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(Germany)

Understanding the reality interdisciplinary and arranging it socially and integratively

We are situated in the planetary age. To discern human nature means to put the human being into the universe, not to cut it off. At this point an epistemological problem appears: It is impossible to grasp the complex unity of humanity by a disjunctive, separable thinking that understands our humanity as an island – outside the cosmos that surrounds it – and the physical and intellectual matter we are made of. The human sciences are cut up and separated into different subjects. In this way the human complexity becomes invisible and the human/being vanishes "like a trace in the sand". ¹

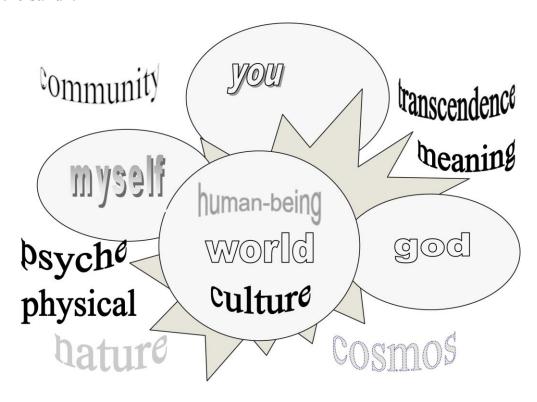


Fig. 1 Human complexity of world-configuration (Bäuml-Roßnagl 2004²)

Without an interactive design of living there will be no future for the human being in our planetary age. Only in the interactive gap between the human being

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¹ Morin 2002, p. 59f.

² Cf. There is a detailed explication of this figure in Bäuml-Roßnagl Maria-Anna 2004.

and the world is there the possibility for life-exception and life-continuation to constitute themselves. The practice of living configures the sense of life in a decisive way. This "between" – between myself and the world – determines the sense of perception.

This between is the expressed sense of my *being in the world*. The sense that lies in the world becomes a signification in the moment I say, denote or express it in a way of understanding... When we want to invade into this realm of this between to grasp it, we need other tools besides the ones common so far: The thoughts of term, idea, and realization have to be replaced by the thoughts of dimensions, articulation, levels, hinges, center of rotation, and configuration³. For this reason, the primacy of the simply reflexive understanding of the world is no longer valid and a so called post-modern understanding of the human-being and the world is proclaimed, which requests for the search of a link between rational determined polar phenomena, for example 'between body and soul, between physical and mental, between rationality and irrationality, between intellectual and sensual, between the self and the other, between nature and culture and between reality and utopia'.⁴

Such a lifelong educational attitude requires a courageous commitment in the way Maurice Blondel (1893) demanded it at the last turn of the century:

Every critique of life, that pops up onto a fragmentary experience is made upon a fundamental incompetence. A thin ray of light does not suffice to enlighten the tremendous extensiveness of the practical life; the things you see do not destroy the things you don't see; and as long as one cannot completely link the action to the thought, as well as the conscience to the knowledge, everybody, both the unknowing and the philosopher as well as the child have to stay teachable toward the empiric, even in a naïve way. For the sake of life one has to put the reality of being onto the scale, because there is a mutual bend of science, morals and metaphysics.⁵

The actual sociological research offers the "theory of reflexive modernism" as an action-guiding comprehension of this postulate. This theory analyzes the social reality of the present in the research focus of varied networks and tries to describe the processes of reflexive modernization in as many category groups of activity as possible. In this way an interdisciplinary mutuality is recognized for the fundamental approval of plurality opposite to its marginalization before.⁶

³ Merleau-Ponty 1973, p. 277.

⁴ Madison 1986, p. 167.

⁵ Blondel 1893, p 526. ⁶ Simon 2009, p. 88.

1. Interdisciplinary understanding of the experiential reality

1.1 Relational expertness

The educational anthropology and interdisciplinary education didactics legitimize their scientific character by using theoretical concepts, research methods and modes of neighboring disciplines such as psychology, psychoanalysis, role theory, action research, biophysiology, theology, sociology, philosophy, social philosophy, systems theory, theory of science, and other disciplines of anthropology. These didactics repeatedly ask the thousand-year old question of the balance of body, mind and soul of the human being consistently in a new way. Thus, the human image increasingly develops and seeks a harmonious design of sensuality and spirituality, and strives for a relational understanding of property in respect to the expertise.

Everyday life-oriented research assesses the theoretical ability of everyday experiences, particularly high in human sciences. The individual and biographical significant as historically and socially unique everyday actions are actually basis and goal, in particular for everyday oriented science of education. Thus, the ideas of meaning or meaninglessness of human existence become the scope of duties of scientific research. Edmund Husserl has convincingly criticized the so-called "lifeworld oblivion" of science because he has developed a request for "factual sciences". In these sciences the subject has to be of pivotal significance, like the researcher and the one or thing being explored. Only with the involvement of the so-called "pre-scientific life" because "the sense of being of the existing living world is a subjective entity, performance is the experienced way of real life. In this life the sense and the sense-constitution are designed, in each case for the world, which respectively applies to the experiencing". The Cartesian Dubito (ergo sum) has to be expanded and strengthened by a lived intersubjectivity, which opens the human communication framework, both to the objects as well as to the spiritual way.

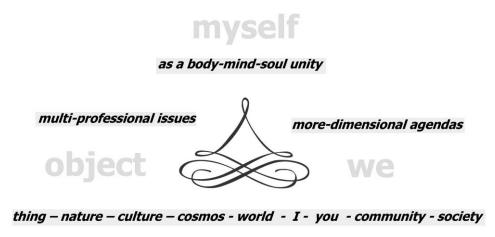


Fig. 2 Triad of relational expertness (Bäuml-Roßnagl 2000)

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⁷ Husserl,19622, p. 7.

1.2 Camera obscura – No view

An incorrect form of our western thinking and life is the merely "registering gaze". "The merely registering glance destroys nature", says Carl Friedrich von Weizsäcker (1947)⁸. If the scientist subjects a "piece of nature", to his experiment, he destroys it; we must add to this that he destroys himself by doing so. By making the encountered into an object, and by subordinating this object to his judgment, he extinguishes the intrinsic subject in himself.

The "obscure" view has become a segregated glance – a dissociating gaze of the objects and the human being itself. With the goal of seeing the objects with the narrowness of the human view exclusively – for this reason the human being contains the objects into itself own periphery. Where the human being wants to create the objects out of itself, the human being loses the objects as "others": as "the other" of itself. The deprivation of the objects as a "counterpart", as "the other" to itself, signifies also the self-loss of the human being. The objects of the earth are the ones, which bring – for the human being – the eternal light into appearance. Without objects, the human being cannot raise its eyes to objects. Even the mystical vision of objects is established in the objects themselves.

The human being must learn to overcome the "definition-blocks", it has to re-open worlds, enclosed in figures and data networks for the vital, for completely normal in rem "life phenomena". The networked world appears to have no global future if it is designed only as a logical or logistical network.

In the issue-related awareness enforcement of the human being, sensuality and reflection have to be executed in a mutual interdependence. Logical and holistic analytic expertise has to be aspired to as a unity to find and lead to fundamentally new shapes of comprehension. The analytical separation of subject and object in (scientific) theories of cognition is determined by the real bondage of structure of the awareness-process. The multidimensional nature of the human action of cognition requires a development of theory that explores the coherence of justification of knowledge content from the perspective of the acting subject (the perceiving) as well as acclaiming the multi-perspective character of the subject of awareness (thing, object, artifact of the environment).

1.3 Science as a "puzzle game" – An epistemological Spectaculum

We are currently in an epistemological as well as didactical "Spectaculum", with a quasi-fluctuating basis. An interdisciplinary knowledge puzzle would have to be developed, which doesn't neglect the sensual body-related and the emotional-ethic dimensions of human factual-cognition. What persists of an expertise that is not developed with the help of all the relevant dimensions of human knowledge? It is well soon a by-product of information utilization. Knowledge and the humanly meaningful sense of knowledge-ability and knowledge-desire are like two sides of the coin when it comes to human relevant educational knowledge. Knowledge transfer as an input-output model without anthropological reflection is exclusive of an allocation of sense and stays anthropologically meaningless. A scientific re-

⁸ Cf. with respect to the "just experimental" research design of the modernity see the critical remarks v. Weizsäcker 1947.

search, which is significant in respect to living environment, puts the research achievements in correlation to subjective comprehensions and anthropological intentions of the factual access.

Of a puzzle, parts can be removed and put back together into an entire "image", but this image is still recognizable as a puzzle. The individual pieces of the puzzle cannot coordinate themselves, rather they require a "someone" who has all the separate pieces "in mind", in "a" mind in "her/his" mind. One could ask the question: is the anthropologist more capable of doing this than a professional scientist? At this point the problem of a reliable epistemology becomes significant.

Expertise, environmental understanding, and understanding of the world are not designed by acquiring data and figures from the so-called "science", but rather in the process of confronting people with these facts and figures. At the same time the historically determined object structures or rather the different theoretical approaches of individual disciplines play a major role.

For this elementary coherence of implication of scientific proceduralized experience and subjective everyday experience, the modern constriction of scientific rationality to "instrumental rationality" (Horkheimer) is a dogmatic narrowing of the definition of science, which in no way does justice to the complexity of the subject. For decades, approved natural scientists have pleaded for a new scientific paradigm that lives up to the complex problems and diversities of rational or anthropological ways of thinking and living. ⁹ A complex arrangement of perception, thought-, and action-structures as a scientific exploration strategy is therefore demanded in particular by the recent social science research. ¹⁰ The following chart presents research-strategical spotlights for socially inclusive research concerns in matters of cross-cultural comparative studies in the survey.

⁹ Cf. the convincingly displayed explanatory conception from science and cosmology resp. anthropology Dürr 2010.

¹⁰ An actual overview in respect to the current problem area of socio-scientific research concern and research strategy is displayed in Garhammer 2009.

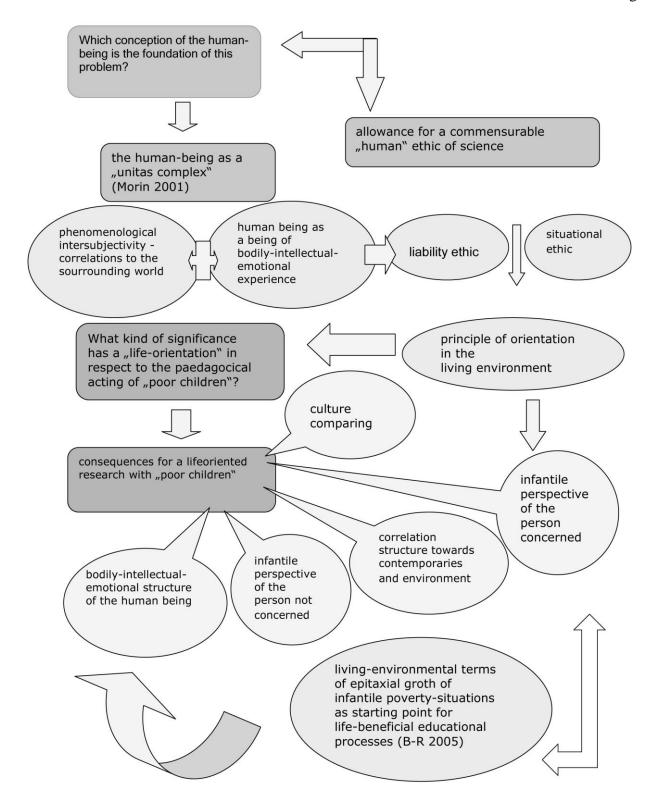


Fig. 3 Reasearch-strategical spotlights for socially integrative research requests in intercultural comparison (cf. Garhammer 2009)

Perception and interpretation of what is perceived – A "blurring principle"

The perception and interpretation of what is perceived is always dependent on the chosen point of observation of each human observer. This insightful phenomenological thesis makes clear that the scientific researcher has to act in a correlation structure, maneuvering between the object of observation and himself/herself without getting mixed up in the dilemma of non-detectability or nonunambiguousness. The inquiring observer finds herself/himself "subjectively" within the world she/he "objectively" would like to investigate. The boundary between subject and object is blurred, vague and "fuzzy". Heisenberg's famous formulation of the "fuzziness relation" of the "wave-particle duality" of light has tried to clarify this indetermination correlation of modern physics, but only for the price of a fundamental fuzziness not many thinkers find acceptable, understood as a deficit compared to the exact science of classical physics.

The term "fuzziness" in case of quantum mechanics does not sufficiently reveal that in this case "fuzziness" is not an expression for a "deficit", it's rather the opposite in the way of a consequence of an inner correlation between the spatial existent... and this is due to a togetherness, not a interdependency. The "fuzziness" is an expression of a holistic structure of reality. 11

By this scientific theorem, the integration of an intangible dimension of the worldview of modern science theory is justified, and the world is recognized as a "floating reality... as pending potentiality" (Hans-Peter Dürr) and that means:

The perception of the wider reality in rem, or more generally as a materiallyenergetic reality we are used to, corresponds to a more gritty perspective; for us it is the conspicuous and sensually perceptible "crust" or "slag" of the lively boiling reality. 12

An "open" attitude towards this lively "bubbling" reality is in demand and the subject may neither be deactivated as a researcher nor as an object of research. It is not enough when we use "purely rational" science.

Every truth that is formulated this way, leaves us alone in the end; it does not get us a world closer, but lets it become stranger to us, and the correlations we identify are to be consistent and rationally understandable, yet meaningless and cold. 13

In exploring what is worth living a scientist risks falling into an unstable, even interactive process with his/her objects.

¹¹ Dürr 2010, p. 15-16.

¹² Ibid., p. 61.

¹³ Drewermann, Eugen (2007): "...and it happened": creation and evolution – inquiry to the sciences. Invited lecture at the LMU-Munich on 13.12.2007.

1.5 Multi-dimensional understanding of living and learning

Human existence is something "concrete and suggestive". Learning takes place in each specific design of man's relationships to objects, to other human beings, and to himself. Human action that wants to lead to self-realization must constantly balance its oscillation into an action that also lets the others and the objects of the world come into action. Individuality and sociality are not opposites but are mutually dependent. The essentials of such an understanding of living and learning reside in an analogical alteration towards the changing social structures to which they are directly related.

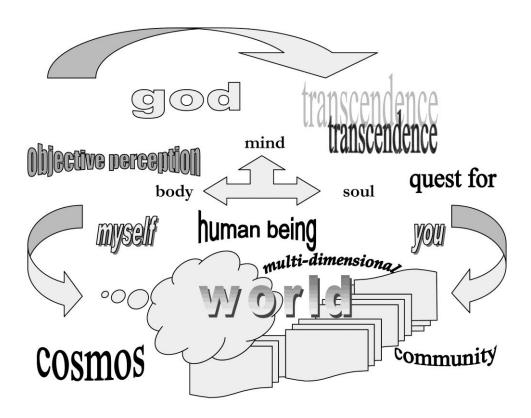


Fig. 4 Parameter in respect to multidimensionality of the conditio humana (Bäuml-Rossnagl 2004)

A demeanor of interpersonal skills is acquired and used in the generational exchange. This generational exchange in everyday life is affected by the multicultural structure of participants in societal life. Therefore, the inter-subjective discourse of research studies should become the center of exploring strategy to capture the content of conduct of interpersonal skills. The specific points of view, from children and adults should be collected and compared in order to uncover the specific conceptual knowledge in the generational incline and to stimulate education-related discussions. Of particular epistemological interest will be the analysis of self-and external assessment as children and adults have them with each other and within the intercultural contact. Dealing with the social imprinting through the influence of modern media and the multiple ethnic origins is still of imminent socio-educational relevance.

2. Acting multiculturally

2.1 From a knowledge of the world to an intercultural understanding of the world

For a holistic interpretation of the world to be mediated, the exchange of reliable knowledge about the world is as necessary as the meaningful interpretation of a substantive relationship. Especially the ingrowth of young people and children into the world presupposes that educational measures are in balance like the two pans of a scale.

Dealing with the social imprinting of different ethnic backgrounds requires the conscious acceptance of heterogeneous elements in terms of a "good ambiguity" (Maurice Merleau-Ponty). Similar to the mutual interpenetration of self and other, culture and nature, mind and body, without leveling the differences of the various sectors in the respective field of action, comparable to the puzzle pieces in a kaleidoscope, where individual light-effects illuminate the entire image in a crucial way.

The essence of scientific methods is a lively *inter-est* as ambitions and it is equally the being-appeared of a lively being-in-the-world. We think ourselves into the contemporaries with the help of our hands and by doing that we form our self-perception, or worldview and our idea of man. Thus, the network of terms for world-knowledge as a responsible intelligible base of the configuration of the world has constantly to be re-linked by the knowledge-seeking researchers.

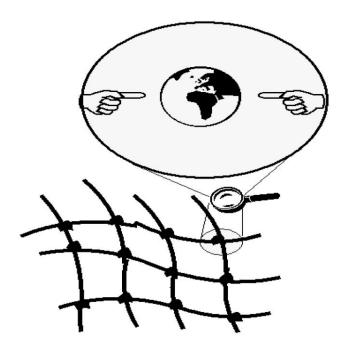


Fig. 5 Humane "joint-guidance" for a networked understanding of the world

The categories of reality, objectivity, illusion, virtuality, simulation, and fiction are no longer – as in the traditional explanation of the world – only linked systematically. Thinking and feeling, cognition and emotion are interwoven into each other in a reality-developing way. When people think about themselves and their world, experiences and emotional experiences play an equally important role in the

cognitive capacity for knowledge that leads to logical models of explanation about the origin and structure of the world. In particular, for the promotion of knowledge assets in the after-growing new generations, new pathways of education have to be followed with the aim to seek a balance between thinking and feeling in a child's world access. In the Anglo-American world, it was mainly Stanely J. Greenspan (2002) who postulated this by his comprehensive research studies: "This new theory offers a profound challenge to many of today's thinkers who devalue infant caregiver interactions and leave the development of the intellectual". ¹⁴.

2.2 Interest in the way of world access for the human being

The human being incorporates the world and designs it. The being-over-thebeyond is amicability. Only if it does not apprehend the term to make the world and the others arrested, but by participating in the lively existence of others and recognizing the imposition of otherness. Body-distant and subject-neutral stances result in the human being distancing itself from the objects and the world: an attitude which leads not only to a kind of absolute knowledge, but which also leads to a kind of distancing from the act of participating in the creation of the world. In personal exchange with the manifold, socially, materially, and environmentally unique individuals evolve whose thinking, feeling and acting is predetermined. Their thoughts, feelings, and actions are due to external conditions of the "intermediate being" always co-constituted, because the fundamental condition of the incarnation is the relegation to a specific place or part of the space we take up physically. Although we can, in contrast to plants, move to different places, physically existing always means to be reduced to a spatial [and temporal] perspective. It is the desire for participation in the world and with others, as far as possible with a side-glance to Levinas. This participation is also a prerequisite for spirituality, as the human being is inter-ested and questions the world beyond itself and understands, even in terms of annexation and of enjoyment, the reunion with the world, etc. 15

¹⁴ The short formula in this quotation (from a telephone interview) characterizes the special request of the decade-long research studies of St. I. Greenspan, to alert the western societies in respect to their "*endangered intelligence*"; a plausible insight into his psychoanalytic and socio-pedagogical research outcome in respect to childhood research offers the following publication: Greenspan 2002.

¹⁵ Weber 2003, p.74.

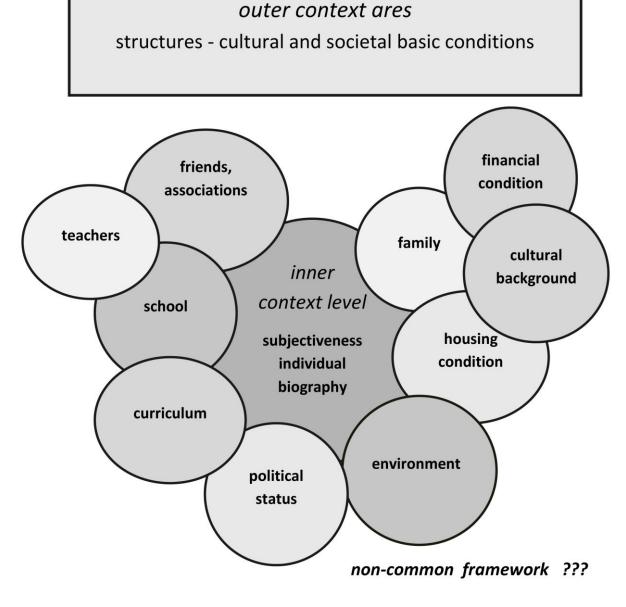


Fig. 6 Areas of life in their mutually conditional combination for a contextual world view resp. knowledge of the world (Graphic: Barbara Weber 2001)

2.3 Wordless facts and "words of the world": multicultural

School and science are not able to get a grip on perception of the "wordless facts" of our world. In order to include these vital dimensions of the world, it requires living persons who bring the cognitive part of their personalities into the research and educational events. Research paths in this direction require a patient exploration strategy and have to be searched and executed in a way of anthropological accountability. The following diagram illustrates individual steps and step sequences of an adequate qualitative-quantitative research strategy¹⁶ by the example of a research study on child poverty in cross-cultural comparison.

¹⁶ Explanatory statements with regard to contents for the single parameters and the detailed ex

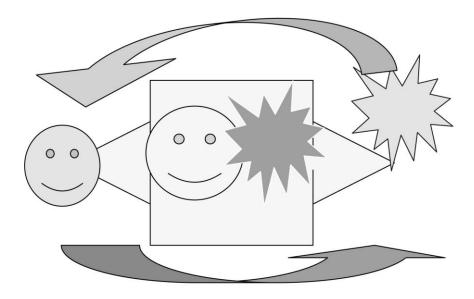
	planned approach	theoretical justification frame	literature embedment
step 1	particular case analysis: micro- linguistic descriptive evaluation by a sequence analysis (combination of group- and single-analysis)	problem of extrinsic understanding "let oneself be surprised by reality" "dipping as deep as possible into the world of the children"	Kruse 2008 Lakoff&Johnson 2003 Glaser&Strauss 1969 Heinzel 2000
step 2	creation of guideline pillowed segmented inventory with respect to the particular case (interaction, syntactics, semantics, motives, and rules of thematization)	problem of data volume structuring and diminution	Kruse 2008
step 3	formation of central main motives resp. rules of thematization	problem of data volume aggregation and bundling	Glaser&Strauss 1969
step 4	creation of a distinct socio- ecological case-extract in the form of an analytical- documentary scheme	problem of deficient comparability perception of coherence visual symbolism with hermeneutical and documentation capacity as well as "connection between cultures" (trans-culturality)	Bäuml-Roßnagl 2000 & 2008 Barth 2004 Müller, J. 1997
step 5	screening of the three most significant areas of experience in respect to infantile poverty on the basis of case-extracts	problem of diversity of predications – necessity of screening on the basis of present interpretations	
step 6	comparative analysis of the infantile poverty experiences within the selected areas of experience/ Namibia creation of homologous frames of orientation with help of a graphic scheme	necessity of topical convergence theme-oriented, but multiperspective oriented bundling	Kruse 2008 Bohnsack 2001&2003 Nohl 2004

	planned approach	theoretical justification frame	literature embedment
step 7	comparative analysis of the infantile poverty experiences within the selected areas of experience/ Germany creation of homologous frames of orientation with help of a graphic scheme	necessity of topical convergence theme-oriented, but multiperspective oriented bundling visualization of proximity and distance of perspectives	Kruse 2008 Bohnsack 2001&2003 Nohl 2004
step 8	intercultural comparison of the created cross section analysis within the specific area of experience	problem of the perspective constriction on the national sphere intercultural comparison	Bohnsack 2001 & 2003 Nohl 2004
step 9	junction of the analysis of the areas of experience	problem of topical constriction on one area of experience respectively development of relations and coherences between areas of experience	
step 10	development of a theoretical coherence scheme	necessity of a synopsis of results creation of a basis for the development of pedagogical professionalism in the area of concern "infantile poverty"	Bäuml-Roßnagl 2000&2008

Fig. 7 Research modules with the focal point of qualitative-quantitative, problem-oriented interview research of intercultural trade-off studies (cf Garhammer 2009)

2.4 Opening of the human "gaze" for the diversity of human phenomena in their relational sociality

The tense interweaving of different dimensions as body and torso, reason and emotion, individuality and sociality leads to a tense relationship between the individual self and fellow men – even in exchange with animals, plants and other living things in our world. The phenomenological way of thinking broaches the issue of the diversity and ambiguity of life forms and wants to show the genealogy of the human experience. The aim of this thought-effort is a life-practical referential.



Things as "environment-related" not as scientificly definable objects "environment-world" (M. Scheler) is always ambiguous and multivalued human being as a "subject of experience" physical and intellectual structures are inseparably bonded in the "bodily staturecircle" (Viktor v. Weizsäcker)

Fig. 8 Object experience by primordial inter-subjectivity (Bäuml-Roßnagl) 2010¹⁷

The promotion of a broad spectrum of relational modes of "being-in-the-world" in the sense of integration of emotion and cognition is the task of holistic education processes, aiming towards the development of a cognitive-emotional-integrated personality. Due to the different physical registers, other possibilities of knowledge open up in respect to practical actions; next to thinking these are perception or speaking.

¹⁷ Detailed considerations in respect to this figure can be found in. Bäuml-Roßnagl 2010.

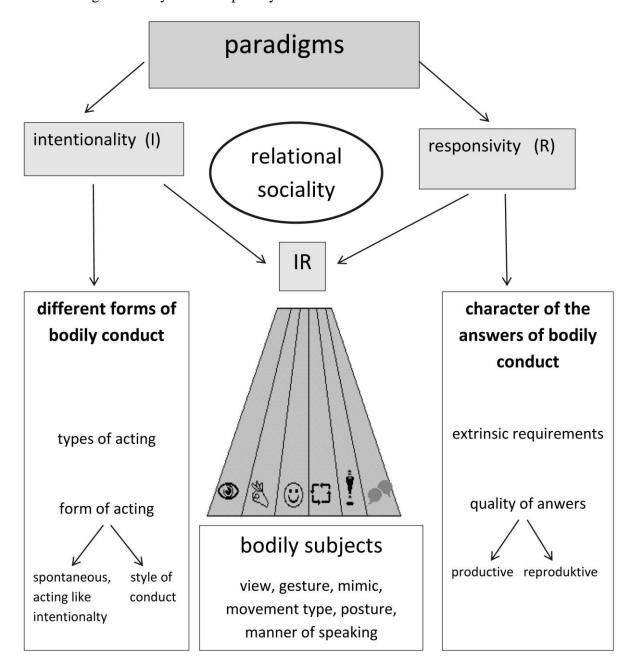


Fig. 9 Model of the *bodily fan* in the course of the human perception- and education process (Petra Merkel 2003¹⁸)

2.5 Balance efforts in the antagonism of forces

Given the fundamental anthropological insights of today there are international global-social deficits to be admonished such as the lack of dialogue reserves between people and cultures, the lack of inter-subjective clarification of problems in everyday life, socio-cultural and intellectual trends to terrorism, and often a predominant know-all manner in human communication instead of the necessary critical solidarity. For a proper understanding of the world the education of our children would have to unfold in an open-minded dialogue, "concerning wisdom (sophia) and philosophy (philosophia)". Only through willingness to a mutual dialogue can an over-excitement of our young people with the so-called knowledge-

¹⁸ Merkel, 2003 p. 226.

implementation be avoided. A conversation-dynamical ("Socratic") developed interpretation and meaning assignment of property situations and behavior patterns in human interaction are present and future tasks. ¹⁹ The humanist tradition of education in western culture favored the subject-specific dominance of human life forming in a strong way. Unilateral egos were a deformity of this educational endeavor, which requested a free self-development. Time is moving more than ever away from this extreme position and to recognize a dynamic sense in the antagonism of life forces.

Accumulation and education should foster a self-directed education, but that does not mean self-creation. Self-designed education in this sense is considered to be a life facing position, which enables especially one's own openness to oneself and the ability to interact with the world, human beings, animals, nature, and things. ²⁰

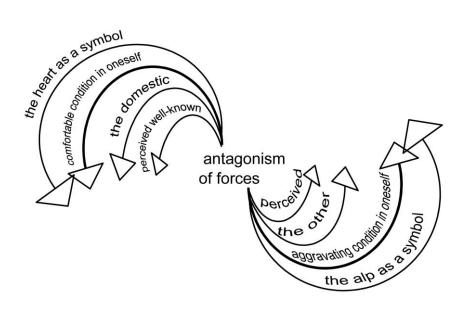


Fig. 10 Dynamic progress in the antagonism of vital force (Elena Haas 2011)

A "new cogito" in interactive pursuit of life has to be developed, re-designed from the comprehensive ability profile of human thought and discernment ability. "We must go back to "cogito", search for a logos that is more fundamental than the objective thinking, which gives back its relative right and also refers to its proper place". That means no rejection of intelligibility and rational thought, but the tireless pursuit of a "une raison elargie". That is because "man himself is a single continuous experiment of determining the location of our self in the world constellation and the location of things relative to our dimension". Scientifically numerous parameters show up interdisciplinarily for the conceptualization of this episte-

¹⁹ Ct. Marsal 2005, pp. 52 – 72.and the paper by Merkel / Weber: Merkel 2002 and Doc-Team (2002), III in: Münchner Hochschulscripten, ed.by M.-A. Bäuml-Roßnagl..

²⁰ Haas 2011, p. 53. ²¹ Merleau-Ponty 1973 p. 419.

mological paradigm, but more urgent is the justification of this "new cogito" as action-guiding maxim in our multicultural defined world.

Translated by Jan Kleine and Lucy Cayard

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