

A complementary theory of learning in Waldorf pedagogical practice

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ABSTRACT: Waldorf pedagogy requires teachers to observe and understand learning processes among their students. To do this they need a learning theory that can be used for reflection and practitioner research. The paper builds on existing theories of learning within the Waldorf discourse and outlines a complementary theory of learning formulated in a series of propositions that can be used as heuristic concepts to investigate practice. This learning theory includes Steiner's notion of a correspondence between the bodily life processes and learning processes and takes account of current phenomenological, pragmatic and social practice perspectives on learning. It is a companion paper to two previous papers on practitioner research in Waldorf pedagogy.

Keywords: Learning theory, research in Steiner education, life and learning processes

ZUSAMMENFASSUNG: Die Waldorfpädagogik verlangt, dass Lehrpersonen die Lernprozesse ihrer Schüler*innen beobachten und verstehen. Dafür brauchen sie eine Lerntheorie, die sie für die Reflexion und für die Erforschung ihrer Praxis verwenden können. Dieser Artikel schließt an bestehende Theorien zur Waldorfpädagogik an und formuliert eine Reihe von Propositionen, die als Heuristik in der Praxisforschung verwendet werden können. Diese Lerntheorie berücksichtigt auch Steiners Idee der Korrespondenz zwischen den Lebensprozessen und Lernprozessen und integriert Aspekte aktueller phänomenologischer, pragmatischer und sozialpraxis-orientierter Lerntheorien. Die Studie knüpft an zwei vorausgehende Artikel zur Praxisforschung in der Waldorfpädagogik an.

Schlüsselwörter: Lerntheorie, Waldorfpädagogik, Praxisforschung, Lebens- und Lernprozesse

Introduction

Pedagogy is based on teachers' understandings of the relationship between their teaching and the learning of their students in a particular social, cultural and historical context (Nind, Curtin, & Hall, 2016). At its most basic, the pedagogical relationship involves teachers helping students to learn (Marton, 2015). Therefore, Waldorf pedagogy needs a theory of learning which practitioners can use to research, interpret and understand the context, learning processes and the learning behaviour of their students in response to the teaching and the curriculum. Understanding how their pedagogical actions influence the learning behaviour of their pupils is the most powerful way teachers can enhance, or hinder, their students' learning

(Hattie, 2012). Ideally Waldorf teachers can use a theory of learning for their practitioner reflection and research that is compatible with the philosophy and epistemology that informs Steiner pedagogy. In this paper I refer to Steiner pedagogy taught by Waldorf teachers in Waldorf schools, since the pedagogy is based on Steiner's anthropology and most school based on this approach have a recognisable practice, that can be called Waldorf, following a tradition beginning with the first Waldorf School in 1919.

A review of the available Waldorf literature shows a wealth of material on the curriculum, teaching and pedagogical anthropology but very little theoretical or empirical work on learning. Recent exceptions to this are the publications of Loebell (2000, 2016, 2017) and Schieren (2012, 2016). This lack of learning theory is not untypical of education generally. Hattie and Donoghue (2018) note that most teacher education focuses on delivering curriculum and that learning theory is conspicuous by its absence. It is not clear that Waldorf teacher education is any different in this respect, though it teaches the nature of the human being from an anthroposophical perspective, which includes the learning process. Nevertheless, my professional experience has been that in practice, understandings of learning and in particular assessment of learning are limited. Sfard (1998) has pointed out that there are two fundamental metaphors for learning- acquisition and participation. My sense is that the metaphor of participation is less well-known in Waldorf discourse.

The acquisition metaphor refers to learning as the internalisation of concepts that pre-exist in the world. Acquisition implies "gaining ownership over some kind of self-sustained entity" (Sfard, 1998, p. 5). Learning is thus an accumulation of such entities (e.g. information, concepts, facts) that can be reproduced, applied, tested and measured (e.g. in tests and exams) as evidence of learning and also transferred to other contexts or transmitted to other people. The metaphor of participation on the other hand is not a question of *having* something but of *doing*, of *taking part*, *sharing a part of*, *being a part of*, or simply *participating* in an activity that is always embedded in a social context and requires social mediation. Learning involves being increasingly able to participate in the primary activity of a specific group of people who have this practice in common. Whilst acquisition focuses on the individual mind taking something in and reifying and decontextualising it, participation, on the other hand "shifts the focus to evolving bonds between individuals and others... makes salient the dialectic nature of the learning interaction" (Sfard, 1998, p. 5).

Biesta, *et al* (2011) offer the view that people learn in different ways that can be described by several metaphors- acquisition, construction, informal learning and instruction- but that participation in social practices is the predominant mode. Within the spectrum of the metaphor of participation is the notion of learning as becoming through participation in changing practices over time (Hodkinson, Biesta and James, 2008). Illeris (2015) understands learning as the transformation of the whole person over time that cannot be accounted for by biological maturation or ageing. Indeed, a recent compilation of learning theories, *Contemporary Theories of Learning* (Illeris, 2018) offers 18 different approaches, none of which rely on acquisition alone. The metaphors we use are important because, as Sfard (2009) also points out, metaphors not only shape our thinking about learning, they also influence our pedagogical actions.

The learning theory in Steiner's pedagogical anthropology is woven into and distributed across his overall account of the developing human being. Only fairly recently have scholars drawn this body of work into a coherent theory that practitioners can use to reflect on and research practice (Loebell 2016, 2017; Schieren 2016). Loebell (2016) shows how Waldorf pedagogy relates to other learning theory, showing overlaps and differences. I believe that Waldorf learning theory can also be complemented by other learning theory. The word *complementary* in the title of this paper means *different but compatible* and *mutually useful when used together with other ideas* (Cambridge Advanced Learner's Dictionary). This is the meaning in the term complementary medicine. Thus I draw on other learning theories that I consider to be complementary in this sense, in particular I draw on the metaphor of learning through participation which underpins both phenomenological and social practice approaches.

Here I must add a brief note about what I understand by the term practice. If one follows Nicolini's (2012) discussion of the origins and meaning of practice, there is no unified practice theory but all current practice-based views, have certain aspects in common, or family resemblances. These include recognition that actions are made possible and acquire meaning through practice; practice is always situated, contingent, relational

and historical; practices are always social accomplishments and comprise a web of mutually constituting relationships and agents (or subjects) are agentic within the possibilities afforded by the practice. Thus practices are not merely reproduced because agents are always differently resourced and positioned, thus they re-create, change and may renew practice. Whilst accepting these ‘family resemblances’ I nevertheless believe it is helpful in a Waldorf context to take an Aristotelian perspective on praxis and its virtue *phronesis*, practical wisdom (see Rawson, 2019). Seen thus, *praxis* is meaningful and meaning-making human activity that reflects the nature of being human. Unlike *poiesis*, which means making or doing something to achieve a specific end, praxis is an end in itself and is thus close to the notion of *Bildung* or *Selbstbildung* (self-formation) (Thompson, 2009).

My aim is to formulate a series of propositions about learning that teachers can use with illuminative practitioner research (see Rawson, 2018a). Theory, in this sense, means an account of how learning occurs that can be used as a heuristic tool to observe and interpret learning processes. This paper draws on a wide range of literature about learning that cannot be discussed in a paper of this length. A fuller discussion is in preparation in book form. I start the paper by summarising existing Waldorf theory. This is followed by a discussion of two aspects of learning that relate to Steiner’s theory of knowledge. Then I discuss a correlation between the life-processes and the processes involved in learning based on Steiner’s work and that of subsequent authors, on the correspondence between what Steiner calls the life processes and possible learning processes. Into this interpretation I weave aspects of social practice theory and phenomenological approaches. The rest of the paper presents eight heuristic propositions about learning. Each proposition is followed by a brief explanation and suggestions as to the pedagogical research questions that arise from these.

Waldorf learning theory

Following Schieren’s (2012) account of learning from a Waldorf perspective, learning involves:

1. *Transformation*. Learning means a crisis-provoked stepping out of the existing pattern of mental representations we have of the world and actively uniting oneself with reality. Learning enables the subject to restore the integration of self and world in a new equilibrium in Piaget’s sense.
2. *Forgetting*. In order to learn one has to forget, which means loosening the close connections of the I to our mental representations of the world and being open to relationships between things, processes and being. This leads to adjustments in our embodied experience. Sleep is therefore a part of the learning process.
3. *Abilities*: The main benefit of learning for the subject is the growth of abilities and dispositions, rather than only the acquisition and accumulation of factual knowledge.
4. *Comprehensiveness*. Learning occurs through the fullest possible engagement with reality through direct experience wherever possible.
5. *Truth*: Learning as a process of generating knowledge unites the human being with the world’s laws and this process makes the human being capable.
6. *Meaning*: Engaging the world through such abilities is experienced as relevant and meaningful.

Loebell (2017) refers to learning as the process of becoming a more experienced subject and that the learning process is mediated and enhanced by teaching. He draws attention to several key aspects of learning.

1. Learning is an expression of the activity of the subject forming her individuality, which is emergent and open (i.e. rather than fixed and predetermined). Learning is ultimately an individual process of becoming more experienced (*Erfahrenerwerden*). Becoming a subject through learning by experience occurs in different ways in thinking, feeling and willing, since thinking and willing are polarities in terms of consciousness. The Waldorf approach is to educate both thinking and willing indirectly via the feelings, though how this is done, varies fundamentally between early childhood, childhood and after puberty and also requires teachers to be artistic in their whole approach. Pedagogy as an

art involves structuring and fine-tuning the rhythms of learning in ways that respond to the specific situation.

2. Rhythm is vital for learning and this has many aspects, but most centrally a sequence of learning processes. The steps of learning have been summarised as follows:
 - taking in, directly experiencing, encountering, observing, experimenting,
 - recalling, describing, characterising, recording,
 - processing, analysing, abstracting, generalising, deepening, grasping of connections, relationships and laws, constructing concepts (Richter, 2016).
3. Bodily experience leads to embodied cognition and this highlights the central importance of sensory experience, concrete encounters with the world and activities involving movement and physical skills.
4. The significance of the teacher for learning is not only as a shaper and observer of learning processes but also as active meaning-making actor. The teacher is called upon to be both reliable as a role model and capable of transforming herself, to know and understand the pupils and to awaken a sense of trust in the pupils.
5. Loebell emphasises Steiner's point that learning is an ongoing, life-long process.
6. The content of the curriculum and what is taught undergoes a metamorphosis at key moments in the trajectory of the learners. Such key moments of change are around the age of 6/7 and the second dentition, the age of 9/10 and the onset of puberty start of adolescence. The Waldorf approach to teaching and the material that is taught changes at these stages to interact with the development of the pupils.

Wiehl (2015) characterises learning as an extensive process of assimilating the world, self-formation and self-transformation. Zech (Zech, 2016) refers to learning as a path of individuation. Learning is essentially based on transforming experience and becoming transformed. My contribution is to add the social dimension to learning in school and to apply the notion of learning as participation in communities of practice over time and across social space.

Memory

In his pedagogical anthropology, Steiner (1996) assumes a fundamental interaction between the lived-in body and the activities of the mind (thinking, feeling and willing). In this he has much in common with phenomenological approaches. Furthermore, he posits an agentic self (in German *das Ich*, the 'I' or self) as spiritual core of the human being that engages with and comes to expression through the mind and body but has an independent origin and existence beyond both. This is a fairly unique position in current theory, as one can see in compilations of contemporary theories of self (Gallagher, 2011). In Steiner's analysis of the human being, the self as spiritual core of the human being is understood as agentic within the bodily processes and within the mind (what Steiner refers to as *Seele* or in English, soul). We may, I believe, interpret this agency as being bounded by several factors including physical, mental and social constraints and what Searle (1995) calls brute facts, that is, age and biological factors, life circumstances such as poverty, malnutrition, stress, conflict, accidents and other things over which the individual has no control. Individuality as the signature of the self comes to expression in how the person engages with these constraints, how she learns, establishes identities and engages with the world and how she responds to opportunities for learning and development.

In his book, *Theosophy* (2011) Steiner describes how the fruits of our sensory experiences are preserved in memory. In his account of the supersensible (i.e. beyond the sense perceptible) processes within the human being, memories are retained by the body and the living processes that shape and maintain our physical organism, what he calls the life-body. Thus experiences and our mental and physical response to them are embodied in the lived-in body. This body of life processes retains the impressions made by our perceptions and our immediate response to these, in the form of mental images, feelings and will impulses. Each time we recall these experiences, we construct new mental images or representations. When we shift the focus of our

attention elsewhere, this new reconstruction sinks back into unconsciousness, overlaying the original memory and changing how and what we subsequently remember. Neuroscience has comprehensively described this biosocial process through which memory changes and develops over time (e.g. Damasio, 2010 Markowitsch & Welzer, 2005, Schachter, 1996). In Steiner's terms, the soul both makes impressions on the life-body and also perceives them. Steiner's description of experience is remarkably detailed, considering what was known at the time and the means he had to investigate this. The sense organs are so constituted that there is a bodily basis for sensation (sentient body) and a mental function that experiences this (sentient soul) as two distinct but integrated systems producing units of primary experience.

Memory provides us with both continuity of identity and the capacity to learn from experience. Damasio (1999) speaks of autobiographical memory as constituted by "implicit memories of multiple instances of individual experiences of the past and anticipated future... which can be partly re-modelled to reflect new experiences" (1999, p. 174). Each time we revisit an embodied experience and add new experiences through new sensory perceptions and through new internal responses to memories (e.g. through the formation of concepts and expanding awareness of connections to other experiences), our relationship to the world changes or is consolidated as habit or disposition. Waldorf pedagogy makes use of this process by actively taking account of the processes of forgetting and remembering in the way learning situations are structured (a process I describe below).

The meaning of what we perceive is given to us intuitively through concepts that have their origin in the world of ideas (Steiner, 1963), because "I am a thinking being capable of grasping truth in my spirit" (Steiner, 2011, p. 69). The human spirit- the 'I'- is embedded in the world of ideas, the spiritual world in which all realities are woven into a meaningful and coherent whole. Furthermore, the spirit transforms these embodied treasures from the past (i.e. experiences imprinted into the living unity of life body and physical body in the form of memory) into abilities and "extracts from each one whatever it can use to enhance its abilities" (Steiner, 2011, p.70). It does so by taking the forces at work within the experiences and applies these to enrich ability. The example Steiner gives is learning to read and write. The person does not need to recall the many specific experiences of learning that led to this ability, but rather the self, or 'I' as spiritual core of the person, becomes capable of this new skill. New abilities open up new realms of experience and extends what we *can* learn. Because we can read, our whole relationship to the world changes and reading opens up enormous new possibilities for the development of our thought life and also for learning. The same is true of other new abilities.

Having new abilities enables us to form new relationships to the world and to other people. New abilities dispose us to new learning. They also change both our social identity (how others see us) and our I-identity (how we see ourselves). In short, experience is retained as memory, and abilities are drawn from the fruits of memory, not in a material sense but rather in the sense of process. At each stage, selection occurs according to values the person has. We remember from daily experience what we regularly encounter, what we attend to, what we deem to be important and what affects us and what we have been disposed to expect and notice. Experience is transient, memory is mutable but dispositions and abilities are sustainable and capable of growth. Learning to swim, ride a bike or read involves permanent changes in our bodily organisation, such as mastery of balance and coordination of movement and perception.

Steiner uses the analogy of digestion to describe learning more than once (e.g. in a lecture on 4th October, 1919). On eating bread our digestive processes free the forces within the food and use these as energy to drive our activity and nourish our processes of regeneration. We do not build our bodies out of the materials in the foodstuff but rather release the energy within them to generate our own substance and fuel our activity. The process of generating abilities from the 'raw material' of embodied experiences is analogous to this. Thus experience prompts activity. In his description of how teachers can develop intuitive insight through meditatively engaging with anthroposophical ideas about the developing human being, (Steiner, 1982), the same analogy is used to explain how the ideas taken in and contemplated transform into dispositions that enable the teacher to intuitively recognise the wider picture and thus inform her actions. He speaks of remembering (*erinnern*) in the sense of the ability of knowing-in-practice what the appropriate action is, based on an inner connection to the situation. What has been learned and has become disposition or ability

directs our attention to the actual phenomenon in a way that enables us to grasp the wider implications and connections that are not sense perceptible but locate the phenomenon in a bigger context, thus enabling us to ‘understand’ more, or literally enables us to take a new stance in relation to what we experience, from which we can grasp or apprehend it. We can only describe this process using metaphors.

Thus we have a picture of the complex roles that memory and recalling play in learning and identity and how memory is transformed into ability and that ability disposes us to not only see more but do more in a given situation. Being able to see and do more, gives us a new identity in relation to the world.

Knowing

Wagemann (2016) has argued that Steiner’s pedagogy is closely based on his theory of knowledge. This particularly holds true, I believe, for his understanding of learning, which Steiner linked to the generation of knowledge, the development of memory, the growth of abilities and the self-development of the subject as agentic being. Space does not permit a full discussion of Steiner’s epistemology and readers are directed towards accounts of this (Schneider, 1982, da Veiga 2016, Wagemann, 2016, Dahlin, 2017). However, a brief summary is necessary in the context of this paper.

In Steiner’s early theory of knowledge, *Truth and Knowledge* (1963b), the human being is not a passive observer of world events, mirroring ‘in here’ what happens ‘out there’. Rather we are co-constructors of reality. As Dahlin (2013) puts it simply, according to Steiner; knowledge + experience = reality. The construction of reality is located within the human mind—Steiner refers to the human soul as the stage for cosmic events (1996b). The ‘I’, as spiritual core of the subject, is the source of agency and is embedded both in the unified world of spirit and matter, and is also embodied in the physical human being. As the bearer of consciousness, it experiences the world empirically through the senses and it can experience the coherence of the world’s structures intuitively in cognition. Following Steiner’s epistemology, it is the nature of thinking to bring separate thoughts together into a relational unity, in which “all the elements are related to one another” (1968, p.44). All individual thoughts, he says, are part of the whole unified thought-world. This unity however can no longer be experienced under normal circumstances because our physical constitution causes the experience of separation between subject and object. Barfield (1988), interpreting Steiner, refers to this as separation from a state of original participation. However, in thinking, this unity can be achieved again, in a state Barfield calls final participation.

In his *Theory of Knowledge*, Steiner (1968) describes our initial experience of the world as a chaotic and “unrelated aggregate” (p. 34), and individual sense perceptions appear un-related, an ongoing sequence of events without meaning or context. What is needed is an act of thinking to organise the experience. Bortoft (1996), who like Steiner draws on Goethe, refers to the need for “organising ideas” that make sense of the percept. Thinking thus makes sense of experience.

In Steiner’s account of knowing in *The Philosophy of Spiritual Activity* (1963a), the ‘I’ constructs percepts in the form of mental images on the basis of empirical sensory experience through observation and embodied experience and these are given meaning through a particular form of intuitive thinking in the form of a concept, whose source is the spiritual world of ideas. Percepts are subjective and individual whilst concepts are of general and objective validity, on the grounds that anyone, anywhere, given the same experiences and conditions, can think the same concept, as is the case for example in geometry. It is important to note that Steiner (1963a, p. 148) emphasizes that the word *perception* describes a process that is not limited to sense-perceptions, but includes everything that the mind encounters in terms of experience, including memories. More specifically, it is the experience of the ‘I’ *within* the experience that translates or interprets (Steiner uses the term *Dolmetsch* meaning both translator and intercessor) and gives meaning to the gestures of experience, a process through which, “the mute percept suddenly speaks a language intelligible to us” (1968, p. 52).

Some aspects of Steiner’s theory of knowledge are relevant to understanding learning. Firstly, knowledge grows through the self-activity of the subject constructing individualised concepts in the form of

representations (Steiner, 1963a, p. 124). Put simply, our representations of what we know about the world can grow as we apprehend their relationships within ever larger contexts. Thus knowing can be described as a process of learning to relate what we know to a progressively more comprehensive and coherent whole. Furthermore, as Schieren (2012) explains, the constructed unity of concept and percept that takes the form of a representation plays an important role in learning because we can remember, link and combine representations. The knowledge process, and thus the learning process, extends in two directions. The concept is anchored in a general, nomothetic structure of meaning (what Steiner calls the world of ideas) and at the same time is individualised as the meaning of a specific percept. In other words, general concepts are individualised. It is these that grow as the learner becomes more experienced. They grow towards a more comprehensive and general knowing.

We can assume that as individualised concepts are reinforced through repetition they form dispositions or abilities to certain ways of seeing the world and certain ways of being and acting. Through learning new abilities and dispositions, we change our relationship to the world and other people. In other words, learning is a process of becoming. Thus we bring reality into being through the performative and productive act of constructing knowledge and in doing so, we bring ourselves into being. The 'I' is both agentic subject and brings its own subjectivity into being through evidential experiences (Loebell, 2000), which has the dual effect of enabling the individual to experience, "I know that to be true" and "I am the one who knows it". Such experiences call the subject forth and heighten subjectivity. This is not a process that education can directly influence. It can however create learning situations in which it is more likely to occur and it can scaffold these processes through recognition and support.

The role of language

One aspect that is often overlooked in accounts of Steiner's theory of knowledge is that the concepts that we intuitively experience have to be 'clothed' in a culturally shaped 'garment' of language and culturally specific symbolic forms if they are to be communicated (even with ourselves)- "what a concept is, cannot be stated in words" (Steiner, 1963a, p.76). Ernst Cassirer (1962) argued that before we can grasp concepts, we have to express our experiences in the form of symbolic imagination and intelligence using discursive symbols, such as gesture, language, signs, art, myth, religion and science. Indeed, Cassirer argues that symbolic thinking is the precondition for relational thinking that enables us to understand the connections and relationships between things, because even the act of configuring a perception requires the things to be recognized and given a symbolic form. This does not mean that reality is constituted by language, but rather, as Taylor (2002) puts it, "all intelligible reality is 'enhanced' or 'increased' by the words we find to comprehend it." (Taylor, 2002, p. 66). Taylor is discussing Gadamer's statement that, "being that can be understood is language" (2013, p. 474). Language enables us to understand reality and enter into discourse through it. This means that each act of knowing is performed by an individual but this activity is always embedded in a social and cultural context through language. Thus, although the subject brings forth the reality of the object in matching percept with concept, she always does so within a discourse shaped by symbolic language and cultural understandings.

As Fuchs (2008, 2013) points out, the structure of language also enables the separation of subject and object and thus interrupts our active but unconscious participation in the living world. Even though language strives to overcome this separation, it cannot fully replace participation with representation. What we learn cannot entirely be articulated by words. Something is left over that we can only enact. Although school learning is heavily dependent on narrative and text (including all forms of symbols), we should not forget the learning that is also pre-verbal and manifests in actions, non-verbal expression and relationships. Language skills are the precondition for conceptual learning, (including the experience of learning concepts in three languages -the mother tongue and two others from grade 1 onwards, as practised in Waldorf schools), but the learning process does not start with concepts but rather from experience. Not all of experience can be articulated in words which allows for the fact that something is left over, that cannot be conceptually framed but which can be experienced aesthetically. When we reify knowledge in words and

concepts we take possession of it. However, the part that remains is the being of the 'Other'. Adorno (1966) called this negative dialectics, within which the possibility exists, that the 'Other' can be recognized. We can strive to understand but we will never be able to do this completely and we should respect this. Art is a form of knowledge that can mediate meaning without defining what that meaning is (Gadamer, 2013). Ong (2002) has made the important distinction between the consciousness associated with forms of orality such as speech, poetry, story, myth and literacy, which enables rationality, science and literature. Orality is in many respects 'closer' to the pre-verbal source of experience and thus plays an important role in the learning process.

Thus learning is an aspect of knowing and knowing is about participating in world processes in progressively more comprehensive ways. From a phenomenological perspective we already participate in the lifeworld (Gallagher and Zahavi, 2012, Berger and Luckman, 1963). From the perspective of Steiner's theory of knowledge, the human being participates in the creation of reality because the human spirit is already embedded in the world and the act of knowing gives our participation in the world meaning. Our bodily nature gives us the experience of being separated from the world; we experience 'in here' what we see 'out there'. These metaphors refer to different perspectives. The act of knowing involves returning to the 'things' their meaning and reality. At the same time, we bring ourselves into being. Learning is thus a process of becoming.

A model of learning processes: life processes and learning processes

As Heusser (Heusser 2014) has suggested, throughout his works Steiner posits an interactive correspondence between the processes at work in the human organism and the processes in the mind. Following anthroposophical pedagogy, the body is not simply an instrument for the mind, but through the embodiment of the soul and spiritual dimensions of the individual, we are connected to the living world, just as we are connected to the spiritual world in consciousness (Steiner, 1996b). Both body and mind participate in experience. The 'I', as spiritual and permanent core of being, is agentially active in both body and mind and mediates between the spiritual/soul world and the living body (Steiner, 1996b).

In his unpublished work *Anthroposophy – A fragment*, Steiner (1996a) attempted to show that within the processes of sense perception, various life processes are at work in our bodies that come to expression in our mental activity. The correspondences between body and mind suggest an embodied mind and a body transformed by the individual mind and "social suggestion" (Berger and Luckman, 1967), that is, a body, whose natural processes, such as breathing, digesting, growing, reproducing etc. that it shares with other mammals, are socialised and encultured through participation in social and cultural practices and modified through learning. In Steiner's terms, the life processes are part of the life-body, or formative-force-body (Steiner, 1996a). The human life-body, comprising a series of life processes, is an individualised part of the natural life-processes in the biological world. The nature of experience is portrayed as an interaction between sense organs, life-processes, soul and ultimately, the 'I'.

Underlying our sense experience of the world are seven life processes, which Steiner (1996a) describes as: breathing, warming, nourishing, secreting, maintaining, growing and reproducing. Dyson (2001) suggests that *separating* is a better translation for secreting, and *sorting* is also sometimes used. Space does not permit an account of Steiner's highly complex description of these processes. However, these ideas have been taken up by various authors (König 1999; Lindenau 1974; Rawson, 1999; Sahlmann, Weihs, & Urieli 1996; Stolz 2005; van Houten, 1993). Rawson (1999) aligned the life processes with the soul/mind processes, as follows:

1. breathing- perceiving
2. warming- experiencing sensations
3. nourishing – visualisation
4. secreting/separating/sorting – judging

5. maintaining – memory
6. growing –personality
7. reproducing –self-development.

Van Houten's (1994) interpretation of the seven life processes in adult learning, offered another variation. His sequence is as follows:

1. breathing – observing
2. warming – relating
3. digesting – assimilation
4. secreting(sorting) – individualising
5. maintaining – exercising
6. growing – developing new abilities
7. reproducing –creating.

In order to help the teacher to research the learning processes among her students, I have framed a series of heuristic propositions about learning. I briefly explain each of these, though these explanations are necessarily brief. I start with a characterisation of learning itself. Each proposition concludes with possible research questions. There are a whole series of preconditions for good quality learning. Space does not permit discussion of these, but I have published these separately elsewhere (Rawson, 2018).

Some propositions about learning

Lave (1997) suggests that any theory of learning must answer three questions; the relationship of the human being to the world implied by the theory, the telos, or direction of learning and the mechanisms by which learning comes about. Drawing on Waldorf learning theory and on the various interpretations of Steiner's work on the life processes that correlate these with learning processes, and on insights into learning from phenomenological and social practice theory approaches (see below), I attempt to answer these questions. I have found it helpful to think of learning in Waldorf contexts using the following propositions are heuristic tools:

1. learning is sustainable change of the whole person, body, soul and spirit,
2. learning has both a social and individual ontology,
3. learning starts with rich experience,
4. learning requires forgetting,
5. learning develops through narrative recalling,
6. constructing shared concepts,
7. and practice, applying what has been learned
8. leading to the growth of abilities.

Proposition 1: *Learning can be understood as sustainable transformation in the whole person as subject (body, mind/soul and spirit) over time and across different social practices through the activity of the 'I' as spiritual core of the human being. Learning is a process of becoming located within specific learning cultures.*

This characterisation of learning reveals its complementary nature. It draws on Waldorf theory but supplements this with elements of social practice (Lave and Wenger, 1991, Wenger, 1998) and phenomenological theory

(Fuchs, 2013, Meyer-Drawe, 2009). It does not significantly differ from the definitions offered by Göhlich and Zirfas (2007), Illeris (2014) or Faulstich (2013), except that it takes the spiritual dimension of the human being into account. These all describe a process of self-formation (*Selbstbildung*) in which the subject engages with and assimilates understandings of the world and in so doing, constructs identities. Anthroposophy posits a self as spiritual core of the human being, that is, agent and subject of activity. Following anthroposophical pedagogical anthropology (in German *Menschenkunde*), learning is part of the overall process of incorporating or incarnating, in the literal sense of embodying, the spiritual part of the human being into the living body, during which mind (in Steiner's terminology the soul) emerges through experience. The 'I' is active in all dimensions of this process from physical growth to intellectual development. As we have seen above, experience has two sources - sense perceptions and cognitive activity (Steiner, 1996b). The human being is embedded in and participates in the world unconsciously in willing and forms representations of the world in thinking consciousness. Feeling occupies a position between participation and separation with regard to consciousness.

Learning transforms the whole person, body and mind over time and across social practices, in what Illeris (2014) calls transformational learning. In practical terms, it is impossible to separate the mutual influences of body, soul and spirit in the learning process because changes in one area call forth changes in all areas, though synchronising the changes is an ongoing task of learning and development. Synchronising (or harmonising) implies the balancing one-sidedness within the psycho-somatic dynamic (e.g. physical exercise may build muscles or endurance but is not transformational unless it accompanied by new ways of thinking and feeling, whilst conversely, certain mental activity may have a deleterious effect on the body). Thus we need to distinguish transformational learning from more one-sided or superficial forms of learning that could be termed conditioning or training, in which external agency changes the person's reactions and behaviours.

Learning as becoming as a metaphor was coined to describe the learning of young adults (Hodkinson, Biesta & James, 2008) and was then applied to learning throughout life (Biesta, *et al*, 2011). It implies that learning goes hand in hand with identity work (i.e. the ongoing constructing resilient and coherent biographical identities) and ecological agency (the ability to act within the opportunities and restraints of a given social situation). This metaphor recognises that what we learn, can reinforce or alter what has been learned and can thus influence what we can subsequently learn, thus shaping the habitus (Bourdieu, 1990) of the learner and disposing her to certain new learning experiences. Habitus refers to embodied social positions and the behaviours and attitudes that are linked to these. This notion reflects Dewey's view that learning influences the formation of embodied "attitudes of desire and purpose... [and] every genuine experience has an active side which changes in some degree the objective conditions under which experiences are had" (Dewey, 1938, p. 36). Significant new experiences may change the existing body of habits. Dewey refers to this process as growth and development. Thus learning changes our 'I'-identity (how we see ourselves) and our social identity (how we are seen by others). Faulstich (2013) describes learning, which he associates with the idea of self-formation, as a lifelong biographical process of striving to establish identity by assimilating culture through learning and in doing so, developing personality.

Since learning in school, which is the focus of this paper, always occurs in a social context, we can understand it as a process of becoming (or self-formation) within a given social and cultural context and within specific learning cultures. Following Stuart Hall's discussion of identity and culture (Hall, 1996), this view of culture sees it as an expression of the actual actions, thoughts, feelings and relationships of its members and how these are positioned by the discourse (Hall uses the metaphor of suturing to suggest how the individual is 'sewn' into the discourse), rather than as a something of an abstract or essential nature. Following Hodkinson *et al* (2008), a learning culture is embedded in a community of practice (Wenger, 1998) and comprises the actions, attitudes, behaviour, expectations, assumptions and talk of the people within that community. A community of practice is a group of people who share tasks, experiences, language, tools and artefacts, rituals, ways of seeing and being.

In a Waldorf school the learning culture includes the curriculum as espoused (and expectations arising from this), curriculum as actually taught, the teaching methods, the class community and the school culture

(Helsper *et al* 2001). The explicit, actual curriculum is the visible side but there is also a tacit, invisible or hidden side to the curriculum, which comprises the unintended, unconscious ways that teachers and schools privilege some students and marginalise others (e.g. for social, cultural or economic reasons), in ways that Kelly (2011) has addressed. This kind of cultural perspective on learning de-centres and contextualises the learning process yet also gives a strong role to individual agency; people have to actively participate if they are to learn. The question is, whether the learning culture enables or hinders their participation. A Waldorf school is an educational culture that both shapes persons and is shaped by them. The way people learn, including teachers, generates the relationships and meanings that we refer to as school culture. As Lave and Wenger (1991, p. 35) put it “learning is an integral part of generative social practice in the lived-in-world.”

Learning is also shaped by the experiences a person has had. Bodily maturation may follow a genetically determined sequence but the timing is culturally variable and wide individual variation in development is normal (Beglinger & Largo, 2005). We know from neuroscience (Hackman & Farah, 2009) that brain development is affected by socio-economic factors and that individuals respond in individual ways to this, notably in puberty (Foulkes & Blakemore, 2018). From a Waldorf perspective, development also reflects individual biographical dispositions (Wiehl & Zech, 2018). In schools, both learning and development are significantly influenced by the institutional structures (e.g. the Waldorf class system), particularly at moments of institutional transition from one set of practices to another (Fleer & Hedegaard, 2010), such as the move from kindergarten to first grade, or from Middle to Upper School.

In Waldorf pedagogy, the curriculum, which includes both the content and the teaching methods, is obviously a prime factor in shaping learning and development. Zech (2016a) refers to the curriculum in Waldorf schools as being structured around ideal-typical developmental descriptors that relate to the developmental tasks the students face. Thus the topics dealt with and the teaching methods, offer learning opportunities in which the students can respond to certain age-related developmental tasks. These developmental tasks are based on this heuristic model of development in the curriculum and also on teachers’ understandings of the actual local social, economic and cultural context and individual learning and developmental needs. For this reason, Waldorf curricula around the world and over time will vary of necessity. This is a vital aspect of curriculum development everywhere in the world because it cannot be assumed that the same developmental tasks can be answered by the same curriculum everywhere in the world at any time. This is an under theorised area of Waldorf practice (Rawson, 2017, Boland, 2015).

Wiehl (2015, p. 169) uses the term *learning disposition* to describe how the individual’s psychological and cognitive constitution that at any given moment in her development, shapes the way that person relates to and responds to her experiences and to the social and material environment. She points out that Steiner identified three basic and universal learning dispositions; imitation (age 0-6 years), following authority (6/7 to 14/15 years) and learning through the forming of judgements and learning from life (from 14/15 upwards). However, in my view it is always important to understand dispositions within the context of a specific learning culture rather than as essential or intrinsic traits possessed by a person. Even if we accept that these learning dispositions are inherent (e.g. the disposition to mimetic learning, see Wulf, 2007) in the young child), or latent (e.g. the disposition to seek authority role models in childhood), these dispositions still have to be learned in a specific context that offers learning opportunities for this learning. Learning cultures afford certain dispositions but also hinder others. Educators make conscious choices as to which dispositions they cultivate and the nature-nurture question is always at the heart of all pedagogical theory.

Thinkers such as Michel Foucault, Judith Butler and Stuart Hall have changed the way we think about identity and the self-though this influence is barely apparent in the Waldorf discourse, which generally tends to assume an individualistic, essentialist ‘I’. Most contemporary educational discourses recognise that people are positioned through their social interaction. Lachicotte (2009) notes, “the subject-in-action, the ‘I’, has no (in fact, cannot have) immediate knowledge of itself. In order to understand oneself, one must respond to oneself as an object, as a ‘me’. Yet the only models in experience for such self-response are the responses of other people” (2009, p. 225). Thus identity is always relational- we see ourselves in relation to others and how they see and respond to us. As Bakhtin (1981) put it, self-consciousness is always dialogical. Postmodern and post-structural theory has sought to refute the notion of an autonomous, self-determining,

essential self, and has replaced it a dialogical, social self, or rather a diversity of selves, or selves in different contexts with ecological, experiential, ontological and emergent, social and spiritual selves (Gallagher, 2011). Whatever theory of self we choose, learning, becoming and identity all require some notion of agency. I think Biesta and Tedder's (2007) notion of agency is helpful in seeing agency as something that is not given but has to be achieved through active engagement of individuals within contexts-for-action, or what they call an ecological understanding of agency. This notion comes close to Alheit's (2018) construct of biographical learning, which requires a reflective ability to construct biographic narratives in response to the opportunities and limitations afforded by the given context, and indeed how the individual can change those circumstances to take advantage of them for learning.

This proposition about learning invites many research questions. One can seek to identify what notion of learning fellow teachers in a faculty (or indeed what parents) have, since attitudes to learning shape the learning culture. Another research question is to explore how we can identify and work with different understandings within a learning culture. Curriculum development is a vitally important aspect of Waldorf pedagogy, which has barely begun to be recognised as an issue, either because of naïve views that the curriculum is a given and canonical set of standards, or because teachers teach what they subjectively feel is important.

Proposition 2. *Learning occurs through participation in social practices and has a social ontology but requires an active subject*

I take a relational view of the human being and thus of learning. This stance seeks to overcome the notion that learners somehow internalise knowledge as something pre-existent. Rather, a relational, social practice perspective understands that “the production, transformation, and change in the identities of persons, knowledgeable skills in practice, and communities of practice are realised in the lived-in world of engagement in everyday activity” (Lave and Wenger, 1991, 47). A relational perspective emphasises the interdependency and mutual formation of persons and the social and cultural worlds. Activity, knowing, meaning, and learning are part of this interaction. Instead of the dichotomy of inside and outside implied by internalisation, learning is seen as the process of developing trajectories of participation. Learning is inseparable from the process of persons becoming through experience and understanding are always in an ongoing cycle of mutual formation involving the person and social context. The person is the focus of this approach to learning, but we must always see the person as a person-in-the-world. In typical child-study approaches in Waldorf schools, there is sometimes a tendency to look at the child separate from the pedagogical and general life situations the child is embedded in. The one cannot be understood without the other.

Participation in a social practice mediates to the learner, more than simply knowledge. Following Wenger (1998), learning in a community of practice involves meaning making (i.e. our individual and collective ways of experiencing the world as meaningful), social belonging through shared learning, identity (i.e. how learning changes who we are and our personal histories of becoming) and learning as doing (developing abilities and becoming skilled). A community of practice is a group of people who - share experiences within a common social framework, participate in a joint enterprise with its rhythms and common activities, have mutual engagements and relationships, a shared repertoire of stories, language, artefacts, a shared history and discourse. This characterisation matches a class in a Waldorf school. Here the participation is usually long-term, involving many rituals, rhythms, ways of being together and shared activities over many years leading to the growth of a Waldorf habitus (Idel, 2013).

Participating in a community of social practices- and people belong to several overlapping communities- involves the members initially in a peripheral position within the community. Through their participation, their trajectory (how they move through life) leads them, as a rule, towards more comprehensive participation and expertise in the practices that characterise the community and thus also to the further development of that community. Even though individuals are differently resourced and positioned within a community, which in a school class may show itself in differential levels of ability in the various subjects and in different

family backgrounds, novices nevertheless become full members over time, regardless of their individual abilities. In a Waldorf class seen as a community of practice involving ritual, rhythm and the structured reinforcement of relationships over space and time, we would normally expect a culture of fluid collaboration involving shared understandings leading to “complex engagement and construction of shared reality among participants [that] is not the result of combining individual characteristics or experiences. Rather, it is mutual sharing of a common way, a common understanding... The individual acts with commitment to exercise communality, engaging in the ways of the group and potentially modifying them in the process” (Mejia-Arauz, *et al* 2018, p.121). A clue to understanding the task of inclusion is recognising this principle and all members of the community doing their best to make it possible for all others to participate.

Thus the primary mode of learning is participation. Knowledge-making involves participation with the world, with other people and their thoughts, feelings and intentions, with and through language and symbols and ultimately, anthroposophically speaking, with the world of ideas in which we are all embedded. Barnes and Lyons (1979) describe the overall learning process in a Waldorf context as first involving an encounter with the world, “then encounter becomes experience; and out of experience the concept crystallises. Encounter, experience, concept – perception, feeling, idea: these are the three steps in every genuine learning process” (1979, p.7). Loebell (2000, 2016) describes this process as three stages of participation in experience; attention and interest (*Aufmerksamkeit*), commitment (*Verbindlichkeit*) through which the learner unites herself to and ‘owns’ the experience, and then the individual’s experience of evidential knowing through insight (*Evidenzerfahrung*). This perspective emphasises the individual experience. However, as I have argued, the social and cultural context is equally important.

The primary research task is to explore the ways in which rich experiences can be facilitated and the extent to which the practices enable all participants, whatever their resources and differences, to participate to the best of their abilities. Rogoff (Rogoff, 2014) offers several criteria for assessing the conditions for participation. These are:

1. The learners are incorporated in and contribute to community endeavours.
2. The learners are eager to contribute, collaborate and belong and each member is willing to help others.
3. The activities are organised so that all can participate.
4. The goal of the learning situation is participation so that all can contribute, allowing others to participate, taking responsibility and contributing to belonging.
5. The learning occurs through keen attention to and contribution to events, guidance is provided across the community and there are expectations that people will learn in the learning culture.
6. Communication is based on shared reference in collective endeavours through verbal and nonverbal communication and narratives and dramatisations are used to convey values and explanation is always in the context of the shared activities or in anticipation of such.
7. Assessment for learning is used in relation to the collective endeavour.

Each of these criteria can be used to explore pedagogical learning situations. I used these criteria to evaluate the learning processes in three Waldorf institutions in very different cultural settings, Vietnam, Lebanon and Kyrgyzstan, in a way that shows the general applicability of the model (Rawson, 2017, 2018).

Proposition 3: *the basis for learning is rich experience.*

Learning begins with rich sense experience through listening, observing and participation. Rich means experience that is direct, authentic and multi-sensory. In order for transformational learning to occur, there have to be significant experiences that interrupt, discontinue or challenge existing embodied experience. We start to learn when what is known is no longer adequate. The new experience must require the learner to readjust what they know. Meyer-Drawe (2012) uses the Greek term *pathos mathei*, which means literally

learning through suffering or being moved (e.g. in the context of Greek theatre). She argues that we do not learn through experience, but that learning is experience.

Learning can thus occur through active participation in a social practice, experimentation or through active imagination (e.g. prompted by the teacher's narrative, text or images). In Waldorf practice, the learning process is structured so that the students first experience something and then, in subsequent steps, come to an understanding of that experience (Avison, 2016). They first have to form a perception of the phenomenon. This proposition refers to the first stage in the learning process, in which the initial experience is made (subsequent stages are discussed below). Not only should the experience be rich enough to make a strong impression, but it is important that the encounter with the new experience occurs within the community of practice.

The notion of starting learning with experience (rather than with a concept or definition) requires us to have a comprehensive understanding of the nature of perception, which is why Steiner (1996b) developed a pedagogical theory of 12 senses and did research on the processes behind the senses and how this relates to his theory of knowledge, which I have referred to above. From a phenomenological perspective, perception, movement and knowing cannot fundamentally be separated as functions (Fuchs, 2013). The body, in Merleau-Ponty's (2005) terms, is an ensemble of capabilities to perceive, to act, to desire and to communicate that have been learned and these depend for their expression on what the environment affords. Following Gibson's (1986) ecological understanding of perception, learning involves a schooling of attention to the affordances in a given environment. Therefore, teaching methods are required that involve heightened awareness and accurate observation, so that the learners notice what is important to understand the situation. Marton (2015) makes the case for an emphasis on noticing differences rather than similarities, because what is different stands out from the pattern. Through active engagement with the real world through doing and communicating, the students learn to recognise and identify differences in the qualities of the things they encounter using as many senses as possible to build up rich experience.

A key pedagogical research question is exploring how children actually experience the main new content in lessons and building up a taxonomy of experiential learning, by for example, exploring the differences between direct seeing, hearing, doing and indirect methods using narrative, texts, images and other media, e.g. how much primary experience of nature is needed for learning related to the natural world?

Proposition 4 Forgetting is an important part of learning

One of Steiner's most important ideas related to learning is the role of the unconscious. Remembering and forgetting are part of the overall rhythm of what Steiner (1996a) refers to as sleeping and waking, in which the soul and spiritual parts of the human being engage and disengage with the living bodily organism, a process that is accompanied by different levels of consciousness. In sleep the soul-spiritual dimension is unconscious because it is disengaged from the life and physical bodies. In this state, however, the experiences of the day continue to resonate in the unconscious. The same thing occurs when we direct our consciousness towards something else; the experiences we have just had, become unconscious. The impact of the experiences, comprising sensations, perceptions, feelings, thoughts, language and actions on our sentient soul (as Steiner calls the process and location of our response to sense experience) can unfold and are now uninhibited, as it were, by further new experiences and the focus of our attention, and thus go on reverberating.

Fuchs (2013) makes the important point about the unconscious that it has less to do with the *depth* of soul experience but rather with the *horizontal relationship* to space and in particular to our lack of awareness of the relationships between things in our normal consciousness. When we are attending to our immediate experiences, we are not usually conscious of the whole context and the relationships between the things around us. We experience the world anew, initially as an undifferentiated totality. We give it shape, perspective and dimensions to our perceptions through comparison with the knowledge we have already embodied. Steiner (1996) says that our ability to form mental images of what we experience is possible because our pre-bodily experience is already pre-figured and is thus innate, though the capacity to form mental images at will is

only available after the second dentition. That means the ability to conceptualise, though innate, becomes possible only once the life processes have undergone a transformation into soul processes.

From an anthroposophical perspective, the 'I' is already embedded in the relationships in the world, though the conscious mind is not aware of this. We are not aware of everything we perceive and experience. Looking more closely at this situation we can see that during the original encounter with the phenomenon, we were not separated from the object of our interest because our will unites itself intentionally with it through our various senses. The phenomenological notion of intentionality (Gallagher and Zahavi, 2012) says that in the act of perceiving what is given to us by the world- the phenomenon- involves entering into a relationship between subject (perceiver) and object (perceived). Through intentionality we enter into a relationship with what we see, hear or otherwise perceive, which alters both subject and object. When the object is another person or sentient being, that relationship becomes a shared intentionality (Tomasello and Carpenter 2007).

When we are asleep or unconscious (or our attention is directed elsewhere) the connection is retained, though it is freed from sense impressions. Following Steiner's account, an experience we have during the day, for example in a lesson, resonates on in the unconscious. Our unconscious will remains bound up with the experience and in particular with the relationships that belong to the object, including of course, our relationship to the original experiences, the feelings that were activated and the way we perceived the original encounter, the senses involved being linked to various life processes. However, another important factors plays into this process.

The teacher has already made a significant connection to the subject matter that forms the content of the rich experience. She has selected specific elements in her presentation and arranged the learning situation in an artistic way to optimise the effect of the experience. The encounter is not casual or accidental but intended, guided, shaped and framed (here the analogy with a work of art is helpful, not least because it wishes to make something invisible, visible). Furthermore, the teacher has specific aims in bringing this material to this class at a particular time- in other words she has specific intentions with a specific group of children. Thus the teacher's intentions and intentionality play important roles in directing the children's attention to the salient aspects of what is to be learned in the actual situation. There is a qualitative difference between an accidental encounter with the world and the rich experiences that have been selected, scripted, organised by someone. The experience comes to the students in a form that has already been shaped through the teacher's activity and consciousness. In the same way a photograph taken, selected and perhaps modified by a professional photographer often has greater depth of impact on the viewer than a 'selfie'. Teaching as an art involves precisely this deliberate choice and planned presentation of 'material' that conveys meaning, without specifying what that meaning is. The children's task is to experience and articulate the meaning in subsequent learning stages.

This directing of attention and intentionality 'directs' the child's unconscious 'I' (unconscious though active) to the phenomenon. It is not that the teacher directs their attention explicitly ("look at this, it is important"), but rather in her preparation, this focus is highlighted and the directing is implicit. Because Waldorf teachers select and prepare their teaching material themselves, as opposed to using textbooks or material prepared by others, their subjective involvement with the material is intensive. When they have prepared their lessons and meditatively focused on the essential "message" they wish to communicate, in the context of a basic relationship of trust between students and teachers, this intentionality resonates in the children's unconscious, along with the experiences they have had in the lessons. Part of the art of teaching is being clear what the core 'message' is, and thus to construct the lesson in such a way that the students tacitly understand this 'message' too. That is why, as Biesta (2012) points out, it is important that children and young people learn *something* from *someone*. The teacher's being mediates between the child's being and the being of the subject matter (as a meaningful part of the world). The child is already embedded in the living world and the cultural lifeworld of meanings; her organs of perceptions are permeated by the life processes that belong to the world. The teaching directs the child's attention to the relationships and strengthens them. These relationships are woven together in the sleeping, unconscious mind, where the interests and

intentionality of the other participants in the learning community also mingle. The next stage is to make the process more conscious.

An important research task is to review the relationship of “well-prepared” teaching material to the subsequent recall of the experiences. Another is to explore how teachers determine how they select the priorities in their choice of material and indeed the whole process of preparing lessons.

Proposition 5: *Individual and social processes of recalling, re-telling, re-constructing and giving meaning to experiences*

When we recall the experiences, we reconstruct them from our memory. The reconstruction however is no longer identical to the original experience, but has been modified in ways that are relevant for learning. Steiner (2007, lecture 11) speaks of remembering as the recalling of sequences of deeply embodied images and raising these to conscious ways of seeing. This involves an act of will that is strengthened by the intensity of our interest and engagement and the feelings generated by the experience and thus the identification with the original experiences. Steiner uses the example of zoology and the students’ encounter with certain animals through the lively, vivid and artistic presentation by the teacher. He also refers to the teacher narrating history in such a way that strong identification by the students occurs. He contrasts this way of experiencing with the taking in of dead concepts that burden the memory and lame the will.

Following Steiner (2011), re-calling an experience involves constructing a new perception, though internally rather than through the senses. This activity requires an act of will or agency on the part of the subject (as opposed to a spontaneous memory). It is therefore important that each student performs this act for herself. Simply taking notice of someone else’s memory is insufficient. Walter Benjamin (1928) offers an insightful analogy for this process. He compares the experience of looking down on a road from an aeroplane to walking along the road. The power of the experience and the insight one has into the locality is obviously much greater when one walks through it. He then goes on to suggest that the act of reconstructing a text or an experience involves a strong identification and thus deeper insight. It gives the student ‘command’ over her experience. Benjamin (1969) offers further insight into oral communication and the realm of what Ong (2002) later called orality. Benjamin speaks of an artisan form of storytelling, in which experiences in the workplace are recounted and shared. This generates and circulates meaning and affirms the practical life of the community, thus sharing and imparting knowledge to all the members of that community. Such storytelling “presupposes a situation where someone is sharing a story with listeners who in turn take up that story and make it their own” (Pereira and Doecke, 2016, p. 539). This is exactly the function of recall in a Waldorf class.

Thus, each student is encouraged to recall the experiences of the previous lesson for herself. Individual agency is important, which is not achieved when only a few students do the active recalling. The function of the recall is not simply and pragmatically to reconnect the class to “where did we leave off in the last lesson?” but has the more significant function for each individual to reconnect to her own embodied experiences, since it is *her* personal abilities we are trying to enable to grow. Re-calling embodied experiences initially in a non-verbal way may draw closer to those embodied experiences because as soon as experiences are verbalised they change their meanings (Kelly, 2011). This can be done using drawings, making models or enacting.

When people recall what they have experienced they usually do this in narrative form. Bruner (1990) has established how human beings structure complex experiences in narrative in order to give them meaning. In the recall part of the lessons, the students are either re-telling what they have been told or they are recounting what they directly experienced. In doing so they draw on their own embodied previous older experiences, which already contextualises the new experience being recalled. When re-telling the story the student participates in the experience of the original story-teller, which is why teachers present much of the material orally rather than in text form. In orality the teacher’s inner connections to the material are more authentic and vivid. It is a quality of orality that speaker and listener are embedded in the same process (Ong, 2002). The re-telling is also never a mere reproduction but a re-creation, what Reason and Heinemeyer

(2016) call *creative copying*, a process in which the teller makes the story her own, whilst remaining faithful to the original in its intentions and forms. These authors have coined the phrase *storyknowing* to characterise the kind of knowledge that is borne in story form. Re-counting an experience orally also generates a form of storyknowing. In order to get from storyknowing to conceptual knowing several further steps are required.

One way of prompting recall is to address questions to different temperamental types, for example, asking about elements of the story or experience that invite a melancholic or choleric perspective. Power (1988) has suggested using different modes of recall in the upper school classes, which he relates to archetypal planetary qualities, for example, as a *Venus-quality* of recall, which focuses on the emotional and relational aspects of the experience, or a *Mars-quality* of recall that focuses on essential actions and outcomes.

The next step is to share verbally those recalled experiences in the class. Here the students experience a wide range of variations and details they themselves had not noticed. At this stage the teacher can also correct, modify or supplement the memories of the class. In effect a kind of collective cultural memory (Assmann, 2011) is being constructed, in which “our” experiences are given meaning through sharing, repetition and ritualising.

Through language we are inducted into the historicity of words and their sedimented, intuitive levels of meaning. Reciting and working with poetry is particularly important in these terms. A text such as the following passage from Shakespeare’s *Macbeth*, experienced and then unpicked to reveal the images within it, connects the student to concrete experience, metaphor and practical wisdom and spans the gap between intuitive orality and analytical literacy: “Macbeth hath murdered sleep! Sleep that knits up the ravelled sleeve of care, balm of hurt minds, chief nourisher in life’s feast...”. Placed into the context of the play and Shakespeare’s life and times, we excavate archaeological levels of human collective and personal experience through the medium of language. Steiner (1995) made the point that engaging with the ideas living in such images can enable adolescents to access the pre-verbal, spiritual dimension of the world of ideas, from which they can derive the energy they need to create their own ideals. Learning two other languages from class one onwards provides children with two further strata of linguistic experience, which enables them, among other things, to have three perspectives on common concepts that do not overlap but create a fuzzy and thus malleable experience of approximate understandings. (Zech, 2016)

Explaining experiences to others using words means to some extent objectifying and reifying them. Indeed, to follow Dewey (1933), the reflective reconstruction of experience is located in the social sphere. Understandings are the outcome of communication and following Cassirer (1962) communicative knowledge is conceptual, symbolic and linguistic. Wenger (1998) points out that the interplay of individual and social memory involves the weaving together of two strands of experience, that of participation and reification. Participation is action-in-the-world and is largely un-reflected. Reification (literally meaning making into an object) involves “our constructing physical, procedural and conceptual artefacts- words, tools, concepts, methods, stories, documents... that reflect our shared experience and around which we organise our participation” (Wenger, 2010, p.179). The interweaving of these two strands over time helps to define both identity and belonging within a community of practice. The community understands what matters and enables the participation of its members. It uses the repertoire of resources the community has accumulated over its history to enhance its practices. Experienced in this way, the recall process not only shares and clarifies, it also reifies and consolidates the experience of the community.

The final stage of recall and reconstruction is when the class characterises the essential aspect of what has been experienced and then formulates a concept or rule. This shapes the collective understanding of the phenomenon- “how we understand this”. In the upper school, the students exercise their powers of individual judgement in various ways, though this also involves the formation of negotiated and agreed judgements (Zech, 2016b). At this stage, the students compare their “discoveries” with those of their cultural predecessors, the scientific tradition and the range of possible theories that seek to account for the phenomenon. The point about concepts being constructed throughout the twelve years of the curriculum is that the class revisits concepts again and again, each time expanding and modifying them in the light of new understandings- what can be referred to as a spiral curriculum. Thus these concepts need to be

capable of growth and development, rather than fixed definitions that have to be replaced in the light of new knowledge. Thus we have a dynamic growth of conceptual understanding that is distributed among the members of the community through social interaction and communication. These draw on existing cultural concepts that are distributed across cultural artefacts (e.g. books, educational institutions) and mediated through language, in which cultural understandings are sedimented (Barfield, 1967). Knowledge is also part of individual evidential experience (Loebell, 2000).

A research task connected to this proposition could be looking at actual ways of recall in the various subjects and exploring ways of strengthening both the individual and shared processes.

Proposition 6: *Learning grows through practice and applying what one knows*

Through the systematic application of what we know to similar situations supports the process in which what is retained in memory is transformed into ability. This process is akin to Vygotsky's (Vygotsky, 1978) notion of the zone of proximal development in which the learner can attain a new level of learning with the progressively reduced support of a more competent other person. Thus a series of tasks can be given to the learners in which the application of what has been learned becomes progressively self-directed. A first stage is simple reproduction; a second may involve applying a known pattern to similar situations. A third level of task is to recognise differences between situations (Marton, 2015) and a fourth level is when the learner frames her own questions and provides her own answers. When the student knows how to deal with a phenomenon, interpret it and take up a position, when she can "play" with it, one can say that she has developed an ability.

Ultimately, abilities change the way we see the world. If we take Steiner's example of the ability to read and write, then we can see that many experiences in a particular field can lead to the development of a particular ability, which by its nature is more generalised than the specific experiences. Following a successful chemistry main lesson block, the learner will relate to the world of material processes differently and may be able to draw on this to construct conceptual metaphors meaningfully in chemical processes, such as combustion, reduction or catalysis for example. This is ultimately the idea behind the block-principle (epoch) in Waldorf schools, in which a theme is intensively experienced over four weeks (two hours each day) and then allowed to be 'forgotten'. Some subjects are experienced only for one or two blocks a year, which means that the period of forgetting can be half a year or more. What do teachers expect students to 'remember' after such a long time? Very few specific facts will be retained after such a long time, so the function must be to facilitate the growth of abilities rather than build up a body of specific knowledge that can be recalled. However, there is an obvious ambivalence about this process, since some subjects are deemed to require continuous regular weekly lessons and some subjects that are taught in blocks are supplemented by 'practice' lessons. It is as if teachers do not fully trust the system and do both. This is a very under-researched aspect of Steiner pedagogy. Is it clear what the distinction is between occasional blocks and subjects that are more frequently taught and what the expectations of both are? Sievers (2018) has made a strong case for block teaching in English as a foreign language in the upper school (and indeed many schools teach in alternating blocks in the lower and middle school). Other teachers insist that foreign languages can only be learned in regular lessons- evidently they are basing this judgement on quite a different understanding of learning.

Another research task in relation to this stage of learning would be to monitor the stages of emancipation from the teacher's scaffolding to the growth of ability. An important part of formative assessment is observing and giving feedback on this stage of learning. Indeed, summative assessment assumes that the learner has "learned" what she should and has mastered it. If the growth of ability is the actual aim, how can this be appropriately assessed and 'tested'?

Proposition 7. *Learning ultimately leads to the transformation of the whole human being*

When we have thoroughly learned something, we are transformed; or rather we are in a process of ongoing becoming. As Loebell (2000) has shown, there are close links between the stages of learning and the

emergence of individuality. When the whole person changes we can probably recognise this in her overall maturity.

Our primary research task in relation to this level of learning is to note how students change in their overall development over time, perhaps each year. It is actually the function of the annual school report, to characterise the changes in a person over the past year and point towards new challenges in the coming year. What form can long-term formative assessment take, if it is to make this becoming of the person visible?

Conclusions

Do these propositions answer Lave's (1997) requirements for a theory of learning? The learning approach based on Steiner's theory of knowledge involves a participatory epistemology that sees the learner/knower as a co-creator of reality- the other creators being the nature world and the social world and, in the classroom, the learning community. The direction of learning is on the one hand the reintegration of knowledge into increasingly comprehensive understandings, and on the other hand, involves the emergence and growth of the person. Learning is thus the motor of growth and development and the emergence of individuality. The parts of the world we perceive are given back to the world as a whole and in the process is given meaning. The primary mechanism of learning in school settings is participation across changing practices and the individualisation of evidential knowing.

In this paper I have attempted to outline a complementary and provisional theory of learning in Waldorf practice that builds on anthroposophical insights as well as other ideas. The purpose of the propositions is to focus practice-based reflection and research. In the course of such research these propositions can be tested as to their usefulness, modified or abandoned and new propositions formulated. The purpose of the paper was also to elicit a critique. No doubt those who know better than me will provide this.

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