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Some Perspectives of Interactive Constructivism on the Theory of Education

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In the following, I will outline some implications and consequences of the Cologne program of “interactive constructivism” (founded by Kersten Reich)¹ for educational theory. I will proceed in three steps. In an introductory section, I will first briefly locate the Cologne program within the context of the so called „cultural turn“ in recent constructivist discourses. Secondly, I will introduce some main theoretical perspectives of interactive constructivism. Thirdly, I will elaborate on the relevance of interactive constructivism to a contemporary philosophy of education. In doing so, I will focus on six mutually interrelated conceptual levels: The interactive constructivist understanding of education involves, among other things, theoretical perspectives on

- (1) observers-participants-agents in cultural practices, routines, and institutions,
- (2) processes of communication with particular focus on the dimension of lived relationships,
- (3) the interplay between the symbolic resources of a life-world, the imaginative desire of subjects, and the occurrence of real events,
- (4) the connections between processes of construction, reconstruction, and deconstruction in the cultural production of realities,
- (5) involvements of discourse and power,
- (6) cultural diversity, otherness, and incommensurability in multicultural contexts.

Although it does not stand in the foreground of my interest in this paper, I will at least indicate some theoretical connections along the way to the most important philosophical predecessor of constructivism in education – which, to my mind, is John Dewey.²

¹ Interactive Constructivism is a new approach in the German field of social and cultural constructivist thinking. For theoretical foundations see Reich (1998). Other recent publications are e.g. Reich (2002a,b), Burckhart/Reich (2000), Neubert (1998), Neubert/Reich (2000). An English introduction is presently being prepared as a co-authored book by Neubert and Reich to be published in 2004.

² This is not the place for a systematic assessment and evaluation of Dewey’s theories from the standpoint of interactive constructivism. I have given a comprehensive critical interpretation of his philosophy elsewhere (see Neubert 1998). For a comprehensive discussion of affinities and differences between interactive constructivism and Deweyan pragmatism see also Hickman/Neubert/Reich (2003).

1 Constructivism and Observer Theory

Constructivists, in general, think that the production of realities – i.e. the production of viable ways of ‘world-making’ (Goodman) in the sense of both knowing and the known – is a process of construction by observers. Given this idea of observers constructing realities, the question of course arises of how we spell it out more specifically. Which theories and concepts do we use, which perspectives do we prefer in devising a constructivist theory of the observer? At present there is a variety of constructivist approaches that differ quite considerably with each other over this issue.

However, this is not the place to resume in any detail the complex and highly diversified scene of present day constructivist approaches. They have in common that their use of the word ‘observer’ is not meant as a narrow visualistic metaphor. Also, the constructivist ‘observer’ is by no means identical with the detached spectator e.g. of Platonic idealism. To say the least, the field of contemporary constructivist approaches comprises perspectives as different as constructive subjective psychology (Piaget, Kelly), materialist constructive theory of culture (Wygotsky), radical constructivism (von Foerster, von Glasersfeld, Maturana), systems theory (Luhmann), methodological constructivism and culturalism in connection with developments in German phenomenology (Janich, Wallner), and socio-cultural constructivisms in many varieties (e.g. Berger/Luckmann, Gergen, Garrison, Reich). I confine myself here to outlining some main tendencies that I consider most pertinent to the present theme.³

Having been proliferating particularly since the 1970s, parts of the recently emerging constructivist theories were at first stimulated not so much by developments within the humanities or the social sciences, but by discourses on cybernetics and the biology of cognition. Accordingly, the observer theories they designed were in the main rather cognitivistic and subjectivistic – e.g. taking cognitive autopoiesis as the key for explaining the construction of human realities. Many of these theories tended to underestimate the interactive and socio-cultural dimensions of experience. Since the 1980s and 1990s, however, there has been a broad movement which some have called a “cultural turn” in constructivism. The emphasis has shifted from cognition and biology to social and cultural perspectives, and today many constructivists are striving to overcome the more reductionistic assumptions of so called “radical constructivism” by reformulating constructivist thought within the discourses of the humanities and social sciences.⁴

³ For a detailed survey see Reich (2001).

⁴ In this connection, there is at present an awakening interest in the “rediscovery” of classical pragmatism (and especially Deweyan pragmatism) among many contemporary constructivists. For example, Jim Garrison (1997a) has recently opted for “Deweyan Social Constructivism” as an alternative to von Glasersfeld’s radical constructivism and subjectivism in the field of science education. I share Garrisons conviction that “Dewey was a ‘social constructivist’ decades before the phrase became fashionable” (Garrison 1997b, 39). On another occasion, I have pointed out in details why and how Dewey’s philosophy can be a major source of inspiration and reflection for constructivists today. To my mind, his theories of *experience*, *habit*, and *communication* show an abundance of constructivist insights (see Neubert 1998; see also Hickman/Neubert/Reich 2003).

The Cologne program of interactive constructivism understands itself as part of this recent “cultural turn” in constructivist thinking. For interactive constructivism, observers are always located subjects involved in transactive relationships within specific cultural contexts – that is to say, they are at the same time agents and participants in culture, too. The aim of maintaining a constructivist observer theory is to refer knowledge claims to the *perspectives* of the observers-participants-agents who make them. It is to argue that all claims to knowledge be seen as viable and provisional cultural constructions of observers-participants-agents that on principle should be kept open to further re/de/constructions by other observers-participants-agents. This is not to say that all knowledge *per se* is relative for all observers at all times – which obviously it is not. But it is to say that there is no claim to true knowledge that *per se* warrants the consent of all observers and thus evades the possibility of relativization. Such is the constructivist conclusion from a diversity of (post-)modern discourses on knowledge criticism that show the inherent paradoxes of the absolute and the relative in the field of truth claims (see REICH 1998, vol. 1).

2 Interactive Constructivism and the Cultural Construction of Realities

2.1 Observers/Participants/Agents in Cultural Practices

When interactive constructivism speaks of observers constructing realities, then, this does not of necessity imply a relationship of detachment or remoteness, as exemplified by the postmodern TV-watcher who zaps her/his ways through the virtual storehouses of electronic imagery. This is of course one possible cultural context of observing, but it is not at all a paradigmatic instance for all ways of constructing reality. In general, interactive constructivists conceive of ‘observing’ in a much broader fashion. It is not only seeing, but hearing, feeling, sensing, imagining as well. It is not only perceiving and thinking, but acting and participating as well.

‘Observing’, in this broad interactive-constructivist sense, is always part of lived cultures.⁵ This is but another way to say that when interactive constructivists speak of observers, they think of agents and participants in cultural practices, routines, and institutions as well. Observing begins and ends in life-worldly contexts (as we say today) or in life-experience (as Dewey would have it) in all its ambiguities, uncertainties, contradictions, and giddy varieties. Here we are involved as agents that act in more or less consciously reflected ways on the basis of preestablished habits that largely grant the viability of our daily practices. And as agents we are always participants, too, since it is only by communication and shared activities that acting becomes meaningful and endowed with performative agency. The interdependence of our roles as observers, agents, and participants, then, constitutes the primary circle of interactive constructivism’s account of the

⁵ We might also say that it is a case of doing and undergoing in the Deweyan sense that comprises all the immediate, fuzzy, and elusive aspects of primary experience (see Dewey 1988a).

cultural construction of realities. Let me first give a somewhat more complete sketch of this account, before I turn to some more specific implications for the theory of education.

2.2 Self- and Distant-Observers

According to interactive constructivism, observers are always “situated within the context of interpretive communities⁶: they are subjects who from the outset participate in the discursive construction of realities on the basis of cultural pre-understandings and in interaction with other subjects.” (Neubert/Reich 2000, 50)⁷ Here it is helpful to further distinguish between self-observers and distant-observers.⁸ As self-observers, we observe ourselves and others *from within* the practices and interpretive communities in which we directly participate. As distant-observers, we observe others in their practices and interpretive communities *from outside*, be it by temporal or spatial detachment or from the distance of reflection. However, this distinction should not be misunderstood as a separation. Transitions are fluid. As distant-observers we are always at the same time self-observers within our own context of observation, while as self-observers we may at any moment try to imaginatively project ourselves into the position of a distant-observer who looks and reflects from outside.

The distinction between self- and distant-observer positions, interactive constructivism further suggests, is becoming more and more important for philosophical reflection in times of postmodernity. It is a marked trait of present day discourses that they have diversified to a degree that no one self-observer can overlook the varieties of approaches even in a limited field of discipline. In proclaiming the end of the “great projects” and “meta-narratives”, postmodern criticisms of knowledge focus on how the pluralization of possible truth claims has rendered any single and comprehensive approach to knowledge questionable. Truth claims more and more seem to be stated by the ones only to be relativized by the others. “In the juxtaposition of approaches, plural knowledge gets relativized and deconstructed by itself, since discourses of knowledge have multiplied and differentiated to an extent that the *one* obligatory truth for all observers can only be seen as the fantasy of a long lost unity of science.” (Ibid., 62) This situation suggests that a constant readiness to change perspectives between self- and distant-observer positions should be seen as a minimum requirement for postmodern knowledge.

⁶ I borrow this phrase from Stanley Fish (1998, 419). The German term is *Verständigungsgemeinschaften*. The literal translation would be “communities of understanding”.

⁷ The translation of quotations from German texts is mine (S.N.).

⁸ The term “distant-observer” is not a wholly equivalent translation of the German *Fremdbeobachter*. However, I could not find a more satisfying expression in English. The German *fremd* properly means “alien” (or “strange”), but “alien-observer” would point toward the false direction, since it completely neglects the dialectical relationship of self and other implied in the German *selbst und fremd*. Simply to speak of the “other observer” would be misleading, too, because in most cases the *Fremdbeobachter* is not the other with whom we directly interact, but a third other who observes from a distance.

2.3 Observers in Discourses

Interactive constructivism favors a discourse theory that draws on modern as well as postmodern theoretical developments (see Reich 1998 vol. 2, Neubert/Reich 2000, 2002). This theory distinguishes and combines four perspectives that we suggest for contemporary analyses of discourses – namely, “power”, “knowledge”, “lived relationships”, and “the unconscious”. Time forbids to go into details here. I confine myself to indicating some very general traits relevant for constructivist theory of education.

According to interactive constructivism, discourses are never unambiguously accomplished, seamless totalities, but incomplete structures with open sutures that while being established are almost already in transition toward something else. This view of discourses, first, draws on the (post)structuralist idea that discourses are largely characterized by ‘overdetermination’ (see Hall 1997; Laclau/Mouffe 1991, 144ff.)⁹. That is to say that discourses are always multilayered formations of meaning that allow for diverse and even antagonistic articulations. The shifting and never wholly stabilized relationship between signifier and signified makes possible condensations and displacements of meanings that lead to a potentially endless ‘game of differences’. Hence any given articulation allows for possible re-articulations and de-articulations that are at the most but temporarily delayed.

Secondly, discourses always involve power relations. Power, however, should not be thought of as monolithic force, but as something largely disseminated throughout discourse. Following Foucault, power operates like a chain that goes through the individuals (see Foucault 1978). Accordingly, while there is no observer position within discourses that is beyond power, neither is there a position where the effects of power are total. Both arguments (overdetermination and power) stand in intimate connection. Taken together, they explain why the poststructuralist (and constructivist) proposition that subjects are *constituted* in and by discourse, is by no means equivalent to saying that they are wholly *determined* by discourse. On the one hand, any concrete discursive formation implies a limited set of subject-positions that subjects may actively occupy as self- and distant-observers. These positions delimit their scope of possible observation and articulation. On the other hand, however, the overdetermined character of even dominant discourses involves that there is always the possibility of new articulations that partly elude hegemonic interpretations by displacement. Hence, while always being pervaded by power, no discourse can in the long run block the possibility of counter-strategies that subvert established hegemonies. It is precisely this discursive suspense of re/de/articulations that allows for subjective agency in discourses.

⁹ The term ‘over-determination’ has been imported into (post)structuralist thought from Freudian psychoanalysis (in particular from the *Traumdeutung*). The theories of Lacan and Althusser have played an important role in this connection.

3 Constructivism and Education

Education, for interactive constructivism, is a cultural process of construction or ‘world-making’ in the sense discussed above. As to the theory of education, the general thesis of this paper is that constructivism broadens our understanding of education in postmodernity by highlighting the variety and contingency of viable versions of world-making that inform postmodern life-worlds and discourses. Constructivism more decidedly than many other approaches argues that education is a culturally constructed reality that always involves a diversity of observer perspectives as to its interpretation. This diversity constitutes a major challenge for theoretical reflection on the complex constructions that make up educational processes. Interactive constructivism, though, does not entail a self-defeating form of relativism or perspectivism. It offers a conceptual framework that claims to be a viable (but not ultimate) theoretical construction for both enlarging interpretations and delimiting arbitrariness.

3.1 Observers/Agents/Participants in Education

Interactive constructivism sees education as a reality co-constructed by observers/agents/participants in cultural practices, routines, and institutions. The focus here is on learning as a cooperative and constructive process engaged in and conducted first of all by the learners themselves. Like John Dewey, interactive constructivists argue that learning is a process that always begins in the middle of things. It is first of all a constructive activity of children, students, learners, and teachers as observers/agents/participants in their life-worlds or social life-experiences. Learning begins when learners use and expand their constructive agencies to solve problems and create meanings in the concrete situations they find themselves in. Accordingly, the role of the teacher in constructivist education changes to that of a facilitator or assistant to the learning processes of his/her students. This implies rather indirect forms of stimulating, informing, and coordinating in the context of, e.g., cooperative problem solving processes. Finding ways of “teaching with your mouth shut” (Finkel 2000) may oftentimes be more effective for constructivist teachers than direct attempts at pedagogical instruction. As John Dewey observed as early as 1915, “the function of the teacher must change from that of a cicerone and dictator to that of a watcher and helper. As teachers come to watch their individual pupils with a view to allowing each one the fullest development of his thinking and reasoning powers, (...) the role of the child necessarily changes too. It becomes active instead of passive, the child becomes the questioner and experimenter.” (Dewey 1985, 318)

For interactive constructivism, as for Dewey (see Campbell 1998), the questioning and experimenting of the individual learner is always informed by the interpretive communities to which s/he belongs. It is rooted in shared cultural pre-understandings. In constructivist terms, this implies that the learning experiments as well as the constructed solutions that individual learners attain are expressions of cultural viability. Cultural viability means that these experiments and solutions ‘fit’ and make sense within the frame of a given interpretive community. It does

not deny that other learners in other interpretive communities may come to quite different learning experiences and construct different solutions and interpretations. Thus the constructivist concept of cultural viability explicitly stresses an important presupposition of constructivist education: that in our (post)modern and multicultural world learning takes place in a variety of cultural contexts and that it is not advisable for educators to privilege in advance one cultural perspective over all others.

This radical commitment to pluralism is constitutive for a constructivist ethics in education. It is part of an equally radical commitment to democracy that interactive constructivism, again, shares with Dewey. Constructivist education is education for an open and pluralistic universe, based on the “democratic faith in human equality [that] is belief that every human being, independent of the quantity or range of his personal endowment, has the right to equal opportunity with every other person for development of whatever gifts he has. (...) To cooperate by giving differences a chance to show themselves because of the belief that the expression of difference is not only a right of the other persons but is a means of enriching one’s own life-experience, is inherent in the democratic personal way of life.” (Dewey 1991, 226-228) The continuing relevance of Dewey’s philosophy for a contemporary education for democracy can hardly be overestimated (see also Campbell 1992, Eldridge 1998, Garrison 1998). It is not at all deminished by the fact that many commentators today believe – justly, to my mind – that it is possible and appropriate to complement and critically enlarge his oftentimes rather holistic vision of democracy – exemplified e.g. in the ‘Search for the Great Community’ (see Dewey 1988b, 325-350) – by more recent approaches that put a different and partly more critical emphasis on questions of power relations, dissent, antagonisms, and hegemonic struggles (see Neubert 2002; Laclau 1990, Mouffe 1996, Fraser 1994, 1998; for a pragmatist feminist criticism see also Seigfried 2002).

3.2 Communication and lived relationships

Theories of communication are of particular importance for constructivist education. Among other things, approaches and methods that stem from systemic (family) therapy and supervision have had an influence on ways of rethinking pedagogical communication (see Reich 2002a; Schlippe/Schweitzer 1998). In this connection, the distinction between ‘contents’ and ‘relationships’ in communicative processes has been particularly important. One crucial thesis is that the level of relationships has a much stronger influence on the level of contents than *vice versa*. Some authors use the so-called ‘iceberg metaphor’ as an illustration, according to which the level of contents relates to the level of relationships like the one tenth of the iceberg above the surface relates to the nine tenth below.

For interactive constructivism, theories of lived relationships (*Beziehungswirklichkeiten*) are an integral part of constructivist perspectives on pedagogical communications. This emphasis on relationships in learning and education constitutes a major challenge for educational practice and research

today. Much too often in the past have educational theories and practices been focused mainly on the level of contents – the symbolic orders and arrangements of learning – while being much too oblivious to the level of relationships. Learning, however, always takes place in the context of lived relationships (see Neubert/Reich/Voß 2001). And it is crucial for constructivist educators to understand that they do not only construct – together with their students – the symbolic orders of learning, but also the pedagogical relationships in which learning takes place (or does not). Constructivists think that it is an important precondition for constructive and effective learning processes that educators develop and cultivate a sense for the art of creating pedagogical relationships that allow for mutual respect and appreciation for the otherness of the other and that provide an atmosphere of mutual self-esteem, openness, self-determination, and responsibility for both teachers and students (see Reich 2002a, 51-70). To prepare teachers for this difficult yet crucial task requires, among other things, to introduce new ways and methods of self-experience, self-perception and self-reflection as an integral part of teachers education classes.¹⁰

3.3 Symbolic resources, imaginative desire, and real events

Without going too much into details here, I wish to introduce three further constructivist perspectives that may help to deepen our understanding of educational communications and the distinction between contents and lived relationships. The registers of the *symbolic*, the *imaginative*, and the *real*¹¹ are useful for developing a theory of communication that pays attention to the broader cultural contexts and conditions of pedagogical communications (see Reich 2002, Ch. 4). As we will see, these three perspectives are highly interrelated. They can never be separated from each other. However, their distinction can be very fruitful for educational theory.

a) Symbolic representations. Partly influenced by poststructuralist theories about language, signs, and discourses, many recent approaches to cultural theory conceptualize culture by focussing on symbolic representations and signifying practices (see e.g. Hall 1997; see also Auernheimer 2003, 73-77). They analyse and theoretically re/deconstruct what may be called the symbolic orders of lived cultures. Similarly, for interactive constructivism, culture, in the first place, consists of discursive fields of symbolic practices where meanings are construed, articulated, and communicated between partakers. The production of cultural realities is insofar a matter of viable symbolic re/de/constructions within discursive fields (see Neubert 2002). To be sure, the questions of cultural viability can be interpreted quite differently by different observers-participants-agents. To an increasing extent this seems to be the case in postmodern pluralist societies

¹⁰ For interactive constructivist views on learning, teaching, and teacher-student-relationships see Reich (2002b).

¹¹ The three registers are common in (post-)modern French philosophy, especially in those (post)structuralist approaches that draw on the work of Jacques Lacan. Interactive constructivism has transformed these theoretical perspectives in a decidedly constructivist way that e.g. rejects the ontological implications of Lacanian psychoanalysis (see Reich 1998, vol. 1).

(see Bauman 1999) where a common denominator for partaking in culture is largely out of sight. Remaining claims to universal validity of cultural norms and standards are increasingly being overlaid by a diversity of heterogeneous and partly even contradictory claims to viability. However, there must at least be a minimum of symbolic meanings and resources common to the members of a cultural group or interpretive community if they are to be able to conduct and partake in discourses at all. Insofar I agree to Georg Auernheimer's definition that "the culture of a society or social group (...) consists in their repertoire of symbolic meanings, i.e. their repertoire of means of communication and representation. The symbolic usage of things in everyday-life is certainly part of cultural practice, too." (Auernheimer 1996, 110)

In this connection the poststructuralist concept of 'over-determination' (already mentioned above) plays an important role, again. It is claimed that the pragmatic usage of symbolic meanings and representations in cultural practices, routines, and institutions is on principle characterized by ambiguity and 'semantic surplus'. For example, the following passage from an introductory text by Stuart Hall gives an illustration of what symbolic over-determination implies for the use of meanings in language: "(...) if meaning changes, historically, and is never finally fixed, then it follows that 'taking the meaning' must involve an active process of interpretation. (...) Consequently, there is a necessary and inevitable imprecision about language. The meaning we take, as viewers, readers or audiences, is never exactly the meaning which has been given by the speaker or writer or by other viewers. And since, in order to say something meaningful, we have to 'enter language', where all sorts of older meanings which pre-date us, are already stored from previous eras, we can never cleanse language completely, screening out all the other, hidden meanings which might modify or distort what we want to say." (Hall 1997, 32-33)

b) Imaginative desire. Secondly, interactive constructivism suggests that the analysis of lived cultures be extended by taking into consideration the role of imagination in culture. As expressions of imaginative desire, cultural representations involve processes of imaginary displacement and condensation (see Reich 1998, vol. 2) that underlie the very dynamics of symbolic over-determination. "Home, for example, is more than just a place symbolically named and objectified. It is a feeling, a desire, maybe a longing that expresses a vision. Disgust with certain food is more than just a symbolically stated attitude. It is an imaginary process charged with emotion and desire." (Neubert/Reich 2001, 7) According to interactive constructivism, furthermore, these imaginative constructions cannot be separated from contexts of social interaction. That is to say, imaginative desire is always involved in mutual mirrorings between self and others. Partly taking place in unconscious ways, these mirrorings express a desire for the desire of the other that cannot be fully resolved by symbolic forms of recognition and understanding. Thus the imaginative appears as an internal limit of symbolic communication: with regard to imaginative desire, there is always something left.

Interactive constructivism, in other words, holds a theory of lived relationships that pays attention to the imaginative fuzziness and indeterminacy of

relations. This indeterminacy is seen as an impulsion for, as well as a limit of symbolic communication. As to the interactions of self and others, it is helpful to distinguish between (capital) O – i.e. the Other who articulates her/himself within the orders of the symbolic – and (small) o – i.e. the imagination of the other expressing my imaginative desire that is mirrored in the encounter with the other. The distinction implies that although the partakers in communicative interaction often aspire and imagine that they can directly reach each other's imaginative desire through ways of the symbolic, the two registers never completely coincide. This is because imaginative mirrorings take place on a different and often far more immediate and subliminal level than symbolic and linguistic mediations. As we all know, an unexpected gesture or a peculiar tone may sometimes say more than a thousand words. A look that 'kills' can silence a conversation as easily as a friendly and encouraging gesture may move somebody to talk about things s/he would not have dared otherwise.

To be sure, the point is not to argue that we cannot at all communicate about such imaginative processes on a symbolic level –this is precisely what the term 'meta-communication' means in therapeutic or pedagogical contexts (see Reich 2002a). But there remains a limit in that we can never completely absorb the imaginative encounter into symbolic understandings. For insofar as there is a difference between (small) o and (capital) O in any communicative relationship, the singularity and particularity of imaginative mirrorings tends to subvert our attempts to unambiguously clarify the symbolic meanings of our interactions. In this sense, imaginative mirrorings constitute a level of communication that renders all forms of symbolic understanding incomplete. Interactive constructivism also employs the Lacanian term 'speech-wall' (*Sprachmauer*) to designate this limit.

c) *Fissures and gaps of the real*. Thirdly, our imaginative and symbolic constructions of reality can never be completely draughtproofed against experiences which interactive constructivism calls *the intrusions of the real*. In this view, "the real (as an event) has to be distinguished from reality (as constructed). The real enters experience as a tear or discontinuity, a lack of sense and meaning. We use the term 'real' to denote the contingency of the not yet symbolically registered or imaginatively expected lurking behind any construction of reality." (Neubert/Reich 2001, 8) Taking us by surprise and entering our experience and perception unexpectedly, real events time and again mark the boundaries of our symbolic and imaginative search for meaning and identity. "These events do not 'fit'. They are the real in its obstinate eventfulness that cannot be easily integrated and transformed into elements of a culturally viable understanding. They astonish us: there is something that could not be foreseen, something alien, strange, incomprehensible. They move us to change our symbolic thinking or imaginary horizon." (Ibid.)

In a word, the fissures and gaps of the real represent important limiting conditions of any cultural re/de/construction of reality. However, interactive constructivists reject any attempt to devise an ontology of the real. They speak of the real strictly in the sense of a void signifier that denotes a limit of our constructive capacities as observers. For interactive constructivism, there is no

overall perspective, no best or final observer as to the real. That is to say, we cannot know what the real *really is* without incorporating and assimilating it into our symbolic and imaginative constructions of reality. The intrusions of the real that we encounter in our lives expose the *internal* gaps, the *inner* fissures in the texture of our realities. Insofar they are as much expressions of our cultural resources as are our re/de/constructions of reality. What can (and cannot) enter our experience and observation as a real event may therefore differ quite considerably from culture to culture, from person to person, and even from situation to situation.

In other words, ‘the real’ is but a construct that we devise in order to remind us that there is a world independent of our constructions, a world that is never totally absorbed by our observer perspectives, however sophisticated and refined these may be. Our relative openness to the real is a question of our being sensitive and vulnerable to the world we live in. The intrusions of the real are often described as events of confusing, dumbfounding, perplexing loss, lack, or failure – witnessing the unexpected death of someone we loved or feeling a sudden pain in our body without having any explanation. What these examples highlight is the dramatic extent to which real events may take us unawares and render us speechless. But the beauty of a landscape that seizes the spectator or the sublime feeling that captures one in the presence of a work of art are quite as much examples of our being open to the real in our lives.

The constructivist understanding of communication as involving the mutually interpenetrating, yet distinguishable levels of the symbolic, the imaginative, and the real has a number of important implications for a constructivist theory of education. I can only indicate some of these implications here and try to give a gross overview.¹²

a) Development and constructive appropriation of symbolic realities. As to the level of symbolic representations, constructivist educators should be attentive to the richness, diversity, and ambiguity of symbolic meanings in postmodern multicultural. They should be able to see the pedagogical processes of learning and appropriating symbolic meanings and resources in their students as highly constructive processes of interpretation where there is no best or overall observer position to decide once and for all what has and what has not to be learned. Rather, they should see learning as a cultural process of negotiation where symbolic resources are appropriated through constructive interpretations and applications by the learners themselves. They should be sensitive to the cultural diversity of symbolic meanings and strive to give their students as broad and manifold an access to the symbolic resources of their life-worlds as possible. And they should be responsive to the ambiguities, changes, and hegemonic effects of meanings in culture. The symbolic construction of realities never starts out of nothing, but presupposes a complex and in part even contradictory body of passed on meanings and hegemonic interpretations implied in the symbolic orders of language and culture. Constructivist educators should be ready to take into

¹² For a more detailed discussion see Reich (2002a, Ch. 4).

account the power effects that inhere in the very symbolic systems of representation they and their learners are working with. This means that constructivist education implies the work of construction as well as criticism. To quote again from Dewey: “There is no one among us who is not called upon to face honestly and courageously the equipment of beliefs, religious, political, artistic, economic, that has come to him in all sorts of indirect and uncriticized ways, and to inquire how much of it is validated and verified in present need, opportunity, and application. Each one finds when he makes this search that much is idle lumber and much is an oppressive burden. Yet we give storeroom to the lumber and we assume the restriction of carrying the burden.” (Dewey 1988c, 142)

b) Development and cultivation of imaginative realities. Learning does not only take place by way of a critical-constructive access to the symbolic orders and resources of a culture. It is a process of imagination, too. Constructivist educators must develop a sense for the construction and cultivation of the imaginative realities of their students and learners. They must try to reach and win the imaginative desire of others as a motivating resource for the project of co-constructing ways of learning. This is not at all an easy task for educators, and there are no ready-made precepts or symbolic rules that one can follow with secure success. This is because students, learners, and teachers are beings whose particular imaginative desires do not always ‘fit’ into the prefabricated pedagogical expectations and symbolic schemes. From the view of interactive constructivism, we can, however, identify at least some crucial preconditions – necessary, but not sufficient conditions – to be fulfilled if constructivist educators are to engage successfully in education as an imaginative encounter.¹³ Among these are e.g. the following:

(1) First, constructivist educators must develop and cultivate their own imaginative desire for shared learning processes in order to be able to communicate their pedagogic intentions authentically to others and move them to genuine and constructive participations of their own.

(2) Second, they must cultivate a true respect and esteem for the otherness of the other’s imaginative desires and be ready to accept and appreciate this otherness even when symbolical understanding fails or falls short.

(3) Third, and as a consequence, they must be willing to have their students and learners take them by surprise by way of *their* imaginative constructions of reality. That is to say, they must cultivate a sense for the freshness and originality of imaginative encounters that comes to light only where the uniqueness of the imaginative other is given space.

(4) Fourth, they must be able to reflect on the complexity and indeterminacy of imaginative mirrorings in the sense described above. They must be willing to recognize the limits of symbolic communication and the implications of the ‘speech wall’ for their own limited perceptions and interpretations of educational

¹³ This is not to deny that imaginative encounters always have their unconscious phases that delimit intentional direction and control. Although the unconscious certainly plays a role in every human relationship, the possibilities of consciously reflecting on the imaginative aspects of pedagogical relationships are of crucial importance for constructivist educators.

situations. This recognition may in turn relieve them of the all too commonly felt obligation that educators must completely and accurately understand everything and everyone if they are to do their job well. Overexaggerated expectations as to our possibilities of symbolic understanding, I suggest, may even be seen as a frequent source of burn-out experiences in pedagogical vocations. It is a widespread pedagogical fallacy with sometimes harmful practical consequences.

c) Sensibility to real events and the limits of reality constructions. Learning through interactively co-constructing symbolic and imaginative realities always occurs, as it were, on the fringes of the real. To keep learning we have to be vulnerable to the world in which we live in the sense that we actively recognize that none of our reality constructions – comprehensive and elaborated as they may be – is ever exhaustive as to the possibilities of future real events. Constructivist educators must cultivate a sense of openness and curiosity as to what might surprise themselves and their students in the cooperative learning processes they are engaged in. This openness refers to the levels of both contents and relationships. If we concede that, in the end, there is no best and final observer perspective as to *what* we should learn and *how* we should learn together, we ultimately have to keep experimenting with the contents and relationships of learning. This is not to depreciate the value of established educational theories, practices, and institutions that make up and sustain the educational realities of a given time and place. Their relative worth as viable resources for the solution of educational problems has to be evaluated time and again in the context of changing societal and educational conditions. But it is to claim that no matter how positively we assess their viability, these theories, practices, and institutions are always limited reality constructions that cannot ever exhaust our possibilities to learn from real events. Constructivist educators should be ready to have their own theoretical certainties, practical routines, and institutional arrangements be challenged by the real experiences they make in the concrete pedagogical interactions with their students. And they should be eager to allow their students to have their own real experiences within and beyond the framework of theoretical, practical, and institutional expectations that make up the cultural setting of the actual educational situation. This (relative) openness to the real in our world suggests that constructivist education be seen as a continual process of conceptual, practical, and institutional re/de/constructions on the part of both teachers and learners.

3.4 The educational cycle of constructions-reconstructions-deconstructions

Maybe it is helpful at this point to spell out in some more details the three perspectives of construction, reconstruction, and deconstruction that have already repeatedly been used in the above.¹⁴ Before doing so, I wish to emphasize that from the view of interactive constructivism, the three perspectives actually indicate three different, yet highly interrelated phases of the critical-constructive cycle of education. That is to say, they do not only refer to each other, but each

¹⁴ For a detailed discussion see Reich (2002, Ch. 5).

perspective presupposes the others in every comprehensive educational experience. Although the emphasis may at one point be more on the construction side and at another point more on the reconstruction or deconstruction side, it is always the complex interplay between all three phases that we must keep in mind when talking about constructivist education.

a) *Education as construction work.* Education as construction work is, of course, the most preeminent perspective for constructivists. They stress and support the possibilities of learners to attain their own constructions of reality in active and self-determined learning experiences. Constructivists think that we, as humans, are the inventors of our own realities. This emphasis on the constructive potentials of learners has its subjectivist implications in that each individual constructs her/his symbolic and imaginative reality in a somewhat unique and personal way that can never be completely and exhaustively commensurated with the realities of others. For interactive constructivism, though, the recognition of these subjectivist aspects is qualified by the interactionistic assumption mentioned above that every observer (as constructor of her/his reality) is at the same time an agent within a cultural context and a participant in an interpretive community. Thus learning is not only a subjective endeavor, but a discursive process as well. As an activity, it involves interaction; as a construction, it relies on co-constructions within a community of learners; as a self-determined process, it presupposes communication and coordination within a social environment. Such interaction, co-construction, communication, and coordination would of course be impossible if each individual had to invent her/his purely subjective reality completely on her/his own. Fortunately, they do not have to (and fortunately for constructivists, they do not hold such a solipsistic position). Education as a constructive process always implies the reconstructive use of cultural resources that exceed purely individual disposal and invention although they represent the indispensable means of each individual's constructions of reality.

b) *Education as reconstruction work.* Before commenting on education as reconstruction work, I first have to explain that in the Cologne program of interactive constructivism, we use the German word *Rekonstruktion* in a somewhat more specific and restricted sense than 'reconstruction' is commonly understood in English. *Rekonstruktion* in this more specific and limited sense refers first of all to the *re*-production of previously established constructions. This may be an act of discovery or re-invention that is itself highly constructive in nature. However, the emphasis in *Rekonstruktion* is more on the aspect of reiteration than on the aspect of renewal. Such reiteration may be consciously undertaken or not, and it may of course imply some degree of renewal since the *re*-constructed is always something that is constructed anew in a somewhat different context and situation – e.g. the child who constructively learns and understands some mathematical formula already well known to others but uniquely new to the child in his/her present experience. But the point here is that in 'education as reconstruction work' learners come to discover the abundant richness and wide variety of reality constructions that have already been accomplished by others. These reality constructions are now available as symbolic resources of the lived cultures that the learners inhabit. It is through the

reconstructive discovery of cultural resources, values, goods, vocabularies, languages, and the various techniques and products of the arts of living (including scientific principles, explanations, and theories) that learners come to appropriate the symbolic resources they need to become responsible selves and to attain critical-constructive competencies in dealing with the social and cultural environments they live in. This in turn is a prerequisite for effectively partaking in the symbolic representations and discourses of a society – including participation in fields like politics, science, arts, economics, and consumption.

The importance of this reconstructive side of learning processes – in the specific sense of ‘reconstruction’ indicated above – should certainly not be underestimated. It plays a crucial role with regard to both the contents and relationships of learning in every human society. However, constructivists more decidedly than many other educational theories claim that education should never be reproductive appropriation of cultural resources *for its own sake*. That is to say, they particularly emphasize the possibilities of *construction through reconstruction*. They suggest that the necessarily reproductive elements of learning should – as far as possible – be used as part of and means for the self-determined and active learning experiences of students. Cultural reconstructions are not seen as finalities, but become the starting-points for the students’ own constructions. Given the diversity and heterogeneity of discourses and symbolic representations in postmodernity, education as reconstruction work must be highly selective, anyway. Constructivists claim that already the selection of subject-matter for reconstructive learning is a task not only of administrators and curriculum experts, but primarily of those actively involved in concrete learning situations – i.e. the teachers and students themselves. Constructivist educators must, first of all, take account of the different viabilities of their learners – their specific educational situations, interests, needs, and requirements. Secondly, they need to select and develop the reconstructive materials most appropriate for co-constructive learning processes with as high a degree as possible of active participation in the processes of selection and development on the part of their learners.

c) *Education as deconstruction work*. As an additional perspective besides constructions and reconstructions, ‘education as deconstruction work’ reminds us that, in an open and pluralist universe, our so far achieved cultural re/constructions of reality are always incomplete ‘versions of world-making’ that of necessity exclude other possible perspectives and interpretations. The deconstructivist – sometimes ironically – suggests that just when we think we have understood something properly and thoroughly, it might be helpful to look at things from a different and hitherto neglected viewpoint. Such deconstructions make the familiar look strange, if only for a moment. They disturb the certainty of our taken-for-granted beliefs, understandings, and prejudices. Constructivists think that at times such disturbances or ‘perturbations’ (*Verstörungen*) are a precondition for the release of new constructive potentials and reconstructive interests on the part of both learners and teachers. Deconstruction in this sense is never an end in itself; it is no ‘-ism’. Rather, it constitutes a moment of

‘strangification’ (Wallner)¹⁵ that serves as a means for enlarging and liberating the scope of our possible reality constructions.

Constructivist educators should try to cultivate a genuine appreciation not only of the constructive capacities of their learners, but also of their deconstructive ideas and articulations. Again, this applies to both the contents and relationships of learning. Deconstruction oftentimes begins with asking supposedly ‘silly’ questions. It is very easy to overhear its inchoate articulations or simply dismiss them as irrelevant or annoying. Indeed, the ‘deconstructivist’ is often a troublemaker in that s/he questions and problematizes beliefs that seem obvious to everybody else. S/he prevents us from being satisfied with an achieved solution; s/he makes things more complicated; s/he insists on unconsidered and apparently irrelevant implications that no one knows where they will lead to. But in hindsight we often find that successful new constructions (both in our individual and collective lives) were first prompted by tentative deconstructions of habitual and customary perspectives that held us captives until some unexpected move opened a new horizon of observation and interpretation. Education as deconstruction work reveals and partly unmasks such captivities implied in our symbolic constructions of reality.

3.5 Involvements of discourse and power

For interactive constructivism, education as a process of cultural re/de/constructions is a discursive reality that always involves power relations. It has been indicated above that poststructuralist theories of discourse play an important role here. The same applies to the power theories of authors like Michel Foucault (e.g. 1978), Ernesto Laclau (1990), and also Norbert Elias (1990). Constructivist educators need to develop a critical understanding of the power of cultural reconstructive patterns that underlie educational theories and practices at a given time and place.¹⁶ As an effect of historically specific discursive formations (see Hall 1997) these changing reconstructive patterns largely determine what makes sense in educational thought and action, what kinds of identities are at stake, what sorts of aims are to be sought by what kinds of educational policies etc. At every juncture in history, they are imbedded in a specific historical set of institutions; they are connected with a specific historical body of knowledge and with specific methods of observation and reflection; they imply specific routines and practices in everyday life.

Without going too much into details here, I want to draw attention to one recent publication in the field of history of education that, to my mind, displays a critical discursive approach similar to the one favored by interactive constructivism. The volume “Cultural History and Education”, edited in 2001 by Thomas S. Popkewitz, Barry M. Franklin and Miguel A. Pereyra, launches in its introduction (and most of its many contributions) a historical approach that localizes the construction of knowledge within a field of cultural practices and

¹⁵ For the concept of ‘strangification’ implied in Fritz Wallners approach of ‘constructive realism’ (*Konstruktiver Realismus*) see Slunecko (1997).

¹⁶ For a detailed discussion see Reich (2002a, Ch. 6).

cultural reproductions. “For cultural historians, history is the study of the historically constructed ways of reason that frame, discipline, and order our action and participation in the world. (...) We use the word *make* (...) to emphasize the ways in which the world and ‘self’ are fabricated, that is, as fictions but also as the result of making that has actual and material consequences.” (Popkewitz/Franklin/Pereyra 2001, ix). The chief intention of their study of ‘systems of knowledge’ – a study that is “not only about the past, but also about the present” (ibid. x) – is to inquire how the ‘common senses’ of socio-cultural life are invented – i.e. “the changing systems of ideas and principles of reason through which we have come to think, talk, ‘see,’ and act in the world” (ibid.). Following Foucault and others, the historical production of these systems of knowledge is seen in its intimate connection with power relations. From the viewpoint of the editors, the focus on the constructedness of knowledge therefore goes hand in hand with an attempt to reinvestigate the problems of social change and the ‘politics of knowledge’ as well as their implications for historical change in education. As one important strategy, this project applies a ‘genealogical approach’ (following Nietzsche and Foucault) that “takes as its objects precisely those institutions and practices which, like morality, are usually thought to be totally exempt from change and development. It tries to show the way in which they too undergo changes as a result of historical developments. And it also tries to show how such changes escape our notice and how it is often in the interest of these practices to mask their specific origins and character. As a result of this, genealogy has direct practical consequences because, by demonstrating the contingent character of the institutions that traditional history exhibits as unchanging, it creates the possibility of altering them.” (Nehamas in: Popkewitz/Franklin/Pereyra 2001, 22)

This cultural history approach also provides critical perspectives on a ‘naive’ constructivism in present educational reform discussions that is oblivious to the historical conditions of its own discourses and thus once again runs the risk of universalizing its own norms in an ahistorical way. “Although certain types of pedagogies are termed ‘constructivist,’ (...) the constructivist discourses do not systematically examine the way in which knowledge or reason is socially constructed except within psychological paradigms that obscure the historical conditions of reason itself.” As an effect, “Educators and researchers refer to problem solving, community, and zones of proximal development as if they were universal processes rather than socially constructed norms related to *habitus*.” (Popkewitz in: Popkewitz/Franklin/Pereyra 2001, 336) From the perspective of interactive constructivism, I fully support this criticism. A self-critical cultural constructivism must reflect on the historical constructedness of its own norms and perspectives, if only because their universalization may all too easily – and often all too unwittingly – go hand in hand with new forms of exclusion that reinforce postmodern power asymmetries (see *ibid.*, 337ff). Constructivist education is not an ‘innocent’ discourse beyond power relations; it is itself part of the hegemonic struggles that constitute the historically changing discourses of education.

3.6 Cultural diversity (incommensurability and otherness)

I wish to close with a word on the question of cultural diversity because multiculturalism constitutes an important challenge for constructivist educators in the postmodern life-worlds of today.¹⁷ I confine myself with drawing attention to only one important theme in contemporary discussions: the theme of ‘incommensurability and otherness’. We may define ‘incommensurability’ as the impossibility to dissolve the heterogeneity of disparate languages, vocabularies, traditions, standards, norms, values, methods, outlooks etc. into one overall, neutral, or universal perspective. In this sense, interactive constructivism, as we have seen, reckons with *some* degree of incommensurability in every human communication. In the multicultural life-worlds that are becoming more and more characteristic for most parts of an increasingly globalized world, the diversity of lived cultures co-existing with each other in close proximity and interdependence makes the theme of incommensurability all the more urgent and important.

To recognize incommensurability as a characteristic and inevitable trait of postmodern multiculturalism, however, by no means implies to deny the possibilities of border-crossing and partially attaining commonalities and shared understandings. As Richard Bernstein argues: “Incommensurable languages and traditions are not to be thought of as self-contained windowless monads that share nothing in common. (...) There are always points of overlap and criss-crossing, even if there is not perfect commensuration. (...) Our linguistic horizons are always open. This is what enables comparison, and even sometimes a ‘fusion of horizons’” (Bernstein 1995, 65) Incommensuration is not simply to be understood as sheer and speechless Otherness. It always leaves us with the possibility of trying to co-construct shared understandings in cross-cultural communication, even though, as Bernstein aptly warns us, such commonalities may be partial and often fragile. “We can never escape the real practical possibility that we may fail to understand ‘alien’ traditions and the ways in which they are incommensurable with the traditions to which we belong.” (Ibid., 65)

For interactive constructivism, intercultural pedagogies in postmodern multicultural societies always have to work with and within this tension between recognizing genuine incommensurability – i.e. recognizing the Otherness of others even when symbolic understanding fails – and attempting to co-construct shared perspectives. That is to say, intercultural pedagogy constitutes a kind of ‘border pedagogy’ (Giroux) that undertakes the precarious venture of cultural ‘borderline negotiations’ (Bhabha). Among recent developments in cultural theory, postcolonial approaches have added to our understanding of the intrinsic ambiguity of such borderline negotiations by introducing concepts like ‘cultural hybridity’ and ‘culture’s in-between’ (see Bhabha 1996) or ‘différance’ and ‘double inscription’ (see Hall 1996). They have also added to our understanding of ethnocentrism in the history and present of Western educational thought (see Neubert/Reich 2001). Interactive constructivism welcomes these and other theoretical developments that provide new starting-points for rethinking our

¹⁷ For a more detailed constructivist discussion of multiculturalism see Neubert (2002).

perspectives on lived relationships in the multicultural worlds of today (see Neubert 2002, 2003).

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