Concepts of Human Nature, especially of the Child, in Three Different Disciplines: An Interdisciplinary and Comparative Contribution to Research on Science and Humanities

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Abstract: *This article introduces a new PhD research project. The key component of the research is a unique interdisciplinary approach which analyses concepts of human nature, especially of the child, in three different disciplines: (1) Education science and theory, (2) Neuroscience and (3) Genetics. It is done through literature analysis. The source is introductory textbooks written for beginners, for instance undergraduate students. This article details the research model by giving a short introduction on concepts of human nature, especially of the child, and by outlining the research approach. It can be beneficial for the development of the single discipline to reflect concepts of other disciplines or to develop one's own concept of the physical world and human nature. Hence the purpose of this paper is to draw attention to comparative research in science and humanities with regard to concepts of the physical world and human nature.*

Contextualisation

The research project deals with concepts of human nature, especially as they concern children, in three academic disciplines: (1) Education science and theory, (2) Neuroscience and (3) Genetics. These concepts of human nature will be analysed by means of introductory textbooks in each of the three disciplines.

The first discipline is based on a definition in the German context. In contrast with many other countries, education science and theory is a self-developed and autonomous discipline in Germany and can be studied under the title of *Erziehungswissenschaft*. It includes philosophical, psychological and sociological knowledge but has its own subject and research questions. Etymologically, it can be translated to *production of knowledge on education*, because *Wissenschaft* means production or generation of knowledge, and while it is mostly translated as *science*, the German definition refers to both science and humanities: all academic disciplines are *Wissenschaft*. The most appropriate English equivalent to *Erziehungswissenschaft* thus appears to be education science and theory, because a significant part of this discipline includes the systematic reflection about the principles of the discipline itself. Because there is a difference of opinion regarding the definition of education science and theory even within the field (Brezinka, 1994), this paper shall take a stand on that problem. A starting point here is a tripartite distinction of the German education theorist Klaus-Peter Horn. In this paper his study results are first translated into English. According to Horn (1999, p 215-221), there is a tripartite distinction that enables one to distinguish between three different educational spheres: (1) educational practice, (2) educational doctrine, like eg, Waldorf education or Montessori education, which shall be titled as pedagogy or pedagogies (*Pädagogik* or *Pädagogiken*) and (3) education science and theory, which offers an academic analysis of educational practice and educational doctrine.

The exploration of concepts of human nature and of the child in three different disciplines has at its core the same questions, thus contributing to interdisciplinary research on science and humanities and providing a valid comparison. The research question motivating the analysis

of textbooks of these three fields is this: What concepts of human nature (especially regarding children) exist, both explicitly and implicitly?

The difference between the disciplines, one from the humanities and two from science, is very important because the research questions and the subjects of a discipline contribute to its concepts of the physical world and human nature. Although education science and theory, neuroscience and genetics do not have the same goals or orientations, education science and theory and neuroscience can be connected by the concept of learning and behaviour, while education science or theory and genetics can be connected by the concept of life as it is expressed in the Greek term bios. Hence education deals with questions about the human nature of the child and its development, that is the initial state and the final state of the child. In the German context, the sub-research field educational anthropology (*pädagogische Anthropologie*), which belongs to the *general pedagogy* research field, deals with such questions about the human nature of the child (Bollnow, 2000, p 199-203; Krüger, 2000, p 310; Hamann, 2005, p 10). Unfortunately, these references are only available in German because of the special German topic and the special German structure of education science and theory.

Introduction: Concepts of Human Nature and of the Child

What is meant by the terms *concept of human nature* or *concept of the child*? In this context, it means the entirety of ideas, mental images, beliefs, opinions and depictions of human nature, or of the child. Such a concept is produced by a person forming an idea or conviction out of their experiences. That idea or conviction serves as a system of categories to classify the experiences which follow. So a concept of human nature can have a strong influence on the perceptions of its holder. Concepts of human nature are central in society and in this way in academic disciplines. The term *concept of human nature* would generally be translated as "Menschenbild" (image of human nature) in German. This is a metaphor that emphasises the visual or sensuous aspect of an idea. Since Aristotle, a metaphor has been understood as an interpretation (Ricoeur, 1977). Likewise, the term *image* points to immediacy because the sensuous image conveys its message quickly.

While concepts of human nature are the result of the conscious or unconscious reflections of adults about adults, concepts of the child are the result of reflections of adults about children. In other words, the object of the concept, the child, is not included in the construction of the concept. Thereby the child is often seen as a descendant who shall get integrated into society. They are supposed to continue the accepted existing conditions and ideals and are subject to numerous expectations.

Around the time of the Enlightenment, a shift in attitude towards children occurred, which changed the notion of *childhood*. Certain new moral connotations became associated with the terms *child* and *childhood* (Ariès, 1979). With the Enlightenment came the idea of perfectibility, the ability to become perfect, and such wishful thinking persisted ever since (Oelkers, 2006, p 2). Two tendencies are intertwined with this perfectibility: on the one hand moral improvement, on the other hand the risk of the development of inhumanity (Koselleck, 2002).

The Research Approach

The search for images of human nature within disciplines is being encouraged by the findings of the philosopher of Science Ludwik Fleck, who stated the existence of a so-called thought style (*Denkstil*) in thought collectives (*Denkkollektive*) and the existence of proto-ideas (*Präideen*) as non-scientific precursors of later scientific facts (Fleck, 1979). Fleck shows that a discipline contains some non-scientific elements. These non-scientific elements

are not objectively legitimised and proven, but they nonetheless exist as precursors of scientific facts or as the starting place for scientific inquiry. According to Fleck, the formation of knowledge depends on the thought style in the thought collective (see also Douglas, 1987). So the thought style, like the concept, plays an important role in shaping the perceptions of the world and the entities in the world.

The role of textbooks inside a discipline is shown by the philosophers of science Stephen Toulmin and Thomas Kuhn. The textbook purports a linear and cumulative tradition that has not existed in reality. That is the reason why textbooks are defined as educational vehicles (Kuhn, 1962), but also as a place of authority inside science or humanities (Toulmin, 1972). They serve as an initiation tool into the academic world. Therefore in this thesis textbooks are appropriate for analysing concepts of human nature inside a discipline.

The three disciplines to be investigated are introduced by stating their research questions, methods and subjects.

As previously mentioned, the research question motivating the analysis of the textbooks of these three fields is this: What concepts of human nature (especially regarding children) exist, both explicitly and implicitly? Sub-questions include the following: (1) Which words are used to describe the human nature and or the child? (2) What concepts exist about the initial state and the intended future state of human nature and / or of the child? (3) What means are chosen to achieve this intended future state? (4) What level of effectiveness is expected for these means?

The hypotheses of the thesis are the following: First, there exist implicit or explicit images of human nature in each of the three disciplines. Second, when comparing the three disciplines, images of human nature occur most frequently in educational theory and least frequently in Genetics. Third, the opinion regarding the development (growing up) of human beings in textbooks lies between the following extreme positions: a) The most important triggers for evolution are released from outside (nurture thesis) b) The most important triggers for evolution are released from inside (nature or personality thesis).

With regard to the hypotheses, I have two primary goals in my study: First, to test the hypotheses against the relevant literature and second, to clarify the tendencies of the third hypothesis. These goals will be investigate through the literature analysis in the introductory textbooks of the three disciplines.

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