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The general didactics of Waldorf education and Klafki's approaches in educational theory – Connections and divisions

The didactic model of main lesson block teaching as a general didactic framework

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Abstract. In Waldorf education, teaching and learning processes, as well as curricular decisions, aspire to be in harmony with the students' potential for development. To this end, the didactic model of main lesson block teaching with its phenomenological approach forms a general didactic framework. It is based on the use of "specific examples of high-density reality" (Wagenschein, 2008) with the potential to reveal the universal in the particular. General contexts, which students acquire at a reflexive distance and with an objectifying attitude, evolve from special, real-life experiences.
It becomes apparent that the phenomenological teaching approach is not merely taken as a consequential complement to the epistemological position of Waldorf education itself but an approach that can also be specifically reflected in Klafki's (1964) theory of categorical education: The material aspect of education, i.e. the phenomenological open-mindedness, has the potential to form a particularly strong, interlacing bond with the formal aspect of education, for it is the formal aspect that is perceived as the students' evolving personalities in their transition or their cognitive achievement, moving from a real-life perspective to an objectifying one.

Keywords: General didactics, Klafki, categorical education, didactics of Waldorf education, Steiner, Wagenschein, teaching science, curriculum research.

1. Introduction: Basic positions and today's challenges

While focusing on an administrative control, based on educational standards and centralised exit examinations, current educational policy also concedes a larger degree of autonomy to individual schools. On the one hand, curricular decisions are subject to a uniform framework of central guidelines; on the other hand, teachers are given greater responsibility and freedom. For the individual teachers, the reflexive culture of general didactics would thus take on greater significance, as the "theory and practice of learning and teaching" (Jank & Meyer, 2009, p. 14) specifically includes curriculum and syllabus issues.

This issue was taken up at the Theory Conference in March 2013 at Leipzig University by the School Research and General Didactics Committee at the School Education section of the German Association for Educational Science (Deutsche Gesellschaft für Erziehungswissenschaft). Under the subject heading 'Comparative Didactics and Curriculum Research: national and international perspectives', the fragmentation

of individual approaches was to be stemmed by criteria-based, systematic comparisons, while at the same time exploring the potential of such comparisons for didactics. Suggested criteria included assumptions based on the philosophy of science, anthropology and theory of learning (Rahkochkine, Hallitzky, Koch-Priewe, Kenzhegaliyeva & Störtländer, 2013).

A Waldorf school is characterised by Steiner's claim that it is "a comprehensive school in the sense that its only concern is to educate and teach in a way that meets the requirements of the human being in its entirety" (Steiner 1992, p. 13). From the very beginning, it was therefore conceived with high anthropological aspirations, giving legitimacy to its curriculum or general didactics.

In the speech cited here, delivered at the beginning of a teacher training course immediately preceding the inauguration of the first Waldorf school, Steiner addressed the school's future teachers. He demanded that, despite all of their autonomy, they should have the flexibility to marry the school's anthropological claims with the basic conditions set by the state. – Evidently, the dynamic field between the autonomy of individual teachers at their respective schools and administrative control of those schools informed then, as it does today, the day-to-day running of Waldorf schools, particularly with regard to curriculum and general didactic issues. The links with the group of themes of the above-mentioned Theory Conference are obvious: What stance does Waldorf education take when assumptions based on philosophy of science and anthropology are applied as criteria and used as a reference for comparisons?

The following introduces and discusses such aspects of the general didactics of Waldorf education. This will reveal a number of points of reference and comparisons, two of which are chosen as examples: one relating to the UNESCO Report for Education for the 21st Century (German UNESCO Commission), and another to Klafki's (1964) categorical education and its discussion or rather its continuation by M. Meyer and H. Meyer (2007).

These comparisons and reference points are explained and discussed in light of the fact that the general didactics of Waldorf education, when focused on the main lesson block teaching model, also provides a consistent and uniform framework for subject-based didactics.

Reference point UNESCO report

Waldorf education is akin to an understanding of education as developed and elaborated on by the authors of the UNESCO report. Their assumption is that, on the one hand, education is an exceptionally good tool for personal development (p. 11) and, on the other hand, a pillar of learning for life that embraces the utilisation of all of an individual's talents and strengthens their willingness to take responsibility for the common goals of mankind (p. 19).

In Waldorf education however, the anthropological assumptions associated with this understanding of education go beyond the scope of the UNESCO report: Provided we seize our independence and work on our self-development, we have the potential to face the world freely, involved and authentically. Freedom, in this context, is seen as our creative opportunity to take charge of our being and develop without formative constraints. Dietz (2003, p. 19) differentiates the concept of freedom further: as "enabling [us] to realise those tasks that are realisable" and as the "responsibility of the individual for the 'whole'". In conclusion, he summarises: "Thus, freedom means to do of my own free will what otherwise may be dictated to me, and to do so in a manner that is individual (as opposed to traditional or instinctive) in character. Freedom presupposes self-development".

In Waldorf education, educational processes are supposed to have the potential to carry the enablement structure as laid out by Dietz. It therefore shows similarities with Peukert's educational theory. Peukert assumes that such an unshakable, subjective aspect of freedom is to be presumed in educational practice (Peukert, 2000, p. 520).

Steiner (1983, p. 8) even considers this type of autonomy a basis for social progression or renewal: "The question should not be: What does a human being need to know and be able to do for the social order that

now exists?, but rather: What capacities are latent in this human being, and what lies within that can be developed? Then it will be possible to bring ever new forces into the social order from the rising generations. The life of the social order will be what is made of it by a succession of fully developed human beings who take their places in the social order. The rising generation should not be molded into what the existing social order chooses to make of it".

Reference point Klafki

While Klafki (1964) thought of education as a process within which a material and a formal side interlace, Waldorf education also associates with the formal side the processes of self-development, as outlined by Dietz. In Waldorf education, issues pertaining to general didactics or curriculum development build up to a search for material educational processes that encourage students to become 'accessible' to the world *and* their potential for self-development (formal side).

The curriculum development of Waldorf schools also has a certain degree of tradition and affinity with Klafki's critical-constructive didactics in that it includes a line of discussion exploring epoch-typical key issues. Overall however, it offers a far more encompassing tradition, one that discusses the 'anthropological rationale' behind curricular decisions, i.e. their anthropological legitimacy (Richter, 2006, Götte, Loebell & Maurer 2009). This is usually based on an educational concept that presupposes, often implicitly, a dialectical interlacing of material and formal education.

2. Connections and divisions in educational theory

2.1 Klafki's theory of categorical education

The Waldorf principle of adjusting teaching and education to the human 'being in its entirety' (Steiner 1992, p. 13) was, from its very beginning, accompanied by a process of discussions: What kind of educational content does more than reveal to the students a content that adequately differentiates their relationship to the world into a 'being in its entirety'? and: What kind of educational subjects are needed to enable students, based on what they will have experienced while acquiring knowledge and learning, to let their humanity admit new experiences, and in doing so, to realise or find themselves in new ways? Such discussions took place during the faculty meetings of the first Waldorf school, often with Steiner's (1995) participation. They later continued e.g. at symposia or, in Germany, at board and advisory board meetings of the Bund der Freien Waldorfschulen (Association of Waldorf Schools). In this context, Zech (2012) produced a very detailed study for the subject of history.

In Klafki's theory of categorical education (1963, p. 44), the educational process includes both a material or objective aspect (the students have gained access categorically to a reality) as well as a formal or subjective one (the students have been made accessible to a reality). Regarding the formal side however, Waldorf education sets different priorities compared to Klafki. By becoming accessible for this reality, students realise themselves as persons in a new way. Formal education is characterised by the emphasis on a personal aspect.

When teachers, while preparing their lessons, focus on the didactic analysis and, where appropriate, work on the basis of Klafki's (1963, p. 135) five fundamental questions, the question of the meaning of a content for the present time, for instance, does not merely hint at the meaning the content is already having in the students' spiritual lives, or is supposed to have from an educational point of view. Rather, the underlying tone of such searching and questioning processes is, how can students grasp their humanity by discussing this content, how do they realise themselves in different ways as persons and, as a result, how may this stimulate specific ability and identity-forming processes. Similar things may be said with regard to the remaining four questions about the future meaning and structure of content, its generic meaning and accessibility.

For example, when class 11 students at Waldorf schools are taught projective geometry alongside Euclidean analytical geometry, the curricular discussion is not only shaped by questions of the vertical

networking of content but also complemented by focusing on an anthropological aspect. What processes of self-development are engendered in students who are inspired by the various aspects of projective geometry, and time and again mull over the phenomenon of two parallel lines meeting in infinity? What potential lies in the teaching of mathematics when students take a retrospective view? "In my mind, imagining the far point of two parallel lines in an infinite space is an agreement you reach with yourself. If you don't want the two parallel lines to meet at a far point they will never meet. At least not in your own imagination" (Sommer, 2010, p. 45).

The students realise they are now free to reach certain agreements with themselves and that this freedom to manoeuvre is linked to very different geometric contexts. Here, subjects such as multiperspectivity, one's own participation in the cognitive process and the role of vividness are directly linked to the issue of the parallel straight lines. The geometric educational content carries the educational substance within. This educational substance may prove itself a useful phase on an educational path that, in class 12, pursues the approximately 18-year olds' sensitising for their own contribution to the cognitive process as well as a free, enterprising attitude toward themselves – an attitude that makes it vital to seize one's own capabilities in order to explore them biographically.

Klafki's theory of categorical education thus provides a framework within which a fertile discussion of the educational concept of the Waldorf school in relation to its general didactics can take place. Waldorf education associates complex anthropological reflections and curricular legitimacies with the formal side of education. It poses the question as to the teaching substance of an educational content, particularly in this light. When preparing their lessons, teachers are expected to combine creatively both general and subject-based didactic knowledge with an anthropological, reflexive culture in order to substantiate this when drawing on a broad methodological repertoire. In return, appropriately trained teachers are given the autonomy to try out new ideas in curriculum design, discuss them with their peers, and finally root them in a distinct teaching culture. In fact, right from its foundation in 1919, curricular autonomy, backed by an anthropological culture of observation and reflection, was one of the corner stones of the republican-administered Waldorf school (Steiner, 1992, p. 14).

It is obvious that the above outlined general didactics of Waldorf education makes high demands on the management of Waldorf schools with regard to staff recruitment and development.

2.2 Klafki's critical-constructive didactics

By evolving his theory of categorical education into critical-constructive didactics and the problem method of teaching, Klafki places his didactic "model on a new footing" (Jank & Meyer, 2009, p. 230). The abilities to co-determination, solidarity and self-determination are cited, and programmatically adopted, as the general determining criteria or didactic goals of a future-oriented, general education. These are to be realised by way of epoch-typical key issues using the problem method of teaching that also promotes a broad development of interests and abilities. Excellent examples of straightforward graphic juxtapositions can be found in Jank and Meyer (2009, p. 235) or Meyer and Meyer (2007, p. 124), making further elaboration unnecessary.

At a later stage, Klafki also introduces four sense dimensions of general education. There he adds a pragmatic dimension to the epoch-typical key issues and ascribes a central role to the promotion of aesthetic cognitive and formative capabilities and the understanding of epoch-spanning issues of humanity (Berg, 2003, p. 14).

Jank and Meyer (2009, p. 239) point out that the idea of the problem method of teaching "can only be realised if the colleagues, students and parents involved see themselves as a *learning school*". In developing this thesis, they refer to organisational implications for the school - something Klafki himself derives from his idea of the problem method of teaching - e.g. the desire to keep selective or segregating aspects in the school's structure to a minimum (no grade retention, heterogeneous composition of classes), or the adoption of main lesson block teaching. Elsewhere, Klafki claims for the teachers ample scope, both in terms of scheduling and structuring of their lessons (Berg, 2003, p. 28). This represents a further affinity with Waldorf education.

For many aspects of subject-specific learning, especially cognitive learning, Waldorf education applies

the main lesson block teaching structure. Over a period of typically three to four weeks, a teaching subject is allocated approximately two school periods daily. Typically, these are the first two periods of the day, forming a focus in the day-to-day business of education for students and teachers alike. This explains why, in many Waldorf schools, this teaching structure has become known as 'main lesson'.

Due to the curricular autonomy of the teachers and the freedom in scheduling that the main lesson block teaching structure provides, many of the Waldorf school's didactic discussion processes are still very close to Klafki's critical-constructive didactics or his problem-based method of teaching. These didactic discussions are both about the role of epoch-typical key issues, e.g. with regard to the subject of media (Hübner, 2008), and about epoch-spanning issues of humanity, e.g. when the Song of the Nibelungs or Wolfram von Eschenbach's Parsifal is taught in main lesson German (Zech, 2002).

While, to the author's knowledge, this closeness to Klafki exists implicitly, there have been few explicit efforts on the part of Waldorf education to reappraise this affinity (Rohde, 2003). For example, in his description of the history and principles of the Waldorf curriculum, Gögelein (2007) cites as the leading principles human and developmental orientation, world and cultural orientation, child and situational orientation, and not least knowledge and exercise orientation, while referring to Klafki merely in passing.

2.3 Lines of discussion

To this day, both Klafki's theory of categorical education and his critical-constructive didactics give rise to discussions (Meyer & Meyer, 2007; Arnold & Lindner-Müller, 2012). In what follows, two lines of discussion are singled out and juxtaposed to positions advocated by Waldorf education.

First line of discussion: The role of the universal

Klafki argues that the aim of a didactic analysis is to reveal the teaching substance of an educational content by applying the didactic principles of the fundamental, the exemplary and the elementary. According to Jank and Meyer (2009, p. 220), of these "only" one concept "survives: that of the exemplary". In this, however, he includes the fundamental and the elementary when something special - transcending itself - reveals something universal, giving access to fundamental insights of the man-reality relationship (Jank & Meyer, 2009, p. 220).

Meyer and Meyer (2007, p. 61) discuss and criticise Klafki's position and argue: "The engagement of the self with the world in an educational context is a process of exploration where any content rendered accessible is necessarily something specific. If and to what extent this specific is, at the same time, also universal must be argued in detail; mere postulation is not sufficient". Something similar may be devised by demanding Klafki's theory of categorical education for the implementation of a curriculum without first discussing whether or not a particular curriculum fits his educational theory.

It has yet to be demonstrated that these criticisms by Meyer and Meyer have been absorbed into the main lesson block teaching of Waldorf schools: Waldorf education is all about finding "individual examples of high-density reality" (Wagenschein, 2008, p. 101) with the potential to reveal the universal according to Klafki. The structure of main lesson teaching is designed in such a way as to only be fruitful for educational content that shows this potential.

When, for example, Waldorf schools pursue phenomenological teaching approaches in main lesson science, priority is given to a series of experiments. These are designed to stimulate the students' independent thinking in order to derive intelligent structures inherent in the phenomena (Østergaard, Dahlin & Hugo, 2008). The aim is, initially to search for a sensory and real-life access, then to appreciate and finally to arrange the series of phenomena systematically. The intrinsic structures of sensory phenomena are eventually worked out, especially the causes that necessitate a phenomenon.

Second line of discussion: The role of an implicit, quasi-ontological assumption of stability

With reference to Türcke (1986), Jank & Meyer (2009, p. 219) point to another criticism of Klafki's theory of categorical education, one that may be made from a philosophical perspective. It alleges "that the concept of a double-sided, categorical exploration of the world contains a quasi-ontological assumption of stability as to the nature of the world, which is no longer acceptable in our time. The categorical exploration of the world can only 'work' if the educational needs of the learner are complemented by a corresponding, well-structured, even harmonious world of explorable, educational assets". Similar criticism can also be brought with regard to education in the medium of epoch-typical key issues. This also raises the issue of a didactic epistemology (Meyer & Meyer, 2007, p. 66).

Meyer & Meyer (2007, p. 65) meet this philosophical criticism with didactic counter-theses: "The exploration of the world is achievable only if, at least within the sheltered environment of the school, the educational needs of the learner have a corresponding, well-structured, harmonious world of educational assets". They continue: "Even if the 'nature of the person' and the 'universal substance' in the world didn't exist, we would need them in order to support the learning process of children and adolescents".

The argument brought by Meyer and Meyer is based on a similar ethos as that of Waldorf education, i.e. to adjust teaching and education to the needs of children and adolescents. – From a philosophical perspective however, the general didactics of Waldorf education is rooted elsewhere. It rather refers to an epistemological position Steiner developed in his early work. Broadly speaking, it argues that the act of thinking ties concepts to the individually occurring perceptions in a structure-forming fashion, thereby manifesting productively in the human consciousness what shapes the phenomena of the world (Steiner, 2012). Thus, cognition becomes an act that constitutes reality. While the status in which it emerges in the consciousness is objective, the nature of its emergence is subjective.

From the epistemological perspective of Waldorf education, the issues of the role of the universal and that of the man-reality relationship are not quasi-ontological but ontological ones: "Based on a conceptually realistic understanding, Steiner furthermore regards the concepts generated by thinking not merely as a person's subjective products but as ontologically founded entities that emerge partially, within the limited section of a given human act of thinking, but still on the basis of their entelechy" (Schieren, 2012, p. 77). Hence, the successful developing of the universal or conceptual out of the particular or exemplary, which the students encounter perceptually, would be an ontological participation experience. It is this epistemological position of Waldorf education that provides the legitimacy to find the universal in the specific.

3. The Waldorf school's main lesson block teaching as a didactic model

As outlined above, main lessons at Waldorf schools are taught as blocks, usually the first 90-110 minutes of every school day, covering a single subject over a period of three to four weeks. This teaching structure lends itself particularly well to cover new topics and broader correlations. If the aim of the lesson is to develop skills by continual practice and to cultivate ongoing learning, however, the format of consecutive subject lessons is often more appropriate.

In mathematics, for example, most Waldorf schools would teach more complex topics such as analytical geometry or the introduction of differential calculus in main lesson blocks, while many more detailed questions and associated exercises are taught in the subject lesson format. Physics lessons, on the other hand, are frequently limited to one annual four-week main lesson block, with supplemental subject lessons only being scheduled during exam preparation. Some schools also teach practical laboratory courses. – The number of main lesson blocks for a given subject, as well as their duration and combination with subject lessons, can vary widely between different schools.

While Waldorf education offers many suggestions for the model of main lesson block teaching with regard to comprehending an engagement with a teaching topic as an encounter, an experience, there is a concrete recommendation going back to Steiner for the structuring of lessons in phases. This phase structure

is supported not least by anthropological lines of argument. – Of these aspects, only one question is to be taken up here: How do phenomenological teaching approaches initiate life-filled encounters with a topic that is being taught?

3.1 Phenomenological teaching approaches

The conceptual approach of main lesson block teaching is close to Wagenschein's (2008, p. 101) assumption of a 'specific example of high-density reality' that also points to something universal, following a set pattern. The teacher's task is to shape the encounters with the world, with a reality, in such a way as to let these encounters be initiators of a cognitive process. In engaging in this cognitive process, students are empowered to reveal for themselves that which is universal or following a set pattern. The following are concrete examples of this from physics and history lessons. They are also intended to explain in detail the meaning of the more generalising term *phenomenological teaching approach* as used below.

Physics

A series of experiments starts with various tuning forks being struck to produce a chord. The teacher leaves the students to take in the sound experience. He then touches the prongs of some of the forks, resulting in those forks immediately ceasing to emit a sound. Touching a tuning fork near its joint, however, will have virtually no effect at all. Similarly, while striking the fork's prongs produces a clear sound, striking it in the joint area results in a dull sound at best.

If a tuning fork is struck and swiftly immersed in a bowl of water, the tone it produces appears lower during the immersion, and the action also causes splashing. Depending on the orientation during immersion, water will splash only sideways (one prong hits the water surface) or both sideways and upward (both prongs are immersed together). Finally, the students continue in small groups or teams, striking the tuning forks and touching each other's nose tips with the prongs (producing tickling) or setting the forks' bases on a number of objects (producing resonance).

Set-up, implementation and observation of the experiments are logged by the students. Moreover, if students also voice what they felt was beautiful, unpleasant or surprising, they will be able to relive these experiences in their memories in emotionally stimulating ways. This prepares for a situation in class where students can form stronger emotional bonds with their experiences.

Up to this point, the series of experiments is designed for the students to get involved as closely as possible with the encounter situation suggested by the experimental chain. Their real-life attitude allows them to approach the phenomena. The immediacy of the experience is the topic. While governing the sequence of the experiments, the concept of an objectified perspective remains implicit during this teaching phase.

When, in the next step of analysing the series of experiments, the teacher asks the question: "What happens to the tuning fork while it sounds?" students will soon figure out by themselves that the tuning fork is in motion, that the prongs must produce opposing lateral oscillations, as these are the only explanations for the splashing experiments. The transition to the up-and-down vibration of the handle may follow. Perhaps graphic representations of the various stages of the handle's longitudinal vibration or the lateral vibration of the prongs are produced.

The open question to initialise the analysis in class is chosen to maintain a close relationship with the process. Yet it demands that the students distance themselves from what they experienced. Other possible opening questions are: "What is the link between sound and motion?", or: "How are sound and movement connected?". Especially the latter question would represent an abrupt transition to an objective standpoint as it is aimed directly at objectifying umbrella terms. Therefore, the question: "What happens to the tuning fork while it sounds?" is a deliberate choice. It is a key element of a phenomenological teaching approach that puts a sensory or real-life revelation at the start of a path on which the students gradually step back from what they experienced in order to learn from the intrinsic structures thus revealed.

History

When concretely and vividly presented, history lessons empower students to form a vivid picture of a given historical situation and manage to immerse themselves in it, a similar encounter can occur, provided a real-life perspective is given initial prominence. Unlike the physics experiments, this experience is not a sensory one evolving before the students' eyes. Rather, it relies on their active participation in the events conveyed by the teacher.

For example, students can 'experience' French absolutism if their teacher presents the lesson in a descriptive way, incorporating vivid details e.g. of the rising ceremony of Louis XVI or the palace and grounds of Versailles. Beyond the delivery of mere information content, this approach requires a detailed knowledge of the court, the characters involved and the physical conditions of Versailles in order to provide the students with a vivid, revealing access, enabling them to turn true-to-life descriptions into concrete, inner images. The beginning of historical cognition is marked by the inner experience.

One approach to the understanding of history lessons is their contextualisation in a framework fundamentally rooted in the history of ideas, anthropology or philosophy. The aim is take what was made emotionally accessible in the initial teaching phase - often following emotionally charged partisanship ("What a waste of money!") - and, having gained a detached perspective, confront it with questions aiming to reveal a comprehensive historical consciousness.

Initially, appropriate questions are those that throw into sharp relief what is characteristic of the narrative. In this case, it may be the question: "What does it mean if there's a bedroom in the centre of Versailles rather than a chapel?" Based on such reflections on concrete events, the discussion in class can then characterise French absolutism as a cultural, social and political historical phenomenon which in turn will raise questions about the image of humanity and its political and social implications for the period, paving the way for the study of the ideas of the philosophical enlightenment and the demands of the French revolution. This may also be followed by deliberations about the present or future relevance of what has been learned (Schmelzer, 2000, p. 9).

Similarly to what was previously outlined in the context of physics lessons, a phenomenon is presented as an impactful encounter so as to enable students to reveal intrinsic structures and continuing perspectives. These enter into the students' awareness by their gradually stepping back from the phenomena and instead taking a more general standpoint.

General characteristics of phenomenological teaching approaches

In the main lesson block teaching of Waldorf schools, phenomenological approaches play a central part. They are a key feature of this didactic model. They are a path to taking a specific example and revealing the universal within it, which may also be fundamental for the man-reality relationship, and can thus show an affinity with Klafki's educational-theoretical deliberations. They have a long tradition in scientific subject-based didactics. Their origins and orientation were most recently outlined in a synoptic article by Østergaard, Dahlin and Hugo (2008).

The authors address, inter alia, the chasm that students can experience between the immediate, sensory, embodied perception of a natural phenomenon, and the concepts with which the phenomenon is explained or scientifically presented. They discuss to what extent phenomenological teaching approaches are able to bridge this gap in an orderly process and thereby live up to their claim of presenting scientific subjects in a compatible, interesting and accessible way. In other words, to what extent do they promote participation experiences.

Fuchs (2008) claims that the above-mentioned chasm is inherent in the scientific programme of the modern era, where, following a reductionist method, the "originally real-life experiences" are split into "physical-quantitative" and "subjective-qualitative components" (p. 18). In everyday scientific practice, the constructs of a quantitative explanation are then established as the 'actual' reality that produces the real-life experience. The impression of being at one with a phenomenon and embedded in it may thus be replaced by a feeling of alienation, as any real-life or qualitative experience becomes a subjective add-on of the 'actual', quantitative reality.

Numerous suggestions for the structuring of phenomenological teaching approaches are specifically not based on a subject/object separation as characterised by the causal construction Fuchs describes. In physics teaching, for example, the transition from an integrated to a detached observer perspective has been adopted as a didactic medium that maintains a differently oriented, dialogue-based judgement disposition (Grebe-Ellis, 2005; Sommer, 2005). The sensory and real-life approach is initially sought and appreciated (integrated perspective) and then arranged in systematic sequences of phenomena. Finally, the intrinsic structures of the sensory phenomena are to be worked out; in particular, the causes that necessitate a phenomenon (detached perspective).

Theory construction proves to be a path on which students can gradually position themselves at a distance to their experiences and then utilise the overview gained to learn to identify intrinsic structures. Participation and observation thus become complementary modes, characterising cognitive acquisition and process (Grebe-Ellis, 2005, p. 38) that students can embrace and transduce into each other transparently. They 'are there' when they discover the laws. It is the thinking experiences they extract from immediate events which are central, not the external causes.

This phenomenological teaching approach, illustrated by the example from the didactics of physics, has a more general perspective: Participation and observation as complementary modes within a cognitive process may be generalised in that the transition from a personal, real-life attitude toward a naturalistic, objectifying one proves to be a characteristic of such an approach, which overarches the subject. The general principle is that of the occurrence of an experience we seriously engage in, and the breakthrough to an intelligent structure that we grasp by way of reflective observation.

Phenomenological teaching approaches enable students to make a specific transition from their own, subjective experience to objective observation. The dichotomous conceptual pair of subject and object no longer characterises an insurmountable barrier. Instead, the barrier becomes a threshold that must be overcome intelligently.

The substantial aspect of education, i.e. that which has been revealed by way of a phenomenological approach, has the potential to form a particularly strong, interlacing bond with the formal aspect of education, for it is the formal aspect that is perceived as the student's evolving personality in its transition or its cognitive achievement, moving from a real-life perspective to an objectifying one. From this perspective, phenomenological teaching approaches represent a differentiated view of Klafki's categorical education.

3.2 Phenomenological teaching approaches – Questions and connections

The connection with Steiner's epistemology

The central role of phenomenological teaching approaches in the general didactics of Waldorf education may become plausible when considering its connection with Steiner's epistemology: As outlined above, Steiner argues that the act of thinking ties concepts, in a structure-forming fashion, to the individually occurring perceptions thereby manifesting productively in the human consciousness what shapes the phenomena of the world (Steiner, 2012).

Thus, phenomenological teaching approaches are an attempt to set into practice what corresponds to this epistemological standpoint. From this perspective, the aim is to take students through cognitive processes that prevent their thinking from becoming stuck in patterns removed from the phenomena due to prejudices, premature judgements or following set models. Rather, their thinking is empowered in order to "adapt", according to Goethe (1966), "to amalgamate, as it were, rationally" to enable them to participate productively in what actively shapes the world's phenomena. As explained above, this has an ontological dimension for Steiner.

Steiner himself took the reverse approach. He developed key aspects of his epistemology based on his studies of Goethe's scientific cognitions. This is also apparent from the title of one of his epistemological works which includes the wording 'The Theory of Knowledge Implicit in Goethe's World Conception' (Steiner, 1940). Goethe himself pursued a phenomenological approach in his scientific studies. Picking up

on these connections, Schürer (1998) conducted detailed studies of the methodological and philosophical fundamentals of Goethe's scientific cognitions.

While phenomenological teaching approaches have epistemological connections with, inter alia, Goethe, Steiner or Schieren, a reference to those authors is not imperative. Varela (2008, p. 120), to name but one other author, claims: "It is precisely the programme of phenomenology that is crucial for modern cognitive science: To research, without prejudice or premature judgement, one's own experiences and perceptions; to include oneself as researcher in the reflection so as to avoid a disembodied, purely abstract analysis."

Epistemology and the teacher's lesson planning

While Steiner's epistemology is therefore not necessarily *the* line of argument for phenomenological teaching approaches, it certainly is one possibility. As a consequence, teachers who base their lessons on phenomenological teaching approaches need not follow Steiner's epistemology. This specifically includes Waldorf teachers. Nevertheless, phenomenological teaching approaches have a strong affinity to epistemological issues that examine whether a subject/object dualism determines the man-world relationship.

With regard to a concrete lesson, and independent of their epistemological position, teachers need to be aware of, or decide how a chosen educational content can unfold impactfully and then develop seamlessly into an objectifying standpoint. In the implementation of this didactic approach, students will then experience their teacher's professional expertise. The teacher's epistemological position must not become the topic, however, if Waldorf education is to be characterised by an undogmatic teaching climate.

This is not to say that individual teachers cannot ask themselves whether or not the thinking experiences they have in the course of phenomenologically initiated cognitive processes coincide with what Steiner develops in his epistemology on the subject of thinking. In such a case, the handling of epistemological aspects of Waldorf education would be characterised by questioning and looking for coincidences. The teachers would rely on their own thought experiences, thus avoiding a dogmatic course of action.

Questions for the didactic analysis

Phenomenological teaching approaches may be integrated into a didactic analysis and a perspective schema for lesson planning, as suggested by Klafki (Jank & Meyer 2009, p. 205 & p. 236). Nevertheless, certain questions are given prominence.

With regards to physics teaching:

How is a series of experiments to be set up and executed in order for the unfolding of the experiments to stimulate interesting questions, and to produce paths to an understanding based on their sequence?

Can the progress of the experiments itself reveal that they represent basic facts rather than artefacts?

Is the progress of the experiments both descriptive and complex? Are the experiments emotionally accessible for the students, do they stimulate cognitive processes? Could the students not get the impression the laws of physics are merely hidden within experiments, and they are supposed to find them - much like hunting for Easter eggs?

Does the sequence of experiments have potential for open questions?

With regard to the subject of history, the following are possible questions:

What does a teacher's presentation have to include in order to depict a consistent, accessible context that avoids the suggestion of one-dimensional patterns of interpretation?

What constitutes the exemplary nature of the chosen object? To what extent does its nature transcend that of a singular instance, or to what extent is it the expression of an underlying, causal event? To what extent is the underlying event, in turn, modified, individualised or even induced by the singular instance?

Is the presentation sufficiently vivid and concrete in order to turn the event into an experience rather than let it remain mere information? Does it enable emotional participation that triggers independent judgement in identification with or opposition to the presentation? Does the presentation allow for a variety of judgements and thus stimulating discussion and debate?

Does the presentation have potential for open questions as well as basic anthropological or philosophical considerations, or even considerations for the present or future?

Possible general questions would then be:

Where can a phenomenon develop in original ways that stimulate interest? Where does it move *out of itself* and toward a generalising understanding?

To what extent is it a stand-alone phenomenon? Where is it more of an accidental nature?

Are the intended questioning processes nuanced, and do they not represent a naïve search task?

Are there good, open questions that stimulate processes of independent thinking and understanding, and point to wider contexts?

In Waldorf schools, phenomenological teaching approaches are implemented within the didactic model of main lesson blocks. They are based on a specific, phased structure devised by Steiner (Steiner, 1986, p. 45) and comprising three phases. How this didactic model becomes a structure model for teaching is the subject of a separate debate. For an example for physics lessons, see Sommer (2010).

4. Conclusion

The reflections on the role of general didactics in Waldorf education presented here were based on their anthropological and epistemological positions.

The fundamental, anthropological position chosen here is that of a free personal development based on the assumption that self-development is both possible and also a source of social renewal. In Waldorf education, teaching and learning processes - and especially curricular decisions - aspire to be in harmony with the students' potential for development.

The didactic model of main lesson block teaching forms the school's general didactic framework for subject-based didactics. There, the students initially perceive a topic as real-life. It follows a phase where the emotional involvement with the educational content is the main focus. This phase provides the possibility of a transition enabling the students, by means of an objectifying attitude, to subsequently achieve their cognitive learning objective.

This process is linked to a specific, phenomenological teaching approach. It is based on the use of "specific examples of high-density reality" (Wagenschein, 2008) with the potential to reveal the universal in the particular. General contexts, which students acquire at a reflexive distance and with an objectifying attitude, evolve from real-life, special experiences.

It becomes apparent that the phenomenological teaching approach can be deliberated against the backdrop of Klafki's (1964) theory of categorical education and specifically adopted: The substantial aspect of education, i.e. that which has been revealed by way of a phenomenological teaching approach, has the potential to form a particularly strong, interlacing bond with the formal aspect of education, as it is the formal aspect that is perceived as the student's evolving personality in its transition, moving from a real-life perspective to an objectifying one.

With reference to Türcke (1986), Jank and Meyer (2009) criticise Klafki's theory of categorical education involving a quasi-ontological assumption of stability regarding the nature of the world. With regard to the epistemological position of Waldorf education, the issue is not just quasi-ontological, but ontological: In thinking, the students tie concepts to the individually occurring perceptions in a structure-forming fashion,

thereby manifesting in their consciousness what shapes the phenomena of the world. – The epistemological position of Waldorf education understands ideas productively and performatively. Reversing the criticism of Jank and Meyer, phenomenological teaching approaches can be identified as the consequential complement of their epistemological position.

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