to us in a situation. When being amazed or terrified, we are very close to *the real* and change our view of reality. This includes all experiences which we make when we allow an immediate subjective experience to produce an as comprehensive as possible effect on us, without having ourselves pinned down too rashly to specific patterns of interpretation or previous experiences. In such moments we are open for assuming new perspectives on events and also to oppose the singularity of experience against generalization because we rather trust our subjective feelings than the conventional requirements from outside.

(b) At the same time we consistently need to concede that by now the so called »pure« reality has been long since interwoven with human constructions, which – as prerequisites – determine what we had until just now thought as pure perception. Regardless what event, we are always unable to completely step out of what we have become. Our socialization has aroused feelings like disgust, shame and doubt, our patterns of interpretation allow only specific perspectives, and our environment determines us on specific preferences of perception and impulses. Although we think that, due to our immediate subjective experience and perception, we have our very own view on what we perceive, we readily fail to notice how many other opinions have already become part of our judgment.

Learners and learning theories that refer to immediate subjective experience will, from a constructivist view, be unable to relinquish critically observing the supposed realistic images which are produced subjectively in situations of perception against the background of their cultural/social use and context. Yet, constructivism is not claiming that objects or situations could not be comprehended in a particularly close and direct sensuously manner. In his pragmatic approach, John Dewey has already established that, regarding learning, immediate images are granted a particular dignity: Learners are supposed to make as many direct experiences as possible in order to increase their awareness for the use of objects within their life-world by *experience.*[10] Yet, Dewey also pointed out that this would

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10 More precisely, this does not mean immediate images in the sense of an unambiguous reflection, but images which are created by a subject for itself in a concrete, direct,

never produce »pure« images[11], because man defines the significance of immediate subjective experience within his understanding and explanations only by its use and context. Insofar, nobody will be able to sufficiently learn something if s/he just tries to remember objects of seemingly immediate subjective experience.

A concrete image focuses on what is there. I take a walk and see a tree. I can have various immediate subjective experiences with this tree. I can touch it, climb it, rip off branches, grind leaves between my fingers. Yet, if I want to explain such experiences in a symbolic way to myself or others, my immediate subjective experience (in terms of an inner image) is of no use to me. I have to start describing, producing images in my mind's eye which are more than just a copy, create words, detect meanings. As soon as I start to talk, the tree has changed in something different. It is no longer the one image that it seemed to be until right now. According to brain researchers, it is, anyhow, not the pictured tree, because, as the brain researcher will explain to me, as a human being I already enter presupposing prerequisites into the image. These help to produce a human image which may appear to me as a real image, but would produce a completely different image for another category.[12] Insofar, images always have to be discussed against the background of generalizable possibilities and prerequisites within the act of copying.

Yet, particularly with learning, we consistently place a large emphasis on images. Until today, this form of naturalism is particularly common with pedagogics and didactics. Teachers are preferably ushered into a position where they offer to the learners such supposed images which associate and locate an object with the designated denotation in order to build up a realistic world picture. Particularly during the first school years this tends to be a popular method. Object lessons serve to show a pictorial world which is claimed to be the real world – this is supposed to produce a realistic basis for a cultural understanding. Yet, unfortunately this also produces an illusionary world in which people believe that they are able to produce an unambiguous world with simple images by means of perception.

Perception itself disposes of no criterion for the cultural evaluation of the contexts of the world. Insofar, perception may deceive us exactly when living in a quasi-world (as symbolized by the film »The Trueman-Show«, for instance). Perception is only of help with the cultural evaluation of the world if we notice the contradictions between the promised, expected, standardized world and our concrete (perceptible) experiences made within this world. Yet, the promises, expec-

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sensuous situation in which it is then enabled to compare this creation immediately with the experience in the situation (verification of reality and experience).

11 As an introduction hereto, cf. Dewey (1985); Neubert (1998).

12 With regard to such biological understanding, brain researchers tend to deduct a realistic and naturalist point of view by failing to take notice of the cultural integration and conveyance and by reducing everything to biological aspects. As introduction hereto, cf. e.g. Edelman/Tononi (2000, in particular 140 ff., 207 ff.).

tions will often easily seduce us to only perceive what others want us to perceive, i.e. we will judge according to desired and undesired perception.

Standardization by means of desired images is quite large: correct spelling, ice handwriting, a correct image, the exact denotation, an unambiguous use of igns and symbols, the correct experience. Therefore, the first years in school are, or instance, the time in life when children start to explain to their parents that the image of the world they have been provided with so far is not correct because the eacher has provided them with a completely new one. Already before attending :chool, we not only develop a certain egocentrism of reality construction along-:ide the makeup of symbolic abilities, as elaborated by Piaget, but also tend to :how an animistic disposition of world explanation. This is where the belief in the mage is based and rooted so deeply that, despite a constructivist epistemology, it :an only scarcely be forsaken later on. It seems as if the senses themselves have been called up to understand reality. Yet, we need to understand beforehand that senses do not dispose of criteria that are necessary to see what other prerequisites have already entered into this understanding. Senses take reality the way it is right now. Whether landscape or architecture, toy or tool, traffic or virtual media, the existence of a world which can be immediately experienced in a subjective way, always forces perception into those images that are perceived and whose reality seduces us to believe in their actuality and truth.[13] In animism, for instance, additional logical connections may be created, emerging from such perceptions. We see lightning in the sky and hear massive thunder and now we can also establish a personified originator who is marked as the producer of this inapprehensible. If we trust in images, we soon run the risk of an exaggerated generalization because we are seduced by the image to believe in the simple logic of seeing, in animistic or other projections, or in simplification. This is particularly valid if these images are presented by teachers because they are normally perceived as someone knowing more, respectively knowing things better.

Constructivist educationalists should handle images with care. In order to make visible the constructions which have already entered the concept of reality, they would need to – with reference to Friedrich Wallner's terminology – strangificate every naïve realism. On one hand, we need to yield to the impulse to create our own experiences with learning comprehensively and, by means of concrete, sensuous, objective experiences, acquire images that arouse the imaginary. Yet on the other hand, the teacher will have to intervene and relativize in order to

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13 With reference to the media, which increasingly replace natural realities by artificial realities and therefore provide perception with simulated impulses as base material, Baudrillard states that our today's world represents an age of simulation which we will only be able to escape if we allow ourselves to be seduced to another (real) world which puts a stronger emphasis on the non-simulated. Yet, this direction seems to be quite improbable, as the artificial, the constructed, which returns as reality to our perceptions, is growing, cf. further Reich/Wild/Zimmermann (2004).

fight the illusion that such an unambiguous world may be built up as a copy model. In particular, he will have to re-orientate herself/himself on a linguistic level and avoid saying: »Look, this is exactly how the world *is*«, but rather say: »What images do you see, what is familiar to you and what is unfamiliar, how have people in former times perceived it and what has changed until today, what different interpretations are there?« This, nevertheless, does not rule out to causally ask for re-construable contexts in unambiguous copy sequences: »In a given sequence of actions, which could be the first and which the last image?« – this is a popular causal question in order to reproduce logical sequences of action. Yet, it only describes this one causality which, again, is generally very limited in its significance.

Taking a closer look at learning processes, we can establish that, in a strict sense, there are no immediate images with respect to the contents of learning. Contents are constructed and made by man in order to predicate something about realities, but partly also in order to describe the unreal. It is possible to give an account of the contents, yet it is impossible to copy it in a strict literal sense. Content is not a sensuously tangible object, but it leads a discourse *on* or offers an interpretation *about* objects. If I ask you to read this text and tell me what actually happened in reality, I give inaccurate directions. I can only tell what has been described, but not what the event actually was like in the end. A text is no direct eye-witness, at most, it can be written by an eye-witness and it always contains less than what has happened in a given situation or has been experience. Contents in learning – irrespective of its form – can not be understood as a concrete image, because it is always an interpretation, governs my perception, and offers sense and perspectives.

b) Conventional experience

It is an interpretive community that has joined subject and object as a mediator (S – IC – O) and that, in accordance with norms demanded by the actual way of life, will influence and guide my perception by establishing contexts and spaces for interpretation. In former times, depending on social classes for example, there used to be strongly judging norms, while now norms and values are becoming more open, more ambivalent.[14] So today I may very easily happen to have arguments with others, whose judgment differs from mine. Each of us may then insist on her/his subjective perception and play it off against the others. Thus someone may state: »I do see it the way it is. I see what's happening. I can definitely de-

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14 This is, for example, shown in Giddens' (1991) approach describing the transition from modernity to a reflexive self-identity that is referring to risks similar to those pointed out by Beck (1992) in his »Risk Society«. Zygmunt Bauman (e.g. 1989, 1992, 1997) describes these aspects in his essays in a very instructive way.

scribe what I am perceiving.« Judging in terms of subjectivity, we could not at all deny that. However, such subjectivity, resulting in a mutual lack of understanding, is nowadays regarded as a hypertrophied subjective demand and is also an illusion, as within a culture nobody could be able to fend all for herself/himself.

Thus, in learning we are confronted with a double perception: on the one hand there is immediate experience perceived subjectively, each subject being allowed to have his very personal experiences (= individual view). On the other hand, those perceived experiences have been rendered controversial, for they never can be completely pure, completely free or undetermined, because they already contain culturally established perspectives and norms conventionally regulating our perception and coordinating it with other people's perception so that our mutual acts may be coordinated (= social view).

In teaching and in learning, therefore, perceptions almost always have been regulated by convention, i.e. the dialogues taking place between teacher and learner are subject to the norms established by interpretive communities having decided beforehand on the correctness, the truth, the honesty of justification and validity.

Conventional contents tends to appear especially in those educational subjects in which the members of a community, regardless of the many potential or actual differences between them, have come to a long-term agreement on which technical language to use, which scientific or technical rules to obey, and what particular conventions to share. Such rules and conventions are being interpreted as laws, as universal norms, as valid methods. Deviations from those norms will have to be tolerated to enable the development of innovations; however, any deviation will have to be plausibly explained as logical with regard to the rules existing. I will resume the meaning as well as the risk of conventional learning as follows:[15]

• The meaning is, first of all, that we can hardly find reasons for denying the cultural necessity of learning a language, of acquiring grammatical structures and keeping to the rules of orthography, of learning the numbers and mathematical functions, of knowing how to handle money, time, norms and prescriptions, or of knowing the capitals of various countries, the predominant practices, routines, or institutions existing – that is, to jointly reconstruct everything that has been established as a meaning, as a sense, as a rule, in such way that as many as possible members of a culture may deal with it in a viable manner and also have to in order to get on in their life-world.

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15 To apply this to all of the members of a culture will, however, remain an ideal, as there will be deviations. In postmodernism there is an increase in possibilities of deviations as well as in globalized knowledge.

- The risk is that by establishing conventions we will automatically land our-selves with a meaning that will narrow our perspectives that will nail us down to habits, will limit the range of creative solutions and may easily tempt us to feel that there is almost nothing new to be found. This would mean that the world could not be designed in an essentially different way anymore.

c) Discourses (open dialogues)

Interactive constructivism will deny neither efficiency nor benefit of conventions. However, it consistently points out the idea that conventions can and should claim validity only with regard to a particular viability, that will have to be cleared up with the learner continuously participating and that will be established for a lim-ited period of time only, so that we may remain open to realizing present prob-lems as well as future solutions. This is why conventional claims for truth and correctness, especially with regard to learning, will have to remain relative. To recognize this relativity in learning, it seems to be important that with learning we frequently appeal to and arrive at a discursive action level, which will enable the learner to critically examine, for him as well as together with others, the immedi-ate subjective experience he has gained and the conventions given to him before-hand.

What do we understand by a discourse? In the narrow sense of the word it simply refers to a »speech« or an »argument« people have in dialogues. The Greeks already dealt with the concept of the disputation as a way of exchanging, examining, and valuing thoughts. On another level, discourses today also refer to scientific schools. Thus for example we will talk of the »discourse of psycho-analysis« or of the »philosophical discourse of postmodernism« to refer to a more or less clearly defined field of exchanging ideas in science. In interactive con-structivism the term is defined in a still more complex way[16]: Here *discourse* means any kind of symbolic order of intentional processes of understanding. At the same time the term refers to reasons or rules on the basis of which this order claims validity. It is being observed within an interpretive community for particu-lar intentions and a limited period of time. This meaning of the word *discourse* is more complex than »speech and argument«, because, instead of just describing contents and relationships by words and speech, we also ask for the rules taken for granted, for the observations already made, for the cultural perspectives and con-texts, which together constitute the background on which contents and relation-ships appear and, also, what this means with regard to interpretation.

The aim of learning by open dialogue (discursive learning) is to allow the learner to look at the preconditions and rules of what is offered to her/him through immediate subjective experience, as contents and codes of behavior through con-

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16 For more detailed description cf. Reich (1998 b, chapter 4).

vention, and as better judgment through discourse. Sooner or later the learner must find out and decide for her/himself what will fit her/him best and how to transform it into her/his situation of life. To this may add particularly a discursive view of learning. How can we encourage such learning in and through discourse? In a discourse the conveying of contents and relationships always involves open dialogue. Thus, as a result from different views by various interpretive communities, there may be numerous, contradictory, or ambivalent justifications of the subject-object-interrelation (S – IC 1 – IC 2 – IC 3 – etc. – O).

At this point there may often occur a conflict with the conventional level of learning and teaching action. Such conflicts cannot be avoided altogether and should be taken as reasons for questioning the respective conventions with regard to their validity promised as a result of former discursive justification. To achieve that aim by methods appropriate to the learner and to the requirements s/he can meet as a member of a particular age group, is to be considered as one of the difficult tasks in teaching.

One of the conventions about learning will say, for example, that in order to enable everybody to learn effectively, there has to be silence in the room. Being silent has been embodied in a discourse of discipline, which will be observed out of habit. As a matter of fact, in former learning scenarios which were centered on the teacher, it was absolutely essential for the learners to keep their mouths shut. However, in altered teaching methods the teacher as well may be urged to keep his mouth shut.[17] Then, due to the learner's activities, the noise level will rise. Now teacher and learners will have to find out together, to what extent the implicit convention may still be considered as valid, or in what way it has to be transformed. In a joint discourse, arguments for and against will be stated and a new convention will be declared valid for this particular group and for a limited period of time. Simultaneously the rules according to which the discourse will proceed, must also be reflected upon: Is it adequate to have majority decisions, or will the group need to protect individual learners who, due to the noise, cannot concentrate sufficiently? Offering his advice, the teacher will play an active part in the discursive process. Evaluations may help to specify the claims shared by all members of the group as well as conflicting points of view, thus achieving at best a solution sufficiently viable for all members of the group.

A discursive concept is a concept which not only describes objects that can be sensuously experienced, reproduces contents and imitates behavior. A discursive concept will demand more from learning: Looking at the level of immediate subjective experience, it is particularly the use of experiments that may promote teaching by question instead of by result. John Dewey showed this very clearly and claimed it a fundamental approach in education. To be curious about objects, to behave exploringly, ready to take a detour or even a wrong way in achieving

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17 As an example cf. Finkel (2000).

knowledge, to behave in a particular situation by referring to experiences already gained before, to express oneself by using extended means, allowing presentation in more than only a rational, language-dominated way: those are fundamental claims forming the preconditions for discursive understanding.

While learning, we will quite often face the question what learners are actually supposed to learn. Why is some material considered to be important while some other seems to be unimportant? Who is to lay down the aims, contents, methods, and the standards for tests and exams? Learning theories favoring the copy or correspondence view of knowledge will remain completely uncritical of those questions and, in submission to what is considered to be an authority, will take over what seems to be forced on them by prescription as a quasi-image from outside. An uncritical learning theory abides by majority decisions and instructions appearing to be indisputable. Mostly, they are assumptions settled by experts and bureaucracy, hiding, however, to the learner the preconditions according to which they were selected. The learner will learn in a way which is considered as a custom. He will achieve apparent expertise without gaining any sufficient knowledge of the methods telling him what and when and why he should learn. A more complex competence taking into account contents and relationships may not be acquired by the learner until s/he is enabled to learn in a way as it is provided by discursive learning theories. It is then that s/he will ask her/himself as well as others what rules and preconditions resulted in favoring these particular contents and behaviors while neglecting others. By and by s/he will be able to establish a critical, reflecting conscience and to examine by way of her/his personal experiences the viability of contents and behaviors with respect to her/his individual situation of life: »The others may say so, but will it fit me, too?«

Some specific characteristics apply to relationships, when they become the objects of discursive reflection. Behavior in discursive relationships does not follow logic of contents but refers to a special logic of relationships. Here it is of decisive importance that teacher and learner develop their communicative competence. Unlike causal and linear attributions, as they are often to be found in scientific or technological processes, relationships will follow different laws. The interplay of contents and relationships will influence the roles taken by teachers and learners.

Looking at the action levels of learning in an overall context, we need to concede that they actually only document a certain logic of learning in a simple form which has to be enriched by other perspectives. Here, the interactive constructivism refers, for instance, to the perspectives of construction, reconstruction, and deconstruction for acting, it refers to the observer, the participant, and the agents as differentiation of roles of acting, and it also refers to the symbolic, the imaginary, and the real as reflections of the description level – just to name some important terms. Regarding the action levels as described here, a reflection on them clearly shows that, from a constructivist perspective, every form of naïve

.lism has to be abandoned. Only by deducting on a discursive level we can dis-
.se what we look for as a prerequisite in immediate subjective experience. It
.y have been this temptation which caused Friedrich Wallner to call his theory a
.nstructivist realism, yet, I also think that I can gather from his works that he –
.well as I – will, due to the constructivist approach, disapprove of a naïve copy
.eory as well as of a more subtle derivation theory based on a supposed unambi-
.ous *reality*. Also, from the perspective of his theory, he will emphasize that it is
.rticularly the strangification between these levels, which develops when we al-
.rnate between them that can lead us to a deeper knowledge on our versions of
.ality.

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