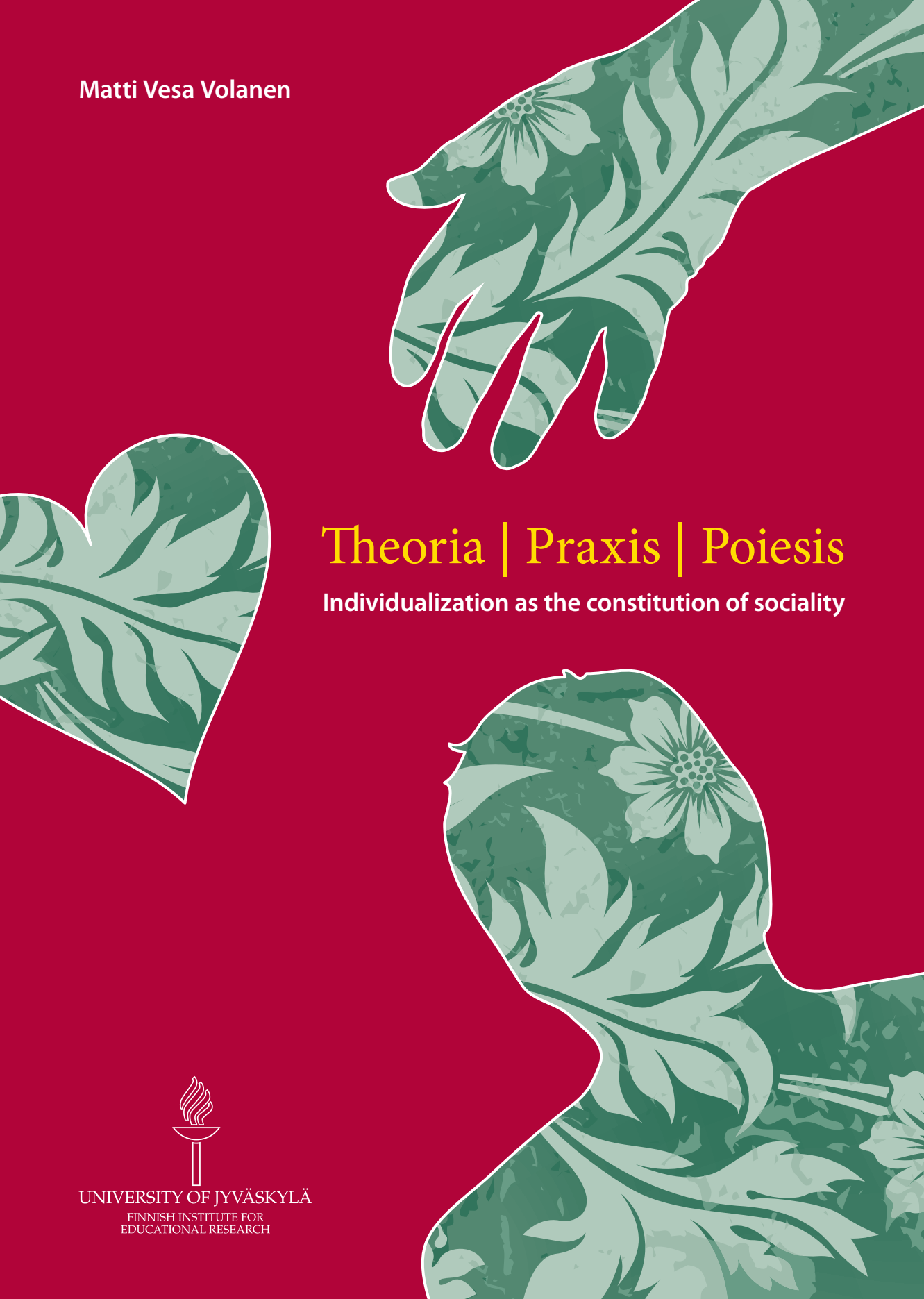
Matti Vesa Volanen



Theoria | Praxis | Poiesis

Individualization as the constitution of sociality

UNIVERSITY OF JYVÄSKYLÄ
FINNISH INSTITUTE FOR
EDUCATIONAL RESEARCH

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Matti Vesa Volanen

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Contents

List of tables

List of figures

Volanen, M. V. 2012
THEORIA | PRAXIS | POIESIS
Individualization as the constitution of sociality

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Abstract

In this work I take the following four steps: First, as a point of departure, I examine the concepts of *Bildung* and *Beruf*. I try to report in brief the historical background of the division between liberal education and vocational training, and also make my first attempts to overcome the division. Unexpectedly, the results of the analysis reveal that the basis of the division is at the very heart of the process of social individualization, within the division between *praxis*, doing, and *poiesis*, making. Secondly, in an explorative analysis, I make a short analysis of social individualization. My starting point is the constitutional character of social individualization, and I use the concept of "texturing" to express the three main qualities of the social individualization process. Thirdly, I construct a model of analysis for psychological research. Drawing from Y.-P. Häyrynen's ideas of macropsychology, and trying to overcome some of the problems in the cultural-historical school of psychology, I propose understanding social individualization as a constitutional process. My main argument is that sociological and psychological theories have not been very successful in handling these questions because the relation between activity (*Tätigkeit*) and behaving oneself, self-conduct (*sich verhalten können*) has not been analysed carefully enough. Fourthly, I introduce three dimensions for the practical analysis of learning. I open the theme under the headline of "learning by making". I conclude with a tentative proposal for a connective curriculum of upper secondary education to overcome, via my model of analysis, the division between liberal education and vocational training.

Keywords: general education, vocational education, social individualization, learning by making, upper secondary education.

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Tiivistelmä

Tässä tutkimuksessa etenen seuraavien neljän askeleen myötä: Ensiksi, lähtökohtanani, erittelen sivistyksen ja ammatin käsitteitä. Selvitän lyhyesti jakoa yleissivistävään ja ammatilliseen koulutukseen ja yritän löytää perusteita purkaa tämä jako. Yllättäen osoittautuu, että tämä jako on aivan sosiaalisen yksilöllistymisprosessin ytimessä, jaossa käytännön (*praxis, doing*) ja tuottamisen (*poiesis, making*) välillä. Toiseksi, selvittelevässä erittelyssä, analysoin lyhyesti sosiaalista yksilöllistymistä. Lähtökohtani on sosiaalisen yksilöllistymisen konstitutionaalinen luonne ja käytän yhteenkutoutumisen (*texture*) -käsitettä ilmaistakseni sosiaalisen yksilöllistymisen kolme keskeistä piirrettä. Kolmanneksi konstruoin niitä varten mallin psykologista tutkimusta varten. Lähtien Y.-P. Häyrysen makropsykologia-ajatuksesta ja yrittäen ratkaista joitakin kulttuuri-historiallisen psykologisen koulukunnan teemaan liittyviä ongelmia, hahmotan sosiaalista yksilöllistymistä sosiaalisesti konstitutionaalisena prosessina. Arvioni on, että monet sosiologiset ja psykologiset teoriat ole olleet menestyksellisiä sosiaalisen yksilöllistymisen erittelyssä koskapa toiminnan (*Tätigkeit*) ja käyttäytymisen (*sich verhalten können*) välistä suhdetta ei ole analysoitu riittävän yksityiskohtaisesti. Neljänneksi, analyysin pohjalta esitän oppimisen käytännölliseen erittelyyn kolme ulottuvuutta, joita tarkastelen "*learning by making*" -ajatuksen välityksellä. Päätän tarkasteluni tekemällä alustavan ehdotuksen yleissivistävän ja ammatillisen koulutuksen yhteensitovasta opetussuunnitelmasta toisen asteen koulutukseen.

Asiasanat: Yleis- ja ammattisivistys, sosiaalinen yksilöllistyminen, tekemällä oppiminen, toisen asteen koulutus.

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I am, of course, deeply indebted to all the thinkers and writers I have been studying during the long history of writing and editing this work. I am equally grateful to the work community of the Institute for Educational Research at the University of Jyväskylä.

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My wife Taru and my son Max have for many years endured my absent-minded presence with great sympathy. I appreciate their presence most of all.

Jyväskylä, May 2012

Matti Vesa Volanen

In his introduction to *Plato: Timaeus* Peter Kalkavage (2001, 19) writes that *Timaeus'* "likely story . . . depicts making, *poiesis*, as an activity that starts with the highest things and proceeds to the lower."

In that is contained all the pathology and pathos of Western philosophy and theology.

If *poiesis* is a descent, then the move from mind to matter is a descent; the move from conception to execution is not fulfillment but failure; the move from individual to community is a decline; the move from inner to outer is tragic; the move from possession to sharing is a loss; the move from contemplation to action is calamitous. Language is less than thought, poetry than science. If *poiesis* is a descent, then change is evil, creation is deterioration, and to be a human is to be fallen. If *poiesis* is a descent, the end can never recover, much less surpass the beginning, and the Last Adam is lower than the First.

– *Peter J. Leithart* (2011)

Prologue

Perhaps it is fair to first say a few words on the motivation behind this work. As we know, the main institutional structure of upper secondary education comprises a twofold division: liberal education and vocational training. It also assigns young people to different social tracks in life. This is the case almost all over the modern world, though with minor differences in different countries. As a result of my empirical research on and reformation of upper secondary education in Finland, I have developed the following working hypothesis: our understanding of social individualization is somehow intrinsically related to the division between *Bildung* and *Beruf:* education and vocation, respectively.

In this work I take the following four steps:
First, as a point of departure, I examine the concepts of *Bildung* and *Beruf*. I try to report in brief the historical background of the division between liberal education and vocational training, and also make my first attempts to overcome the division. Unexpectedly, the results of the analysis reveal that the basis of the division is at the very heart of the process of social individualization, within the division between *praxis*, doing, and *poiesis*, making.

Secondly, in an explorative analysis, I make a short analysis of social individualization. My starting point is the constitutional character of social individualization, and I use the concept of "texturing" to express the three main qualities of the social individualization process.

Thirdly, I construct a model of analysis for psychological research. Drawing from Y. P. Häyrynen's ideas of macropsychology, and trying to overcome some of the problems in the cultural-historical school of psychology, I propose understanding social individualization as a constitutional process. My main argument is that sociological and psychological theories have not been very successful in handling these questions because the relation

between activity (*Tätigkeit*) and behaving oneself, self-conduct (*sich verhalten können*) has not been analysed carefully enough.

Fourthly, as the results of my analysis, I first introduce three dimensions of movements in learning for the practical analysis. I open the theme under the headline of *"learning by making"*. Then I conclude with a tentative proposal for a connective curriculum of upper secondary education to overcome, via my model of analysis, the division between liberal education and vocational training.

In constructing the four steps I have used as a point of reference Raymond Quivy and Luc Van Campenhoudt's research manual for social sciences (Quivy & Campenhoudt, 2006), with some revisions.

I have two levels of discussion, the first of which is the concrete, practical institutional situation of young boys and girls after comprehensive school. This is also the target level: to reconstruct the practical situation of the institutions and their relation to youths, and vice versa. My questions and answers here are not empirical[1] but practical in the sense of *praxis*. Moreover, the *praxis* in this work denotes institutional praxis with reference to the institutional duality of vocational and general upper secondary education and training. This is also an attempt to find a theoretical basis to overcome this division. Achieving this would at the same time open a new horizon in understanding how to write the curriculum and how to organize learning connected with liberal and vocational studies.

The second level is more methodological. My motives are, in a sense, cultural, historical and political: I feel that the classical division of man's activities into three parts – *theoria, praxis, poiesis*, a division paralleled in modern industrial societies, i.e. *science/fine art, politics, production* – can no longer be the very basis of bold work, labour. The threefold division should be the basis of understanding the work process in its entirety. That is to say, the epistemic, ethical and aesthetic questions should be constitutional moments of everyone's work. And so the twofold division – *Bildung* and *Beruf* – must be overcome.

My method goes hand in hand with my motives. My work is not historical in the sense of History; it is in many respects explorative and paradigmatic (Agambe, 2009). I try to unearth and retexture the ex of samples – *Beispiele* – i.e. our use of the very central concepts that structure our educational institutions, *Bildung* and *Beruf*.

One of my working tools is to take short, written excursions through my interest in knowledge. By walking through history – sometimes even by jumping into history – I try to form new textures of the concepts to open their content and context for reconstruction. I do this by relating the texture of the three *cons* – *con*cept, *con*tent, *con*text – to the classical threefold division of *theoria, praxis* and *poiesis.*

[1] My empirical studies and practical work to develope the post-16 education in Finland and international research programmes, see Volanen, 2012.

PART I

The point of departure

1
Reformulating the Bildung

1.1 Bildung and Vocatio

Typically there are two main social forms of publicity in basic educational systems: *Bildung* and *Vocatio*, in Finland, general upper secondary education and vocational training, respectively. This is the first institutional differentiation through which the youths are qualified after basic education. The words "education" and "training" already hint at the different ideas of individualization within the two institutions: *Bildung* refers to working with oneself, and *Vocatio* to working with outside material. Through *Bildung* one moulds the statue of oneself, individualizes oneself; and through *Vocatio* one cultivates the object, individualizes it.

While the German concept *Bildung* is nearly impossible to translate directly into English, it is perhaps akin to "cultivation". In it we have two words, "image" and "tilling", combined to indicate the possibility of seeing an individual's development as a process of becoming an educated person through one's own activities and deeds.

Bildung is always linked to some aspiration; originally it was cutting oneself off from the world and preparing for eternity. The basic idea behind *Bildung* is apparent here: one must make oneself into something worthwhile through one's own efforts. The idea of *Bildung* has opened up at least three different routes to self-worth: the acquisition of *Bildung* through religion, through science and scholarship or through vocation.

A cultural interpretation of the concept advocates classical *Bildung* and the virtues expressed in it. However, although the descriptions of the "free man" are attractive and well-founded, they involve two problems: they portray a free man whose freedom is realised by means of the work of non-free people: in ancient times, slaves and women, and later on, labourers. Secondly, if one was not fated to have freedom and enjoy civilised culture, there was no way one could achieve it.

As we know, presenting Plato's suburban school at "the olive grove of Academe" as the origin of universities is a myth manufactured by university scholars. The University of Bologna, for example, was a student community (*universitas scholarium*) for legal studies in the mid-12th century. Its students, coming from all over Europe, were "aliens but highly desirable ones as they brought with them a promise of fame for the city and prospects of income increase for its citizens (house rent)" (Dabrowski, 1990). The student community was eager to gain political and economic privileges. According to Roman civil law, a community is a corporate personality with a set of rights and obligations, but as legal aliens the students were only superficially citizens of the city. In such a position, aspiring to privileges that were denied the apprentices of crafts and trades of the city required a "masterpiece of juridical sophistication" ... "The ancient imagery of a knowledge hierarchy, with the *artes liberales* at its higher levels and the *artes serviles* at the bottom, was reanimated by the 13th century jurists of Bologna for practical and political reasons" (Dabrowski, 1990.)

Universitas was at the very beginning a community of students or scholars while *Studium* was a name for places at which scholars' corporations resided. *Studium generale* meant that there were enough scholars to teach liberal arts and that the content of their studies went beyond the narrow, local concerns (Cobban, 1971, 1988, 1–10). The division between academic and vocational studies was a question of privilege and power. The result of all this was that academic *Bildung* was easily seen as absolute, truthful and universal, above any particular interests. During the Middle Ages, *Bildung* gained a new, more optimistic starting point: everyone could acquire it through religion. Each person had to educate him/herself in order to be acceptable to God.

Later on, the well-known slogan "*Bildung durch Wissenschaft*" ('*Bildung* through science and scholarship'), described an effort to escape the constraints of the Church and expressed a belief in the ability of individuals to cultivate their own minds. This slogan was based on individualism, perhaps even on the idea of aesthetic individualism: man must put himself in God's place. Science became a new secular church with its accompanying institutions. This was also an excellent rationale for making academic *Bildung* an aspect of the glory of national truth, as was done in many countries later on.

Vocational education, by contrast, was relative, instrumental, specific and tied to particular interests, because it was linked with working life and because its basic nature was

not national but international. When later on the differentiation between art and fine art (*Kunst/Schöne Kunst*) was established to give art and art education the social prestige of a science, *artes serviles* lost its association to aesthetics. The theories of knowledge and of beauty are, for social reasons, detached from the theory of *techne*. After these operations we can easily talk about the training and formation of labourer. Academic *Bildung*, then, expresses a social interest that is not universal but instead particular: a call for power.

Another call has also been heard in the history of education – the call for a profession. Although even here the starting point has often been the individual's preparation for eternal life, this call has also been linked to a bond with other people: it is possible to make oneself worthy through other people by becoming indispensable in their eyes. Thus, here *Bildung* refers to being worthy to others in their estimation, not only in one's own estimation. *Vocatio*n has become a *profession*.[2]

This road to *Bildung* differs in intention from the road leading to academic *Bildung*. Traditionally, academic *Bildung* seeks to escape the world and distance itself from it, so that the world can be seen more clearly, more truly. Ultimately its goal is to write a great book with which to illuminate the world, to recreate the world – and to rise above the hurly-burly of one's own restless era.

A profession, too, is always linked to an aspiration: the desire to make things and even to take on a new form. A profession is not related to the idea of escaping the world; rather, a profession requires going out into the world: the essence of the world can be learned only by working on, in and with it. A profession makes possible the creation of one's own durable, internal world, which also includes other people, as a source of *Bildung* – that is, freedom – not as a barrier to it.

If we follow a variation on the Weberian way of thinking (Konttinen, 1991; Volanen, 2007b, pp. 66–67), we can say that the pre-modern version of professions had at least three different ideas of knowledge:

- *first*, the *Kulturmensch* with scholarship, knowledge of the origin of culture and of the essence and fate of man in the world;

- *second*, traditional knowledge based on craft work as mediated in the craft tradition and as part of craft production; and,

- *third,* elementary instrumental knowledge as part of the *Kulturmensch* or of craftsmen.

[2] In English there is an interesting distinction between ''vocation" and "profession". Vocation refers to a calling, but in a profession, we are working on the basis of our own confession. The German word *Beruf* also refers to a calling. When I use the word "profession" here, I do not mean to exclude occupations or vocations from the discussion.

A profession in the modern version turns the elementary knowledge of the *Kulturmensch* and craftsmen, into that of the *Fachmensch*, (i.e. knowledge based on natural science and specialisation) and of the *Berufsmensch*. The main question for the *Fachmensch* is "How are things or processes?"; for the modern *Berufsmensch* it is "How can I make it?" We can then construct the grid presented in Table 1.

Table 1. *Situating cultured experts (Volanen, 2007b)*

	Main orientation of work process	
Working horizon	**Knowledge**	**Craft**
Ensemble	**Cultivated person** ***Kulturmensch***	**Cultured expert** ***Gebildet expert***
Speciality	**Overspecialised person** ***Fachmensch***	**Professional worker** ***Berufsmensch***

The integration of formal and instrumental knowledge in the course of manipulating objects and symbols simultaneously is "precisely what makes *technicians'* work culturally anomalous" (Whalley & Barley, 1997, p. 49). A craftsman manipulates or transforms materials to produce artefacts. Instead, technicians manipulate materials to produce symbolic references. But technicians do not use these references to create new ones, as in the academic professions. Technicians use these references to manipulate objects. Technicians are neither a hybrid of craftsmen nor blue-collar workers. The work of technicians punctures the existing cultural bulwark; it is at once a synthesis of mental and manual, clean and dirty, white collar and blue collar. Such a synthetic melding of cultural opposites has been previously approximated only by engineers, surgeons and other "manual" professions. (Whalley & Barley, 1997, p. 49.)

This synthesis between head and hand – *being* and *making*, *theoria* and *poiesis* – leaves out the third element, the heart, questions of doing, *praxis* and ethics. To educate *cultured experts* (see Table 1) we need a more profound footing. We need to pose three questions to expand the horizon of *philotechne*: How are things? (theory); how are they when they are good (ethics)?; and how could we produce them according to the laws of beauty (aesthetics)? This tradition of *philotechne* – love of craft – is in fact older than the love of knowledge (philosophy), but its history is part of the history of craft work, not the history of theory and sciences, which is part of the history of universities. Nevertheless, the history of craft work is a fundamental part of the European tradition of work. In this

tradition, work is not a question of an occupation – any job or labour – but a question of a vocation, i.e. *Bildung*.

• *Excursion 1: Philotechne – a forgotten idea*[3]

The love of craft, *philotechne*, is an old yet forgotten concept.[4] Therefore, it has experienced a very different development than the love of knowledge, *philosophy*. In classical culture, the love of knowledge ennobled both the knowledge and the holder of knowledge, whereas the love of productive craft could either ennoble the skill and the craftsman to divinity, or condemn them to slavery as products of nature. Hephaestus and Athena not only *philosophized* in their divine chambers atop Mount Olympus, but also *philotechnicized*. The *Iliad* (Books V, VIII, and XVIII) describes e.g. how the gates of Heaven could open automatically when the divine chariots were approaching. Hephaestus, the god of blacksmiths, made tripods that moved of their own will – *automatoi* – in gods' residences. These were not merely toys or divine hobbies, as they were associated with the same nobility and divinity as the results from philosophizing, knowledge: they were divine high technology. Later, Plato used the expressions *philotechnein*, *philotechnos* and *philotechnia* in various contexts. (Bartels, 2001, pp. 121–122.)

The question of the origins of knowledge, asked by the lovers of knowledge, was answered in a speculative way when an earthly, common craftsman was raised to heaven to become a divine *demiurge.* For both Plato and Aristotle, the basic metaphor for understanding philosophy, or the entire world, was craftsman-like production, not a lover of knowledge strolling through an olive grove.

Plato did not consider nature or material (*physis*) as the source of form and the direction of movement. They were brought to earthly life ab extra as the divine *demiurge's* gift from the world of ideas. Aristotle, on the contrary, relied upon nature: it works like a craftsman. Nature has an inert mover, which is part of nature's own way of functioning. Nature produces the best results itself. Outside help is not needed because nature works like a *demiurge*, a craftsman, the source of life. (Solmsen, 1963; Thomsen, 1990; Cahoone, 1995.)

Over time, the *demiurge* became the *theourge*, someone who creates and produces something from nothing, *ex nihilo*. Later, creationism generated theology, the study of religion

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[3] This excursion has been published in Finnish (Volanen, 2005a)

[4] The terms *polytechnique* and *philotechnique* are commonly used in the French-speaking world. The poly- and philotechnic ideas stem from the Napoleonic times, during which armies needed versatile engineers and technicians. The institutions of philotechnic associations have traditionally provided education in general subjects, technical matters, and art. In Swedish, the term kunskap conveys a wider meaning than the term *vetenskap,* which refers to natural sciences (see Gustavsson, 2000).

(Anton, 1992). In our minds, we still have the image of God as a craftsman who worked six days and rested on the seventh. It was not until the Enlightenment and the modern era that theology and knowledge, and with them the divine and nature-based *demiurge*, were separated. But let us not jump ahead of ourselves.

Philosophy did not examine craftsmanship for its own sake, from the inside, as the work of own hands and the condition of one's own life. Such conditions were external, hypothetical and given. They could only be understood by representation (*praxis/mimesis*), through poetry. The starting point of forming the concepts related to understanding the world and human life was that of referring to something that is not present directly, but rather through references (*theoria/sophia*), i.e. something that is expressed in educated discussions. Thus, philosophers failed to study the core of craftsmanship, in which concepts are tacitly formed through non-verbal experience, and, therefore, the experience cannot be directly communicated to others.[5] Craft was mute. The concepts of craftsmanship and craft work were rooted in experience, which itself was rooted in the space, tools and facilities in which it was performed. In order to recognise the concepts embedded in a tripod, one had to make them; likewise, the way for the earthly *demiurge* to structure the surrounding world was to produce it, thus changing it and revealing the potential beauty of the world (*poiesis/techne*).

Although the craft of production was in many respects mute at the time, it was also already a *method*, a process: from raw material to an end product, an artefact. Unlike knowledge, craft referred to something that was directly present: a situation, a realm, a workshop. This craft was an accumulation of situation-dependent experience as the relation between form and content.

Theoretical understanding (*theoria/praxis*) the world and life is not yet enough to produce and change the world. Everyone have to produce his or her own life. Production (*poiesis*), that is, slave labour provided the foundation for such development and the development of know-how (*theoria/poiesis*) as well. When potters work with clay, giving it a form, the potters themselves become *in-formed*: they learn what is possible and impossible with the various kinds of clays that they use. At the same time, they learn what is possible and impossible for themselves as craftsmen. Furthermore, through practice, they learn how to stretch these limits to serve their goals. Thus, the potter learns *by making*. It is not just about forming the images in one's mind (*Bildung*)[6], but about forming oneself through forming the world – about the sense of life, having a hold on life and the world (*poiesis/mimesis*).

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[5] For a comprehensive overview on craftsmanship, see e.g. Hägermann & Schneider (1997).

[6] This is Meister Eckhart's model, which links the image and the process of forming. The idea is that humans become images of God through self-formation.

When forming the work cycle, the craftsman must ask no fewer than three questions: How are things? How are they when they are good? How can they be beautifully produced? He must include three sets of concepts in the inner relationship: *theoria*/idleness (*skhole*)/epistemology; *praxis*/goodness/ethics; and *poiesis*/beauty/aesthetics. The craftsman describes, values and changes the world in a beautiful manner, here and now. The methodology of craft, *philotechnia*, is the general study of changing the world. In essence, craft is richer and more concrete than knowledge. It requires solving, one way or another, the interdependency between epistemics, ethics and aesthetics. The solution has to be made while producing, here and now, yet in a generalising and adequate manner.

A philotechnician constructs the *theory*/*praxis*/*poiesis* relation on the basis of *poiesis*: the aim is to produce something beautiful from something already existing, rather than from something *ex nihilo*. Thus, epistemics, ethics and aesthetics are built-in conditions of work, often without a verbal form and attached to a certain time and place: the true, good and beautiful in a given situation.

This construction requires a reliance on nature. Craft[7] meant bringing out the true, good and beautiful in accordance with nature. Nature works the same way as the craftsman, and it works with him: to produce is to produce together. However, a craftsman can never tell if nature always works for him; he can only trust in nature's promise of the true, good and beautiful. Thus, craft is about *mythos*, or linking processes together (Kitto, 1966, pp. 24–32); about building the place for production, such as the smithy; about power, trust and happiness; and work and life, working life. The materialisation of the craftsman's sense of situation (*poiesis*/*mimesis*) in the artefact verifies *mythos*, and it manifests as the feeling of good life management, deliverance and happiness.

The philotechnical methodology forms the realm or cycle within which the classical understanding of the changing of the world occurs, i.e. the causalities involved in the change. Consider the example of a hammer. From the Aristotelian perspective, the reason for the hammer's existence is fourfold: 1) *the material reason*, i.e. the iron it is made of; 2) *the formal reason*, i.e. iron's form in the hammer; 3) *the relevance*, i.e. why the hammer was made; and 4) *the contributing reason*, i.e. the craftsman who made the hammer. Thus, the reasons for the hammer's existence are embedded in the hammer and its usage: examining its place within the system of production reveals the reasons. Defining the reasons is a matter of *deduction*, or reasoning, but only within this realm of activities. Its constitution did not require divine ideas or nature's inner *demiurge*, but a generalisation based on one's own experience of how nature works in various situations. (McCullough, 2002.) Thus, a craft, or a professional skill, is a constitutive skill. A hammer is not just a hammer, as it plays a ex-ample (*Bei-spiel*) in the constitution of life.

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[7] *Craft* < to connect; *skill* < to separate

The birth of the modern era

The theoretical roots of the modern era can be traced to the Middle Ages.[8] At that time, scholasticism sought desperately to find a synthesis between rationality and religion, philosophy and theology. Thomas Aquinas (1225–1274) was one of the developers of the synthesis. He theorised that because God is almighty, his absolute power (*potentia absoluta*) cannot be limited by the finite human rationality. Thus, Aquinas considered that God had, by exercising his absolute power, voluntarily restricted his ordained power (*potentia ordinata*) in a manner that was understandable to humans. William of Ockham (1285–1349) broke this synthesis by claiming that the only reason for God to create was that of his own. God cannot be confined even to his human creations, and, therefore, he has an absolute will. Thus, every order can be broken or reconstructed at any given moment. Hence, theology is more powerful than philosophy, and nature cannot be trusted to support reason.

Thereafter, the breakdown of the domination of theology began to appear. In Nicolas of Cusa's (1401–1464) 1450 dialogue between a layman (*Idiota*), a philosopher and a rhetorician, the craft work of a wooden spoon is discussed. To the layman, the making of the spoon meant self-comprehension and self-esteem. The spoon could not have been an imitation of nature (*imitatur naturam*). It was not a triumph of craft. However, it was something that was absolutely new with no pre-existing model found in nature. Thus, our layman did not observe nature or the cosmos to find his own place within them. Instead, he observed the world of human achievement (*solo humana arte*), a world produced solely by humans themselves. According to Hans Blumenberg (1957), Cusa's dialogue was among the first to describe, in a positive manner, nature's and/or God's imitation giving place to a human craft. The fault was not started by art or science, which after all share the same origin with theology. A whole new generation of thinkers was needed: Bacon (1561–1626), Galilei (1564–1642), and Descartes (1596–1650) came to fill the void. Nominalism's rigorous thesis about God's absolute will destroyed the trust in nature and its rationality. The frightening and oppressing irrationality had to be controlled in some way.

René Descartes sought and found what seemed to him a solid foundation for human freedom and the management of nature: *ego cogito ergo sum*. When nature does not have a divine spirit, humans can subjugate it to their power. Thus, the idea of God's absolute power declined: God became a *being*, separate from humans and life. As a separate being not dependent on the self, God can be examined and the question of God's existence

[8] In this section, I partly follow the interpretations of Gillespie (1995) and McCullough (2002).

can be approached. The result: "That hypothesis I do not need" (Laplace). When nature was no longer rational and God was declared useless, building a deductive world order and conception of life was no longer feasible. Bacon made the method of study radically inductive: understanding the world began from material reality rather than from rational principles. Thereby, nature gives the researcher and research feedback that must be heeded. Thus, a new smithy – a research laboratory – and a craftsman were created. The researcher of nature became a self-denying craftsman in two ways: first, he placed himself conceptually outside nature, in a universal position, as a god in relation to nature, outside human communities (*theoria/praxis*). Second, he did not trust himself as an observer, for he had to discount his own subjective experience. Observing had to be dedicated to standardised research equipment and situations that are not dependent on the researcher. Life had the same fate as God. Life as deed of work became the research object and came to be overanalysed. The relationship to life was sustained only through equipment, not through feeling (*theoria/poiesis*). Only measurable force and movement were left from nature's feedback, in-form. Truthfulness was conceptualised in relation to movement and force; truth shrank to reality, it was no longer a fact (*Tatsache*). This reality only has an external connection to goodness and beauty. A laboratory links theory, inactivity, and *poiesis* together without having an internal relationship with the target, nature: "We must put nature on the rack and force her to answer our questions" (Bacon).

Later, the modern changed into nation states and capitalism. The downside of national science and art projects was the forced deformation of craftsmanship into paid work. The only thing left from craft work was the use of force. Craftsmen and the rural poor became the *labour force* for the industrial system. For most people, life happened outside of work. At the same time, national institutions were created for science, art, and politics – as well as for the labour force and labour market.

The national bourgeoisie considered paid work as the exterior condition of their own existence (*praxis/mimesis*). The art favoured by the bourgeoisie detached itself institutionally from craft. The production of meanings, as *representational* /goodness and beauty, began craft work-like and in the spirit of romanticism. National golden ages of art displayed already-forgotten peoples in art galleries and, later, in museums. Soon the representational goodness and beauty ceased to refer to a target, and the Pandora's box of semantics was opened: the presentational began referring to another presentation. Nature, people and life were separated from the realm of experience. They were superseded by languages, symbols and meanings (*Bedeutung*) without experience (*Sinn*), or experience without meanings. Most importantly, the production of meanings rapidly became part of industrial activities in which craftsmanship no longer had a place. This was the beginning of the golden age of the culture industry.

Breaking the shackles of the modern era

If the classical economy was based on agriculture and hand tools, the first modern economy was based on machines and machinery. Later, machines learn to use languages and languages learn to operate machines, and, thus, language has become a central instrument for production. A *texture* of machinery and languages has been formed: machines cannot survive without languages, nor can languages survive without machines. Instruments of the activities and communication of working life are becoming intertwined. They are becoming the stages of a single work process. In recent years, the concept of work has included the requirement of learning – learning at work. Thus, it has now become possible, in principle, to restore the three fundamental elements of craftsmanship to work: the idlesness, the experimental and detective play, and the beauty of production. This would require restructuring paid work from the perspective of the economy of time (Marx, 1974, pp. 590–605).

The fluency of the manufacturing processes has become the central, sometimes nearly the only, criterion for the modernisation of work. Thus, the epistemic, ethic, and aesthetic concerns of work remain outside the manufacturing process. Their methodological exclusion from work eliminates the possibility of evaluating paid work, which is a concept generated by industrialisation, from a historical, and thereby future, perspective (Volanen, 2005b).

Examining the question of work's form requires craftsmanship as a methodological mirror. It is not about romanticising or glorifying craftsmanship, but taking the entire human – head, hands and heart – into account in the structuring of work. In European cultural history, the duration and richness of craftsmanship, in comparison to the short and austere tradition of paid industrial work, has an unmatched history. The latter cannot be considered rich, at least not from the worker's point of view.

Using craftsmanship as a methodological mirror brings epistemic, ethic and aesthetic challenges to the methodological centre of the development of work, thus making them the internal conditions of such development. The economy of time becomes fundamental in the development of work in regard to individual tasks and the whole work community, as well as the distribution of work within the economy in question. A radical development programme of labour is also a programme that breaks the abstract fluency of production. It is a programme that aims to thoroughly implant the true, good and beautiful in labour through reconstruction of the economy of time. *Time* needs to be reclaimed, for everything depends on it (Volanen, 2005b). For philosophy and *philotechnia*, all this means at least one thing: if they and the institutions supporting them – i.e. universities and other institutions of higher education – fail to defend, support and promote the educating

nature of all work or educating work, they cannot continue as the promoters of education and humanity.

End of excursion 1.

The first excursion opens at least two possibilities to overcome the division in the two, in vocational and liberal education. The first one try to restructure the relations between work and learning in "learning society" (Husén, 1970). The main idea is that the two traditions of education both have something to give to each other and this *mutual enrichment* opens possibilities to develope new kind of connective curriculum (Young, 1998). The second one starts from the very idea that in fact vocational *Bildung* is the basis for modern general *Bildung*. Let us touch these possibilities.

1.2 *Bildung* through vocational education: the strategy of mutual enrichment – first attempt at the twofold division

At the structural level, the main division within the educational system is, as we know, that between academic education and vocational training. We know also that since the Second World War, comprehensive education and general upper secondary school are formally providers of liberal education, i.e. their curricula are based mainly on science and the humanities.[9]

Are these distinctions, made in the first modern or early industrial society still powerful enough? What happens if we seriously consider the idea of a learning society (Husén, 1974); that is, the explosive development of knowledge-intensive industries and media and the changing place, time and function of learning?

The differentiation between academic and vocational education is a very essential aspect of the European tradition and it is therefore impossible to overcome it through one type of education getting the upper hand, through the supremacy of the one or the other, irrespective of whether it would entail the scientification of vocational education or the vocationalization of academic education. The mission is instead to create a new kind of

[9] The objective of general upper secondary school in Finland is to promote "the development of students into good, balanced and *civilised* individuals and members of society". The aim of upper secondary vocational education and training is "the development of students into good, balanced individuals and members of society." (General Upper Secondary Schools Act (629/1998); The Vocational Education Act (630/1998).

interdependency between the two traditions such that we are able to generate a process of mutual enrichment.[10]

As we saw earlier, the very fundamental roots of this differentiation between academic and vocational education date back to Classical Antiquity, but the Reformation, the birth of labour markets, the role of the state in the process of the formation of (civil) society have all contributed to determining how important and central the distinction between vocational and academic education has been as an influence on the structure of European educational systems.

Traditionally there has been a strong association between academic education and knowledge and competencies related to life outside work; that is, the public life of a gentleman or a citizen. By contrast, craft work and the vocational tradition have been much more closely associated with skills belonging to the world of work. When we discuss the differentiation between vocational and academic education, we are at the same time discussing the differentiation between citizen and the labourer/worker.

The Anglo-American tradition sees the very position of a citizen in terms of the marketplace, and after the Second World War the whole concept of the citizen has been redefined from the point of view of the social state, which partly excludes questions linked with working life.[11] In the German tradition, the traditional craftsman citizen represents the basic position of citizenship. The very basis of the concept of citizenship is an expression of community, of a shared house, not of the marketplace. This means that the idea of the social state has not led to a purely market-based idea of citizenship; rather, the community has developed in the direction of society while still retaining some features of the traditional community, as is seen in the German system of vocational education.

In the history of its birth, we can distinguish at least two different kinds of labour markets in Europe: "vocationalization from above" (Germany, France) and "vocationalization from below" (England) (Konttinen, 1991; Siegrist, 1990).[12] In the first case, the state has exerted a very strong impact on the construction of the labour market, the occupations and vocational education. In the second case, market processes have been more decisive.

In the Nordic countries – at least in Finland, Sweden and Norway – we have some peculiar combinations of these two pairs of distinctions: characteristically, vocationalization from above together with the central planning of vocational education and

[10] Mutual enrichment is one of the four strategies for establishing a new relationship between academic and vocational education in upper secondary education in Europe (see Volanen, 2009, pp. 39–40).

[11] See the discussion on Marshall in Turner (1993).

[12] I use here the theory of professionalization under the assumption that the distinction between "from above" and "from below" is applicable also to other types of occupations (see Siegrist, 1990; Konttinen, 1991).

the labour market has been quite a strong feature of Nordic societies, but at same time citizenship is understood in terms of the labour market and the state. This is possible only under the assumption that society is generated by the state to ensure general welfare. However, differentiating between state and society is a powerful trend in the Nordic countries today.

We can then see three educational systems emerge from these two differentiations: vocationalization from above vs. vocationalization from below and market-based vs. community-based society as the historical basis of citizenship (see Table 2).

Table 2. *Vocational education and citizenship*

	The basis of citizenship	
Vocationalization	**Community-based society**	**Market society**
from below	**D Learning society, *Cultured expert***	**B England On-the-job Education**
from above	**A Germany Dual Education**	**C Nordic School-based Ed.**

My hypothesis is that to be able to approach the "learning society" with cultured expert (D), all these three approaches (A, B, C) require a change in the relationship between vocational and academic education due to the following trends in working and social life:

1. The idea of the "learning society" implies a process of reflection, a form of learning indispensable in all social activities.

2. The production and work process must be opened to learning. As regards production units, this is a question of life or death.

3. New production concepts/models question the traditional differentiation between citizenship and the worker/labourer: every worker is more or less required to work as a citizen.

4. Open and complex working situations, impossible to prepare for beforehand by issuing rules and directives, are becoming increasingly common. More versatile

skills and more broad-based knowledge – concrete *and* general skills and knowledge – are needed to handle such situations.

5. Vocational competence refers to the ability to increase the output and the quality of the commodities made by the production unit. An increasingly important question is how concrete and rich a concept is the term "productivity" that we are using, e.g. does it also embrace the questions involved in social/individual constitution?

We can see that measuring *Bildung* is here being defined in a new way. Alongside the old measurement of timeless national tradition of *Bildung* comes a time-related qualifier. The yardstick of *Bildung* is linked to an ability to define and solve the basic practical problems of our era. This requires knowledge of other ages in order to provide cross-illumination of our own age. Ultimately it is a question of how we should implement practical humanism and fully matured *Bildung*. The goals, significance and meaning of human activity on the one hand and the tools for carrying out that activity on the other should not be separated from one another, nor should people be cut off from each other on this basis.

If we try connect vocational and liberal education on the basis that work is nowadays in actual fact learning process, the challenge is not only somekind of mutual enrichment of two traditions but to reunderstanding the whole learning as a process: learning is not only movements with concepts and over contexts but a process of forming content expressed via concepts in different contexts.

1.3 Vocational Bildung as modern Bildung – second attempt at the division in two

What then is the basis of the differentiation of *artes liberales* and *artes serviles*? It goes as follows: When you are forming through a working process the object of your work, you cannot reform yourself; and when you are forming yourself through activity, you are not forming an external, separate object, but forming yourself as a person.

In fact, as we have already seen, it was one of the starting points of the modern times to say that you can – in principle and in a philosophical sense – educate yourself through work. It means that in principle and in a very fundamental sense vocational *Bildung* is modern *Bildung*. The practical solutions to the problem were less promising: In the process of forming the modern national state, the idea of praxis – the policy of the national state – was the primary consideration. Science and scholarship, and later on fine arts, had to give their support to the national state. That was a question of money: and in return, they won national glory.

All this meant that the third element, work (*poiesis*) lost the idea of truth, good and beauty, a possibility to generate through work general cognitive or aesthetic processes, or new social meanings; these tasks were now the preservation of science and scholarship, state and fine art. The "Scientific management" of work expresses the standpoint of science very clearly. Frederic Taylor writes in his book "Shop Management":

> My system aimed at establishing a clear cut and novel division of mental and manual labor throughout the workshops. It is based upon the precise time and motion study of each workman's job in isolation and relegates the entire mental parts of the tasks in hand to the managerial staff. (Taylor, 1911, according to Sohn-Rethel 1978, 157).

As regards art, its relation to work was much more complicated: We have a very problematic social classification – and thus a social skirmish – of craft, art-craft, craft design, design, art design, art industry, art and fine art. During the first decades of the 20th century, fine art gained something that was clearly a new position: Art no longer merely reflects the beauty of nature but, instead, seeks and forms new meanings.

The result of the whole process was clear: we can easily make a division between the academic and the vocational tradition on this basis: the academic represents the tradition of knowledge and truth, fine art the production of social meanings and experience of beauty in the context of citizenship. And politics of the national state handle the questions of "good life". Work and labour, on the other hand, are special skills without their own aims or basis; they are for labour and the labourer. Academic education is, then, *vocational* education for those who will become leaders, and vocational education is *general* education for those who will be led, as the classic saying aptly expresses.

We can see three fundamental bases for learning: science and scholarship, social praxis and work.[13] In traditional thinking, *theoria*, representing science and scholarship, aims at forming the ability to see the world as it is, while the *praxis* involves a struggle for the ability to make the world a better place through action. Handwork, *poiesis,* is the domain of production of beautiful artefacts. The first modern solution formed an alliance between science and art, defunctionalising *poiesis* by subjecting it to the outside control of science, and between politics and industrial production by excluding the questions of truth, good and beauty embedded earlier in the working process. Work turned into labour.

A new solution – late-, post- or second modern, or otherwise termed – is needed, because unlike in the early industrial society, between a labourer and the object of his or her work there is no longer a hand tool or a machine, but productive machinery as a whole.

[13] Of course one can immediately raise the question of learning via the Media. In this context, however, I see Media as a medium; that is, as an element mediating between the three bases of main concern here and, I must admit, at the same time, as an element that fundamentally restructures place, time and style of learning.

The machinery has learned to use language and language has learned to use machinery, and still more: the language itself is a part of the machinery of production. To be more exact: what we have here is not only machinery, a technical advance, a productive body, or a "biological" organ, but a language-like *texture*[14] surrounding us.

As a result of this textualisation of our everyday life, the industrial capital has become ever more dependent on human-, social- and nature-based capital; that is, on human qualifications, social confidence and natural resources. The main focus of all the texture around us is our ability to read the value – residing in living work that has already departed from the dead products of that work – in such a way that we can, once again, relate living work to its products without any loss of economic-, human-, social- or nature-based values. This is not only a question of life and death for any production unit or economic system, but also a struggle for the social existence of any social class.

The problem is that the dead products of living work are not in the literal sense a crystallisation of living work, which is how we easily see them, but social representations or "hieroglyphics" (Marx) of the work already completed. They express a social way of thinking (*Gedankeding*). It is – to put it very shortly – precisely *general* vocational *Bildung* that is used in reading and writing this social *Gedankeding*. Why?

The general cultivation of academic tradition, science and scholarship and fine art was based on separating *theoria* and *praxis* from *poiesis*, on productive leisure time to be used for thinking deep or/and high thoughts, on principle of *arcanum*, that is, the idea that authentic reality is anchored not in sensible reality but in some substance behind it, in insensible reality. Besides being typically seen as nationally oriented throughout the early industrial modern, *Allgemeinbildung* of this kind formed in the best works of the time a horizon around the problems of its own era by cross-illuminating everyday life and its problems.

On the other hand, the *allgemeine*, general, essence of vocational *Bildung* was based, in principle, on the educative feedback generated by the object (*Gegenstand*) worked on. If you hit your axe on a stone, you learn very quickly not to do it a second time. When the means and the objects of work manifest themselves in a textual form, it is impossible to perceive this kind of feedback without a reflective, conceptual means to digest the feedback. The worker must master the language of the machinery and of the object of the work. It is most important that they are able to relate themselves to the objects and products of their work, not only through the given vocational means and concepts, whatever they may be, but also through a social way of thinking (*Gedankeding*). This third language is the lan-

[14] The etymology of *texture* has Latin, Greek and Indian roots: In Latin, *textere* is to weave, *textura (texo+ura)* is the art of weaving, *texo* means putting together or constructing a complex structure, *textus* a bound. In Greek, Τεχνη is the art of metalworking, while in old India a *taksán* was a carpenter. *Texture* also refers to the (complex) structure of a surface.

guage of vocational *Bildung*. The general essence of vocational *Bildung* is thus boundled up with the materiality of social texture, that is, with a reflection of dead work. This *allgemeine* is, then, never merely symbols of or texts by a productive mind, but is instead an unfolding of the hieroglyphic of real work, already completed.

However, there is a fatal weakness in both types of *Allgemeinbildung*: they are both outside of the third element *praxis*, the citizenship. The academic tradition provides the means to read and write a book about the world but only through its social position can it possess the power to change the world. The vocational tradition has the means of change but only within the social way of thinking. It does not have enough power for cross-illuminating the praxis of texturing the products of work already completed.

Together the two traditions of education might have something that neither has alone. If we reintroduce the questions of beauty, truth and good life – that is, aesthetics – science and scholarship, and politics – that is, citizenship – into the *poiesis*, we have a possibility to cross-illuminate the social way of thinking through the most concrete *and* general social bounds: the bonds of living work. What then is the touchtone of *Bildung*, education and culture?

• *Excursion 2: At the touchstone of education and culture*[15]

In the prologue of his book *The Craftsman*, Richard Sennett (2008) talks about an unexpected encounter with the philosopher Hannah Arendt on a freezing-cold street in New York. This happened in 1962, during the Cuban Missile Crisis. Arendt (1958) was shaken by the crisis and became even more convinced about the validity of one of the fundamental arguments in her book *The Human Condition*, claiming that "the engineer, or any maker of material things, is not master of his own house; politics, standing above the physical labor, has to provide the guidance". She had come to this conclusion earlier in 1945 when the first atomic bombs were developed in the Los Alamos project at the end of the Second World War. Back then, the director of the Los Alamos project, physicist J. Robert Oppenheimer, wrote in his diary: "When you see something that is technically sweet, you go ahead and do it and you argue about what to do about it only after you have had your technical success. That is the way it was with the atomic bomb." On that freezing-cold New York street, Arendt wanted Richard Sennett, her former student, to draw the right lesson: "People who make things usually don't understand what they are doing." (Sennett, 2008, pp. 1–3.)

[15] This excursion has been published earlier in Finnish (Volanen, 2008)

According to Sennett, Hannah Arendt's fear of self-destructive material stems all the way back to Ancient Greek culture and the story of Hephaestus, Prometheus, Epimetheus, and Pandora, in *Works and Days* by Hesiod (1978). Hephaestus was a club-footed craftsman, *demioergos*, who built the gods' residences and palaces; he was the representative of humanity and peace, whereas Pandora represented destruction. Pandora's box, opened by Epimetheus, was filled with the gods' bitter gifts to humankind as punishment for Prometheus having stolen the fire from Hephaestus' forge and giving it to man. The Ancient Greeks tended to consider these troubles and diseases a part of human nature and character: a culture that is based on man-made things exposes humans to continuous self-destruction and trouble. Thus, life was no longer about returning nature's gifts back into collective circulation (*zoe*), but rather about defending human life against barbarians and threatening nature – against death (*bios*). Economy (*oikos*, household) and production (*poiesis*) were separated from the hustle and bustle of cities and free men's political attention, *praxis*. The hope for eternal life as part of the cycle of nature was transformed, in the leisure activities of the lovers of knowledge, into a thought about the world of ideas, i.e. a theory, a place to see the eternal and the divine. The holy and the true went hand in hand until the beginning of the modern era, when the true became nature's own and the holy was left to the church – money and secular power were passed to the "emperor".

The hierarchy of the conditions of life was evident and is still part of our everyday life: *theoria* / *praxis* / *poiesis*. Sennett wants to break this hierarchy and distinguish himself from his teacher. Arendt drew a clear distinction between *Animal laborans* and *Homo faber. Animal laborans* takes the work as an end in itself – in the act of making something work, nothing else matters. Accomplishing a task shuts out the surrounding world and, thus, for Oppenheimer building an atomic bomb was a "sweet" challenge. By contrast, *Homo faber* was the judge of material labour and practice – not a colleague but a superior of *Animal laborans*. Thus, human life had at least two separate conditions: those for the dimensions of production (*poiesis*) and politics/ethics (*praxis*). "In one we make things; in this condition we are amoral, absorbed in a task. We also harbor another, higher way of life in which we stop producing and start discussing and judging together. Whereas *Animal laborans* is fixated in the question 'How?', *Homo faber* asks 'Why?' (Sennett, 2008, p. 7)"

Thus, it is about the classic twofold division. On one hand, if you shape the outer world, you cannot shape the inner world, and on the other hand, if you shape the inner word, you cannot shape the outer world. This division is based on the "dark spot" of classical philosophy: the material, outer object cannot inform its maker. It was a politically incorrect idea that a slave could become civilised through his labour, to perceive the concept of himself, a concept that was then considered property of the master, and whose possession

was the social definition of a free man. Hence, one could either be a poet expressing one's inner world, or a subjugated worker shaping material objects in the outer world. This dual tradition is deeply rooted in European ideological history and languages (labour/work, *Arbeit/Werk, travail/ouvrage*). (Weinstock, 1954; Riedel, 1973.)

Sennett questions this division by claiming that "making is thinking" ..."[t]he human animal who is *Animal laborans* is capable of thinking; the discussions the producer holds may be mentally with materials rather than with other people; people working together certainly talk to one another about what they are doing. For Arendt, the mind engages once labor is done. Another, more balanced view is that thinking and feeling are contained within the process of making" Sennett concludes by stating that "we can achieve a more humane material life, if only we better understand the making of things." (Sennett, 2008, pp. 7–8.)

According to Sennett, the philosophical workshop of pragmatism provides a solid foundation for bringing craftsmanship into philosophical debate. This philosophical school began in 19th-century America as a reaction to European idealism, and in particular to G. W. F. Hegel's philosophy. C. S. Peirce, the first pragmatist, sought to find the keys to human thinking from small everyday deeds and events. The basis for discussion was *experience*, as understood in the ideal of a scientific experiment or in Hume's empiricism. The first generation of pragmatists – socialists John Dewey, John Ruskin and William Morris – analysed the conditions of *Animal laborans*, or the working class, through socialist ideals. In regard to Sennett's craftsmanship, the double meaning of the concept of *experience* contains the basic problem of pragmatism. In German, unlike in English, experience is divided into *Erlebnis* (lived experience) and *Erfahrung* (life experience). According to Sennett, "[t]he first names an event or relationship that makes an emotional inner impress, the second an event, action, or relationship that turns one outward and requires skill rather than sensitivity." (Sennett, 2008, p. 288.)

Sennett claims that craft work, as he presents it, emphasises the realm of *Erfahrung*: craft work turns the craftsman outwards. Experience is communicated through the outer. Thus, Sennett values the importance of experience as a craft. The "craft of experience" means, for example, that *Animal laborans* is neither blind nor lacking experience, and that craftsmen can truly take pride in their work and the things that they make. However, the working conditions may alienate the craftsman from such feelings. "Ours would remain an innocent philosophical school, however, if pragmatism did not recognize that the denouement of this narrative [of blind craft work] is often marked by bitterness and regret." Sennett wants to steer away from this innocence of pragmatism. He presents his thesis statement in the last sentence of his book: "The clubfooted Hephaestus, proud of his work if not of himself, is the most dignified person we can become" (Sennett, 2008, p. 296.) Thus, the clubfooted craftsman is the ideal and standard of humanity. In the Finnish context, the blacksmith

Ilmarinen would be superior to Väinämöinen, the hero and main character of The Kalevala, the Finnish national epic.

Sennett seeks a way out of the confrontation between *Homo faber* and *Animal laborans* through the interpretation of experientiality: an experience directing outwards, communicated through the outer, the *aisthesis* of producing, has to be co-constructed with the ethics of work. This union applies to all work. This creates a realm of *material praxis*, new conditions of human existence – the new *Human condition*.

The idea is hopeful, yet incomplete. For a long time, *Erfahrung* could not have been restricted to non-theoretical, silent knowledge that is utilised only when needed, and that is subjugated to the demands of ethics, i.e. politics. Living work does not mean stepping outside nature or the second nature, *tradition* – i.e. entering the joys of heaven or the world of pure money, both of which are basically one and the same. No. But on what, then, is living work based? Is it based on the exchange of materials with nature (Marx), that is, facts and laws of nature and tradition? But how can nature generate something that is simultaneously capable of stirring it and being a part of it? In addition to the two pieces – goodness and beauty, ethics and aesthetics – a third piece is needed to complete the puzzle. That piece is truth and the theory of knowledge: epistemology.

The lifeline of education and culture

One strand in the European philosophical tradition aims to reveal the nature of work by putting the aforementioned three pieces together. Here, we can briefly note that, as previously seen in classical philosophy, the basic metaphor was a craftsman, *demiurge*, whom Plato regarded as part of the world of ideas and Aristotle as the mover of nature. But we can better get to the core of the matter by briefly following the development of the concept of "education and culture" (in German, *Bildung*). This construction can be named *Poeta faber,* poetic work and worker. As the phrase suggests, living work is the poetry of the future (Röder, 1989).

Therefore, unfolding the concept of experience communicated through work as good and beautiful is not enough, but work also has to be considered as a fact (*Tatsache*). This is a prerequisite for understanding work as educational, living work. As is commonly known, the German concept of *Bildung* consists of two different elements: image and production. In the process of education, a form is shaped and imitated according to the archetype (*Urbild*). Thus, the process is about form and shaping on one hand, and image and imitation on the other. For Meister Eckhart (c. 1260–c. 1328), it was about the interpretation of the *Imago Dei* doctrine: everyone should give God the opportunity to express himself through themselves, *Inhbilden*; after this, the realities of the world come true (*Wirklichkeit*). Truth and reality are produced, but not by humans. (Uljens 2002, 362.)

This idea is based on the notion that truth is not about being discovered, but is rather the result of production. According to Giambattista Vico's (1668–1774) *verum ipsum factum* principle, we can only truly know those things that we have made ourselves. Full knowledge can be gained only *per causas*, through causes. "We can say that we know an object or a thing if and only if we know why it is the way it is, or how it came to be or was made to be. …knowledge *per causas* is complete only if we make something out of nothing. Only then we can say that we fully understand what we have made. … *Verum et factum*… *convertuntur*… the true and the made are interchangeable" (Berlin, 2000, p. 35.) Vico's *Scienza Nuova*, or New Science, countered the Cartesian theory of perception. However, Vico not only criticised modern rationalism, but also invented (*invention*) a new place (*topik*) for his reasoning by developing – rather than simply observing – the concept of flexible and concrete intelligence (*ingegno*) needed in practical life; a concept that would also include memory and imagination (Amoroso, 2006, pp. 11–15).

Novalis (1772–1801), alias Georg Philipp Friedrich von Hardenberg, writes almost in the same way as Vico: "We know things only to the extent that we can express – i.e. make – them. The more skilfully and accurately we can make things, the better we know them." This requires raising the *Erlebnis*, or aesthetics of production, into a central role in generating knowledge. The poetry of production (*poiesis* > poetry) is to seek and fulfil opportunities. For Novalis, poetry as production is part of philosophical competence: "Every field of science becomes poetry as soon as they have become philosophy." Thus, productional poetry is not merely criticism, since it also has an ideological mission. Philosophy, like art, creates inventions and frees the functions of the self, but always *in concreto*, in a concrete manner. (Redin, 2003, pp. 77–78.)

For Novalis, aesthetics is the science of sensory thinking: "The highest act of mind is… an aesthetic act; the true and the good can become brothers (*förbrödras*) only in the beautiful." Thus, the civilisation process appears to Novalis as a single, yet bidirectional, path: "The only way is to let the outer gain room in oneself, to let it grow inside oneself, but simultaneously *ordine inverso*, to go out into the world, leaving one's self behind. This is the ability to see the outer through the inner, and the inner through the outer; that is, the self constructs the world, and the world constructs the self. These two movements are one and the same." (Redin, 2003, p. 112.)

Wilhelm von Humboldt (1767–1835), in the name of neohumanism, interpreted this as interaction between the self and the world, humans and the universe. God is no longer needed – he has been replaced by nations and states. The harmonious development of individuals now depends on the possibilities of them adapting their own energy (*Kraft*) in such a way that each individual can commit to activities that realise their potential and improve their competence. A central condition to this action is freedom: "In order to act for themselves, i.e. to have confidence in themselves, people have to be certain about their

freedom." This self-formation requires social relations: "And indeed the whole tenor of the ideas and arguments … might fairly be reduced to this, that while they would break all fetters in human society, they would attempt to find as many new social bonds as possible. The isolated man is no more able to develop than the one who is fettered." (Humbolt, 1969, p. 98 occording to Sorkin, 1983, pp. 58–59.) Paralleling Rousseau's thoughts, Humboldt values persons over citizens. Thus, educational organisation "pays heed to no caste, to no single corporation, and not even to the scholar" (Humbolt 1841 GS XII, 188 according to Sorkin, 1983, p. 62).

Johann H. Pestalozzi (1746–1827) attends to what Humboldt leaves aside: personal harmony is not only made up of the heart and the soul, but of the heart, soul and hands. With the metaphor of the hand, Pestalozzi emphasises the fundamental importance of practical functionality in strengthening (*Emporbildung*) the inner forces of human nature. Hegel takes the next step: "Instead of contemplative inactivity, work (*Arbeit*) is the educational way of being for the modern human; a human who, through the special skills gained in his work, becomes a human." (Raufelder, 2006, pp. 89, 97.)

Later, a young Marx commented on Hegel's thoughts, building the idea of humanity on nature's development, instead of spiritual self-formation: "Free work is…nature's self-mediation. … Humans bring nature to life by their free and conscious actions. … Humankind's history of production is an open book of human psychology." Working wood with an axe and a saw gives the worker different feedback than working with a modern harvester or paper machine. This development of *Erfahrung* (life experience), in accordance with the development of tools, machines, and production systems, is the viewpoint from which, according to the young Marx, the development of humanity should be observed. Thus, in a way, nature conceives a natural spirit, and that spirit, as part of nature, helps to bring out nature's spirituality, which is potentially present in nature. Bringing out nature's potential in humans' comprehensive development requires the integration of the realms of freedom and necessity, a process in which time management plays a crucial role: "It depends on time if society has the time to develop (*auszubilden*) itself in terms of humanity" … When people have become "masters of their own time", they can effortlessly and freely move from one realm to another. (Röder, 1989, pp. 542–543.)

But the story does not have a happy ending like this. If a hand tool was the symbol of the pre-modern economy, then a machine is the symbol of the modern industry, and a computer of the information industry. Now that language and notions – *concepts* – have become pivotal tools, and when machines can use language and language operates machines, experience (*Erlebnis*) has begun to fade way: computing or mark-up languages – or concepts in general – do not explicitly refer to one single experience, but references to experiences have become the targets of productional activities. Experience production is now part of industrial activities. Related to concepts and language, collective memory – a

concept that used to belong to the sphere of science and research – has transformed into memory technology (Stiegler, 1998).

Modern rationality, embodied by capitalist industrial production, saw nature primarily as a resource and turned it into waste. However, the information industry of today turns *tradition*, the other nature, and social memory into a resource, leaving behind social waste. The goal is not humans' "harmonious and balanced development of all the strengths as a whole (*Kraftbildung*), but rather producing material commodities as diversely as possible (*Sachbildung*)" (Raufelder, 2006, p. 100). Professions and professional work (*Beruf*, *Vocatio*) are diminished into dead work (occupation), an unfamiliar place, the consumption of labour. Thus, language, culture and science – fields formerly perceived in the realm of freedom – are also closing.

In their book *Cradle to Cradle*, William McDonough and Michael Braungart (2002) suggest that industrial planning should abandon the concept of *waste*. Thus, instead of landfills, we would always have a new cradle for biological and technical cycles. Discarded items and ideas must always form the basis of the conditions for the development of others. The goal is to re-establish the household – *oikos* – as a gift economy: the value of items and services comes from putting them back into circulation. Thus, the conditions of nature, tradition and individual development – the new *Human condition* – must be integrated into the principles of economy; economy is also a man-made construction (*Tatsache*, or 'fact'). Professional work is motivated by the sense of working for the community and the will to leave something concrete for others and a trace in history. Herein lies the value (*worth*) of professional work. Giving the *gifts* received from nature and through tradition to the community and putting them back into circulation is the foundation in practising a profession (*Beruf*) (Hyde, 2006).

Consequently, the question of the destiny of living work becomes the touchstone of education and culture: To what extent can we, as today's craftsmen and professionals, be "masters of our own time", enabling the recognition, determination and solving of the basic problems of our era?

End of excursion 2.

The idea of vocational Bildung as modern Bildung – our second attempt at the division in two – opens a practical zone to develope vocational and liberal education but not a theoretically founded solution to construct a common, solid curriculum.

1.4 Conclusions

We have analysed the relation between *Bildung* and *Vocatio*. It seems very difficult to solve the problem of the content of social individualization via the analysis of the relation between *Bildung* and *Vocatio*. The very message of traditional *Bildung* is keeping the material content of work out of sight, or at least at arm's length. We are then easily forming concepts into a context within which is contained content too abstract. On the other hand, *Vocatio* gives the form of work, the concept, to an outsider, to somebody who is calling us to labour.

The ideas of "*Bildung* through vocational education" and "the strategy of mutual enrichment of liberal and vocational education", give only a direction to act but do not solve the problem of the twofold division. In fact, they open up a view to a more fundamental horizon of the division. To explore the content more carefully, we need a new element in the analysis, an element which gives rise to the possibility of opening the process of individualization as the constitution of sociality.

PART II

Explorative analysis

2

Socioindividualization as texturing

2.1 The end of individual – the birth of individuality

In the introduction to the book *Individuality*, Manfred Frank and Anselm Haverkamp propose three trends in handling the problems of individuality during the last twenty years: first, the paradigm of consciousness philosophy, which studies the individual, but not as a subject. The second is the paradigm of social interaction, which focuses on individuality, but not so much the questions of identity. The third one is the hermeneutic paradigm, which sees the individual as "ineffable", incommensurable. (Frank & Haverkamp, 1988a.)

Frank and Haverkamp see three transitions in the discussion: there are transitions from Philosophy to Linguistics, from Sociology to Psychology and from Hermeneutics to Aesthetics. With these sublevels of the questions of individuality, Frank and Haverkamp ask the following three questions:

1. Do we think that the "language" – the consciousness philosophical paradigm – leads us to the social interaction paradigm?
2. Do we think that the "psychogenesis", the social interaction paradigm, develops itself into the hermeneutic paradigm?

3. What relationship does the paradigm of "Art" have with the hypothesis of congruence between language and communication *or* commensurablity of psychogenesis and understanding?

From a historical point of view, the *individual* refers to some amount, quantity, one-ness; and *individuality* to some kind of quality. The difference between these two opens the anthropological dimension of subjectivity, the sociological dimension of identity and poetizes the dimension of fiction. (Frank & Haverkamp, 1988a, pp. VII–X.)

The crisis of consciousness philosophical paradigms, and the problems reformulating these paradigms into the social interaction paradigm and the transition of these crises to the third – the aesthetic and hermeneutic paradigms, as Frank and Haverkamp see it – open three themes of discussion:

1. The history of the concept of "individual", the problem history of individuality,
2. Psychohistory as archeology of "individuality" (social history of individuals),
3. The function history of individuation as the construction and deconstruction of individual enactment (aesthetics) and individual articulations (*Hermeneutik*). (Frank & Haverkamp, 1988a, p. XII.)

Within these themes reside subthemes of philosophy and linguistics (1), psychoanalysis and social history (2), literature and the science of art (3). The actual discussion underlines the "symptomatology" of the nonconceptual, the "archeology" of the outside, and the "deconstruction" of the traditional forms. The differences between these three campuses of knowledge are not so clear. The theme of individuality is in a way a test case in beginning the discussion of the post-, late- or second modern as the actual problem of The Modern. (Frank & Haverkamp, 1988a, pp. XI–XX.) Perhaps it is not a question of the End but rather of the Origin of individuality; individuality not as a function of but as social structure.

2.2 On the constitutionality of individuality

While in classical Greece individual behaviour outside the *Koinon* was seen as idiotic, and in the Middle Ages it was avoided and regarded as abnormal or sinful, individuality in Modern Times is, as written in Sartre's *La Nausée: "Ce type n'a aucune valeur pour la société, il n'est qu'un individu."*[16] "Only an individual" is the shortest reformulation of the early

[16] Nausea: "This kind of person has no value to society; he is only an individual."

Romanticist view of individuality, which in the last analysis is the string with which the structures of the society and the rationality are laced. In addition, the order of these structures can also be changed without advance warning. (Frank & Haverkamp, 1988b, p. 611.)

Frank thinks that there are two main basic models of individuation, individuality through identity and through non-identity. The first is a process of finding one's own identity as in the traditional *Bildungsroman* novels. The "what to find" is either the divine order of God that one has to realise, the plan of a platonic idea in heaven, or an Aristotelic potency in one's own nature, which one actualises via his/her own activities. The freedom is then the ability to produce something which is not in the divine/nature-based plan. It is something which is not scraped inside human understanding: it is the platonic *Hyla* material or the Aristotelic "ineffable" inside a substrate.

If, on the other hand, individuality is seen as a free plan of possibilities without any kind of previously existing ideas or nature of the individual, no one can guess how an individual acts or develops his/her self-realisation. The core idea of this concept of individuality, routing to/from Schlegel, Schleiermacher and W. V. Humboldt, is that One-ness (*Einzelne*) or the individual is – as difference from special – a unity/element that we cannot arrive at or reach by way of a logical schedule starting from the whole. The concept of general (*Allgemeine*) comes individually interpreted general, the struggle of which for universal competence/validity broken itself in the unpredictable process of forming individual sense of life. (Frank & Haverkamp, 1988a, p. XIV.)

We can see then that the genesis of the question of individuality is at the very heart of and is the test case for the fate of modern times: If the basic vision of modern times was the hiding of the absolute character of ideals and nature and understanding them as more or less cultural or social, still heavily structured but changeable with collective efforts and an *individuum's* individuality as some kind of resonance with these structural social processes, in post-, late or second modern times, then the question turns outside-in: after Hegel's psychology *aus dem Begriff*, Marx's "free development of the individual", and later on Simmel's *individuelles gesetz*, Heidegger's *Jemeinigkeit*, Sartre's *universel singulier*, Adorno's *Nicht-Identisches*, and Foucault's "What is the author?" we are able to not only ask how the social structures produce individuality, or how in the process of constructing those structures through activities or language we construct ourselves, or how through reflection we can de- and reconstruct ourselves and the structures, but how to understand the process of individuation as being "whatever", as *quodlibet ens*, not "being, it does not matter which", but rather "being such that it always matters":

> Whatever singularity, which wants to appropriate belonging itself, its own being-in-language, and thus rejects all identity and every condition of belonging, is the principal enemy of the State. Wherever these singularities peacefully demonstrate their being in common there will be a Tiananmen, and sooner or later, the tanks will appear (Agamben, 1993, pp. 1, 86).

"Being such that it always matters": does this mean that we have to accept the "ineffability" of individuality? Is it possible to open even a little this mysterious "ineffability" of individuality without losing the agency of individuals; i.e. is it possible that the constitution of individuality and social space is one and the same process? Is it possible to see the constituent and the constituted as one and the same?

2.3 Four strategies for acquiring knowledge

In social sciences, structuralism has two sons and one daughter. The main research strategy of structuralism was to find invariance out of variance, search structures behind the uneasy and colourful texture of world, to find structures out of processes, structures not depending on context or limits of eras; structures that can explain not so important everyday phenomena. The aim was to find closed structures, in which the same circumstances always occur in the same way.

After the linguistic turn in social sciences, the two sons of structuralism – constructionism and reflectionism – have tried to deconstruct the concept of structure itself, to develop it into a more open concept: structure is not only closing us inside the walls but the social structures are also open; they form new possibilities, which are not possible without these structures. Social structures are structures of possibilities.

We can think of the structuralism as a "thinking thing", which only tries to find reality, the world, which is awaiting the researcher. With the two sons of structuralism, the searching and finding turns to producing. Our inside world is not fully outside of the world. The inside world and our inside world are overlapping. One cannot put himself outside the search process. We can form a view of the world only by taking part in its production. The link between the subjective side and the objective side is the language we use, and we cannot go outside this mediating link.

Reflectionism reflects the objective side to produce more open structures, to restructure the subjective side; the aim is to unearth the premises of actual thinking and open new ways of acting. Constructionism starts with the aim of restructuring the objective side, by which reform of the subjective side is also made possible.

While the structuralist aim was to keep the subjective side outside the research process, in constructionism and reflectionism the subjective side is more or less the start or end point of research analysis. The process does not include further research but instead the production of something new.

Regarding the daughter of structuralism, we are not exactly searching for or producing the subjective or objective side of the world, but we are read-writing textual situations, social worlds or stages in such a way that the context is not a separate structure behind

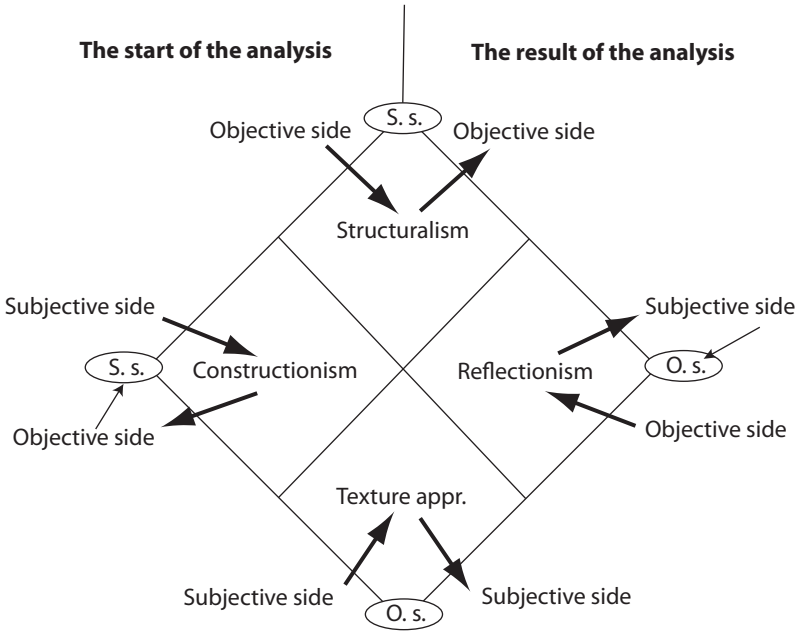


Figure 1. *Four strategies for acquiring knowledge*

the textural surface, it is in it: the surface is as full of context as a musical tone is full of composite harmonics.

The main aim of research is then to read-write a situation, in which it is impossible to identify an exact difference between the objective and subjective sides. The aim is to find a variance within the invariance, to read-write a textual situation, embedding the situation as heavily as possible within subjective experiences of the world that in the same situation something different always happens.

This yields new possibilities for research: facts/*Tatsachen* are human-made under the laws of practice and *poiesis*. This means that laws of nature are younger than the laws of society. Textual research programmes don't hide the motive for facts, there is no data in science or social science: the data are also human-produced, they are facts.

We next explore the concept of *texture*. The etymology of *texture* goes back to Latin and Greek: in Latin, *textere* is to weave, *textura (texo + ura)* is the art of weaving, *texo* means putting together or constructing a complex structure, *textus* a binding; in Greek, techne is the art of metalworking; and in ancient India *taksán* referred to a carpenter. *Texture* refers also to the (complex) structure of a surface (Harper 2010). We can then see three main aspects of texture: *theoria* – being, concept, a means of seeing the structure of a surface; *praxis* – doing, constructing a structure, a context; and *poiesis* – making a product, the content.

The concept (Rc) is a type of junction, *dis-* and/or *con-*, between the context (rx) and the content (rt, see Figure 2). Thus the concept (Rc), the context (rx) and content (rt) have the following main relationships:

1. Being: Rc-rt, to see the content,
2. Doing: rx-Rc, to place, set within the context
3. Making: rx-Rc-rt, to make, within the context, the feel of the materiality, the content, and responding to it, making sense of it.

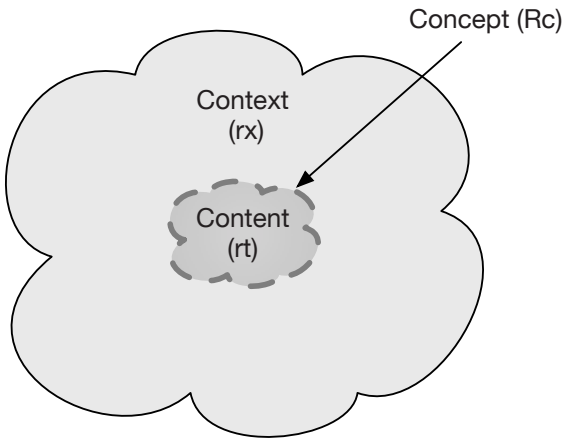


Figure 2. *The relations of concept, context and content*

Getting the feel of as well as the response to the materiality is then an opportunity to get informed, to inform, to *texture* the content and context via the concept. This is not only a question of *praxis* (doing) or *theoria* (being), but primarily a process of *poiesis* (making). The quality of social space is in the relations, which open the possibilities of making, producing the meaning of the space *and* the rules of forming the space.

We have then three different kinds of movement altogether. The constitution of social space is possible only if we can keep open all three questions at the same time: how are we, how do we and how we make. As a definition, I use the term *texturing* (i.e. producing a texture) to make reference to all these three activities – being, doing, making; or the other way round, concept, context, content – of social individualization. My thesis is that it is not enough to analyse relations between theory and praxis, being and doing, concepts and contexts; one must also analyse the very essential object activity, *poiesis*, making, the content.

• Excursion 3: Some conceptual aspects of individuality

Jorge J. E. Gracia (1988) lists in his book *Individuality* six areas of philosophical problems concerning the *theory* of individuality:

The *intension* of individuality is to determine the necessary and the sufficient conditions of individuality. *Extension* of individuality opens the questions of realism, nominalism and eclecticism with many different answers among these three traditions in philosophical debate. Also included are the important issues of the *ontological* status of individuality and *principles of individuation*. He also handles in his book the epistemological problem of the *discernibility* of individuals as the semantic issue of *the reference* to individuals.

Are there any possibilities to determine the necessary and sufficient conditions of individuality, the *intension* of individuality? Can we give in any sense the same terms of, let's say, "game"? Is the only common feature shared by all games that they are called "games"? (Gracia, 1998, p. 10). Likewise, is the only common feature of individuality that we call ourselves and each others "individuals"?

Traditionally, individuality has been analysed in terms of five features: Indivisibility, Distinction, Division, Identity, Unpredictability. According to our "immediate metaphysical intuitions", writes Gracia, "…the world appears to be composed of entities" that:

(a) "lose their fundamental character if they are divided into parts" (*Indivisibility*);
(b) "are distinct from all other entities, even from those that share some features with them" (*Distinction*);
(c) "are part of a group-type or class which has or can have several members" (*Division*);
(d) "can remain fundamentally the same through time and various changes" (*Identity*);
(e) "are the subject of predication but are non-predicated of other things" (*Unpredictability*).

(Gracia, 1988, p. 28.)

What kind of *entities* have we, then, if they have all these features, Indivisibility, Distinction, Division, Identity, Unpredictability? Gracia says that individuals are *noninstantiable*. Let's say the universal "appleness" can be communicated to its instances: apples. Matti or Vesa cannot become instanced in the way "human being" can. "Individuals are … instances, while universals are instantiables" (Gracia, 1988, p. 45). We are not now saying anything about the nature of the existence of these two, as individuals or universals, but something of their relationship. This process of embodying the universals in the individuals, the proc-

ess of forming the *sinnlich übersinnlich* (Marx)[17] is the basis which I later refer to as texturing a reality. The basic metaphor is not ideal/material, high/deep, but the seismic waves of the earthquake of conceptual tectonic plates. We have everything on the surface – not hidden in deep or in a haven of ideas, but embedded on the surface we see. The surface is deep and the depth is in the surface, in the social texture of the reality.

The extension of individuality opens the debate between realism and nominalism, i.e. between the two theses: "everything that exists is individual" vs. "nothing that exists is individual" (Gracia, 1988, p. 60), the great chiasma between Aristotle and Plato. When realism gives some ontological grounds for science and ethics in order to maintain objectivity, it posits a world without individuals and a reality separate from the world of experience. And the other way around: When Nominalism sees the world as a composite of individual entities, science and ethics are then constructs of the mind, in one way or another. Nominalism takes into account the very basis of our experience and common sense. We can, of course, try to find out a third view between these two, the view of Eclecticism: Some things that exist are individual and some things are not". (Gracia, 1988, p. 85.)

Are there any other solutions? One way to find a solution is to make a hypothesis of different levels of existence: my son's cat Milli and the concept of "cat" are different: I don't expect to see "catness" without a cat outside of my mind, only with Milli or other individual instances of cats. My concept of cat is not the universal concept of "catness", but it is also a noninstantiable instance of the *concept* of cat. In my concept I have only an individual representation of the universal "catness". While I have an instance of the universal "catness" in my mind, I cannot say much about the existence or non-existence of cats; but what I can say is something which has its existent between me and others who are using the same language I am. I cannot construct the concept of catness alone, not even my noninstantiable instance of the concept of "catness". It is a product of social history and discussion. It is an example of social texture. My seeing Milli and my concept of cat has – in the last analysis – potentiality of constructing the whole era, the social semiosis/symbiosis in which I am living. As previously stated, the surface is as full of context as a musical tone is full of composite harmonics.

To use another example, we have experiences only from apples, bananas and grapes, but no one has ever seen "fruitness" without an instance of fruit. The "fruitness" of fruits, a socially produced texture on individual fruits cannot in a natural sense produce any apples or oranges but as a social reality, as a common generalised experience of individual instances of fruits, as social texture, it has the power to produce apples with even more "fruitness". Social texture is material. It has the power of work – work of concept.

[17] "Sensual extrasensual", see also Holtzkamp 1976.

What then is the *ontological* status of individuality? Is individuality some kind of *substratum*, feature or relation, or does it have any kind of ontological status at all? (Gracia, 1988, p. 122). Is the individuality of an idea like, let's say, triangularity, which exists outside the world, a reflection of that which we can see as a triangle (Plato), or is it "a structural form present in triangular things, but with no status outside them" (Aristotle)? (Gracia, 1988, p. 122). Individuality is then, according to Aristotle, some kind of primary substance, *substratum*, to which we cannot give any positive expression; it is that which is unexpressed about the individual: when an entity is conceptualised, something is always left out, left unconceptualised, and the outsider is then used in the conceptualisation of the unconceptualised individual (Pieper, 1973, p. 730). This is paradoxical: individuality is non-individual, the material about which we cannot say anything positive.

Duns Scotus, in trying to answer the question what makes an individual an individual, gave to individuality the status of substantive form, *haecceitas*, the *entitas positiva* (e.g. the "Mattiness" of Matti), the third element of the chain of genera and species. So, the universal goes "inadvertently over any individual, which in its uniqueness and non-substitutability cannot be expressed in the metaphysical concepts of form and matter." (Habermas, 1991, p. 134) But the relationship between species and individual comes in the solution *inkommensurabel*.

Leibniz worked out a new interpretation of individuality, the so-called complete concept of the *individi*: "… every individual is a mirror of the world as a whole…" It is no longer space and matter that have individuating power; instead, individuality is explained in terms of the fact that every self-representing subjectivity is centred in itself and represents the world as a whole in this unique manner" (Habermas, 1991, p. 134). Leibniz fills the discontinuum between concepts and individuals with an analogy of infinitesimal calculus: concepts should be differentiated such that the next difference of individual is *minor quavis data, less than any magnitude*. The remaining difference, with the metaphysical rigour, has no meaning at all in the language of analysis, because the error is not assignable. Leibniz can then say that all individuals are not only material (i.e. non-conceptual) but formal, conceptually differentiable (Borsche, 1974, p. 310.) Leibniz follows then Aristotle's idea of the substrate inside the individual: the general is in the special and the special in the individual. Then this concrete concept of individual comes first in the series "general-special-individual", and the question turns from extensional logic to intensional logic. The principle of individuation is then a question of self-active development of the windowless and dynamic monad, which in its integrity of variety expresses the whole world in an individual way.

This "complete concept of individuality" of Leibniz is so complete that only God in his/her omniscience can open it; to everyone else, the wholeness of the individualities of individuals is closed, impossible to know. If it is possible for someone to open completely

the individuality of another individual, the individual loses the possibility to individualize him-/herself. From the practical point of view, the *individuum est ineffabile* is true, not because, as in the theoretical approach, of materia, but because of freedom. (Pieper, 1973, p. 734.)

The Leibnizian traditional concept of God with his *a priori* omniscience of all concepts of individuals turns later into a necessary but not sufficient condition of human ability to know the concepts of individuals or individual concepts. This secularisation of problems opens up the whole series of questions regarding the limits of human knowledge. The questions of individuality have then, beginning with Kant, enormous significance for every area of philosophy. In Kant's thinking, the question of the inarguability of individuality opens the problems of *omnitudo realitatis*, the idea of the wholeness of reality and its nature as a transcendental ideal of the *reinen Vernunft* through which the concept of "*das Ding an sich selbs*" have to be presented. (Borsche 1974, pp. 312–314.)

Fichte also opened a new avenue of discussion. His concept of *Tathandlung*, deed-activity, the construction of "I" via deed of activity, says that "I" is not *Tatsache*; not a datum but a fact[18]. I put myself as "I" in relation to others and they put themselves as "I"s in relation to me. *Tathandlungs* are possible only in relation to the individuality of others. This means that for Fichte the principle of individuation is free deed-activity through which "I" determines its individuality ever more. There must then be the recognition of the others: "The self-determination of the individuum has to have an implicit recognition of the others and every negation of the freedom of others means self-alienation of the individual because his/her individuality is mediated through the individuality of others." (Pieper, 1988, p. 733.) The aim of individuation was to produce unity in thinking, and only as over-individual can we think rationally. Later on Romanticism saw individuals more *personified* ideal, individuality as a unity of fragments (Schlegel) and the windowlessness of monad as the individual's inability to express him- or herself (Schiller). The godly egoism, as Schlegel said, has as its "highest calling in the *Bildung* and development of individuality". And this was the perspective of W. V. Humboldt. He saw as the concrete principle of individuation the spiritual (*geistige*) communication between individuals with *language* as the bridge between the individualities. Human individuality has "as its most inner nature the process of realization of the ideals of human kind as individuality", which is "the basic need, the life principle of individuality, self-active ideal" (Borsche, 1974, p. 316.)

Our short conceptual expedition comes then to a dead end. Individuality seen as a theoretical-practical question closes the doors to production, production of individuality. Individuality turns to something which is outside the human touch – "inner nature" – forming only images of the world, not the actual world. The inside world and the inside of

[18] "Fact" comes from *facere*, 'to do something'

the world do not have any common basis, the basis of the production of social individuality. We need the third moment in our analysis, the moment of *poiesis*, making.

End of excursion 3.

2.4 Texturing and *Poiesis*

2.4.1 The public craftsman

To understand each of the three moments of social individualization, we have to make an excursion to the history of *demiurge*, the public craft. We start from Classical times, from Aristotle and Plato. According to Aristotle, the three fundamental modes of activity (*energeitai*) of the concept (*logos*) of *psuche* are: *theori*a (being/saying), *praxis* (doing) and *poiesis* (making). There are three natural potentialities (*dunameis*) /dispositions (*hexeis*) of the mind and three ways of conceiving the mind's mind, thinking of thinking:

Theoria – *Sophia*, Wisdom (*episteme* and *nous*), Science: Sayings/beings
mind's mind: *nous kat' energia – intellectus agens*, activity of thinking about something.

Praxis – *Phronesis,* Virtue: Ethics, Doing
mind's mind: *nous dynamei/pathetikos; intellectus possibilis*; receptive activity, thinking about the essences of the world and its forms.

Poiesis – *Techne*, Art: Aesthetics, Making
mind's mind: *aition kai poietikon*; "thinking which thinks by creating the content of thought on the basis of the material of perception. Metaphors *faos* and *faino*, the ability of the mind to be the source of the light in which it perceives the phenomenon. Metaphor for this circle: a serpent that consumes its own tail" (Kirkeby, 1997, pp. 5–6.)

The aim of disposition (*dunamis/Hexeis*) of *sophia*, is not action but *theoria*, universal knowledge, a Saying. The aim of the disposition of *techne* is *poiesis*, production, making something and the aim of disposition of *phronesis*, is *praxis*, action limited to itself (for example, learning) or action "not delimited by anything but itself", action as deed, *energeia*, actualization, praxis as *hexis*, habitus as one's own "second nature". (Hanley, 1998, p. 2; Cahoone, 1995, p. 226; Kirkeby, 2000, p. 164.)

At the time, there was no clear difference between craft and art, but the idea of *mimesis*, representation – a *mime* was a dancer who represented to the elite the low life of workers and slaves (Sörbom, 1966, pp. 22–23) – opened the possibility to make a difference between aesthetics of making and aesthetics of perception, a distinction which later formed the very basis of differentiation between art and fine art. The roots of poetry as a form of texturing a reality, forming a *Wirklichkeit*, lie in *poiesis*, in aesthetics producing with nature.

There was a very concrete paragon in the background of the classical approach: *demiurge*, a public craft. To Aristotle and Plato, the idea of craft as the form of production was the very basis and starting point of understanding reality and forming rationality (Solmsen, 1963, pp. 473–496; Thomsen, 1990; Ulmer, 1953). Plato embedded his *demiurge* in the heaven of ideas and Aristotle saw nature as the producing craft. The nature is in his thinking is a craftsman who can use its skills on itself (Blumenberg, 1957, p. 266). This art of nature was for Aristotle so strong that he can even say: one who builds a house simply does what nature itself would do if only it had been given the opportunity to grow into the form of a house. The craft only mimics nature (*ars imitatus naturam*). *Poiesis* is a place for activity and actuality (*energeitai*) under the form, *logos* of Ideas (Plato), or of Nature (Aristotle). In making, "the agent is not an individual *qua* individual, but a representative of a species or of general abilities" of nature. Making is "an anonymous activity". It "requires definite means and definite abilities". (Taminiaux, 1987, p. 138.)

Doing (*praxis*), on the other hand, is something quite different. *Praxis* is closely related to *lexis*, speaking and communication, language and politics. It is ambiguous, unpredictable and reversible; "*Praxis* is individuated." To Aristotle "it is the very life of the individual. Individuated but related, inserted in a plurality" (Taminiaux, 1987, p. 138). *Praxis* is a place for *sich-verhalten-können*, potentiality of one's own conduct (*Hexis/dunameis*). It is the place where the ability to conducting oneself shapes the self. We have to learn to conduct ourselves according to the very basic rules of social life – as in, don't to kill your father, don't have sex with your mother, or don't eat your friends; i.e. needs, desires and pleasures – even to the point that outsiders can think our behaviour to be instinct-based reflexes. An activity can be realised in the form of a concept without any awareness of this concept, or one possesses the concept prior to activity in order to be able to conduct oneself with awareness. The motion, the basis of activity as the cause of activity, has to be re-formed into motivations of activity, to reasons/grounds for "passionate thought".

For Aristotle the actuality (*energeia*) comes prior to potentiality (*dunamis*), and the ultimate virtue is to exercise *sophia*, the disposition of *theoria*, the second in order is *phronesis* of *praxis*. With praxis you are doing, re-forming usually yourself, not the object of activity; but when you are making something, you re-form the object of activity. Making is activity

(*Am-werke-sein*) in which via the movements of work tools, *techne*, the form of blueprint or plan, turns into the form of the object. This potentiality of re-forming a thing is not potentiality of the craft or human agent but nature. There is no "feedback" from the made object to the maker, no circle: you cannot rebuild yourself via making, working. But when the *Poiesis* turns to poetry, the questions of *psuche* to questions of the mind's mind, *noesis noeseos*, to the questions of producing *mimesis,* an imitation or a representation of the reality, a *Wirklichkeit*, i.e. forms of production of social elite, there is possibility of "feedback", circle, faos, light which lights itself, reflection.

The *psuche* – as the principle of life and the origin of *organon* ("instrument") movements – relates the body as a craft to tools, like master to slave. The body is a born tool of the mind, a slave is a tool with a mind, and tools are slaves without minds (Bartels, 1965, pp. 282–283). There is no clear difference between tools and slaves. "For the 'slaves by nature' is he that can and therefore does belong to another, and he that participates in reason so far as to recognize it but not so as to posses it" (Aristotle 5, 1254 b 22 in Aristoteles, 1992, p. 69). As any tool slave carries out a concept but does not possess any concept.

According to Aristotle, the very feature of humankind is rationality, our possession of *logos*. If it were possible to re-form oneself via making, via forming an object, there would no longer be any natural basis for slavery: one could then possess a form, a new *logos* through learning from the object of making and re-form oneself into a rational being without a master or ideas from heaven, a being with *logos*. Moreover, the craft could then produce something which is not pure imitation of nature – something new – to be a *demiurge* on earth.

Perhaps it is wise to note at this point that there was not a unified theme of psychology in the classical world, only the problems of the "principle of life" (*psuche*) as part of early theoretical biology. Neither the juridical ideology of Roman nor Canonic law with the owner-subject had the idea of psychology, but only the idea of power, the power of the will, "appropriation and transfer of property by the 'declaration of will' alone without any conditions of imposed by preexisting 'substantive order of things' " (Wolf, 1988, pp. 83–86). This owner-subject seemed to be "unified" and self-transparent. The problem was the relationships between these kinds of subjects; a theory of contracts was needed and "its theological hypostasis, specifically of the theory of the creator in this relation to the created world and to the human creatures within it" (Wolf, 1988, p. 84). In the history of psychology, there have been two positions of which there is an uneasy and unstable balance: the ideas of "self-consciousness", "self-determination" or "self-development" on the one hand, and the ideas of "pre-existing substantive order to which human individuals have to conform in order to achieve what they do exist for" on the other (Wolf, 1988, p. 85).

As we have earlier already seen (see p. 22), it was possible to break free from the classical principle of *ars imitatus naturam* only much, much later, in the Middle Ages. Nicholas von Cusa's three dialogues with the figure of *Idiota* from the year 1450 opens for the first time the possibility to see human's own position in the world, not according to nature or the cosmos, but in the world of things, *sola humana arte*. It was not artists but craftsmen who made this breakthrough by creating simple things like spoons or dishes without any models from nature. (Blumenberg, 1957, p. 268.)

2.4.2 Modern times: Enlightenment and Romanticism

The modern times turn almost everything upside down or should we say, inside out. In economic thinking, this turn means that it was no longer doing, *praxis*, the basis of economy of nations, but rather making, *poiesis*: not work but labour. This turn happened in Europe in at least two different ways: during the Enlightenment, our *demiurgi* was slittered to pieces, in the early Romanticism of Germany, the *demiurgi* was returned to the ground; there was hope of melding together once again poetry and work, in order to form a "Poeta Faber" (Röder, 1989).

During the Enlightenment, the motto "Cogito ergo sum" turns the being of nature to questions on thinking, i.e. science. Personal experience is not further evidence of being, it is only a subjective opinion. The questions of facts, beauty and ethics are separate. Fact (*Tatsache*) turns to datum, activity turns to motion of matter in its very actuality. Nature is real via thinking, via science. To see red is only a subjective experience; it cannot be shared or measured. Real red is the length of waves we never see. The feedback from nature is real only via science and industry, it is not a personal or individual question anymore. For science, it is a question of universal laws, not dependent upon situations or events. In industry it is – after the first Industrial Revolution – a question of power over nature as a material object.

The other way of thinking has its roots in Romanticism in Germany in the late 18th century. It turns back to *demiurgi* and finds new ontological solutions: activity (*Tätigkeit*, *energeia*) is no longer a question of being (*Sein*), but one of existence: one can exist only via activity. The form of existence is no longer only a question of the substance of heaven or nature, but a constitution of existence via activity of the concepts that can be maintained only through the activity of individuals.

There is at least one main difference between early Romanticism and later Idealism in Germany. In early Romanticism, the main principle was that the being of the self has such a transcendent ground that it cannot be opened or understandable in the immanent consciousness. In German Idealism, one of the main ideas was that consciousness is a

self-complacent phenomenon, which also has the ability with its own means to make understandable its own ground and state, the great task of self-reforming the Spirit (*Geist*) or Concept (*Begriff*). To solve this unsolvable problem of selfhood (*Selbstsein*), philosophy needs some help from art (*Kunst*): "In the arts we can have a construct *(Gebilde*), the sense fullness (*Sinnfülle*) of which any thinkable thought cannot produce." The background of this idea lies in F. H. Jacobi's (1743–1819) transreflexivity of being (*Sein*). Jacobi tried to find the form of perception in which we could overcome the duality of perception, in its immediate firmness of being and never-ending relativity of rational reasoning. Jacobi calls this ability *Gefühl*. It is a transformation of "Belief" from Thomas Reid's (1710–1796) theory of perception. The idea of *Gefühl* underlines our immanent consciousness of the transcendence of the object of perception. "The belief in the existence of the object, which is unsolvable from the perception, has to be understood as the effect of instinct" (Baum, 1969, pp. 96–99; Frank, 1990, pp. 501–502.) There is then a possibility to meld unmediated (i.e. perception without a preset concept) and mediated (perception with a preset concept) perception together with nature as the positive starting point. And it is just the art – *not* the fine art but rather *mimesis* – of producing the perception that gives rise to the form for this melding process.

But on the other hand, as Novalis, a main figure in German Romanticism, writes, "the real, human and historical activity cannot overcome the logic of things (*Dinge*), the activity is … things bounded or object-mediated activity." "We are everywhere looking after situations without conditions of things but we always find the things with conditions. The things are in a way tools or means: things are influenceable and tools are influential" (Arndt, 1994.) Novalis sees the role of tools in a very special way:

> "... I cannot be a real thing via a tool (*Werkzeug*) in any other way than in the way that is natural to the tool. ... So, I have a feeling to be restricted to a special kind of reality via every distinct tool. ... Every tool, which opens the material to work with, modifies the crafts and thoughts of the artist which are led to the material and vice versa. ... the reactions of the material which are led back to the artist." (Novalis, 1797, according to Arndt, 1994, pp. 887–888).

Novalis opens here the possibility of *Bildung*, reforming oneself via work. Moreover, he thinks that the alienation of tools and machines can be overcome only if one self makes him- or herself into a tool or means for self-realisation. "*Poiesis* – work and poetry – is not a free might of creativity but an object mediated reform of encountered reality. … A tool as a tool of work or means (*Vehikel*) is not a vanishing moment, but instead it modifies the worker as also the product. … it is a stand-alone boss."… "Man should be masterly (*Vollkommenes*) and a total self-tool/instrument". … "With this turn, the subject sets free him- or herself from thing-objective meditation, when s/he to each other and to him- or herself behaves as a tool. S/he becomes the objective him- or herself when s/he becomes a

self-tool" (Arndt, 1994, pp. 887–888). To make yourself free, the master and the tool/slave must be one and the same. To possess a concept – i.e. to be a human, not a slave – means to have that concept under your control, that it is your tool or means. If the object activity happens under a form of concept of which you are not aware, you are then – in a way – a slave to that concept. The form, the concept realises itself in the relationships between me and you, man and nature, in our activity.

2.5 Individuality and the question of labour vs. work

In modern times, also the classic idea of *praxis* as the basis of society is turned upside down: the labour, making, is the basis, and the productive basis of society and *praxis*, doing, produces nothing.

Hegel was one of those who turned the classic metaphysical situation upside-down – but only partially. With a hand rafted model of work still in mind, Hegel developed in his Jena version of philosophy the idea of *Bildung* with respect to work, to a fundamental principle of modern time. For him, nature or heaven or God is no longer the *demiurge* of the classic substantial worldview, but rather man himself. Man is *Werkmeister* mirroring universal ideas. (Riedel, 1976, p. 179.) The real existence of man is in his deeds (*Tat*), in his productive work of building a house or building the world into neighbourhoods, and thus producing his real individuality. Hegel puts making – productive activity – near the praxis – doing, conducting oneself – and opens up the possibility for *Bildung*, re-forming oneself via work inside the model of modern craft work. Not *Agere sequitur esse* but *Esse sequitur agere*. This *Bildung* process is a unity of theoretical and practical processes, in which the Hegelian substance re-forms itself ever more in the form of the subjective and the subject: in life-fullness (Anthropology), in consciousness and self-consciousness (Phenomenology) and in Spirit (*Geist*) itself (Psychology). This is also the line of autonomy: ever more the Concept/Spirit realises itself through activity and the reality is conceptualised as activity; this forms the identity of *Bildung*. (Drüe, 1976, pp. 52–53, 365–366.)

We can argue that Hegel does not quite make clear the distinction between activity and conduct/behaviour (*Tätigkeit* and *Verhalten*). We can still say that *sich verhalten können* is to Hegel the very principle of the life process, one of the main qualities of life. Activity, *Tätigkeit*, on the other hand, is the process of *energeia*, the actualisation of the concept under the different forms of *sich verhalten können*: adaption (*Anpassung*; anthropology), adoption and recognition (*Aneignung, Anerkennung*; phenomenology), development (*Entwicklung*, psychology). Hegel developed psychology *aus dem Begriff*, i.e. "The unity between the conceptual Being and the Being of the concept; as Logizität active subjectivity and as *Logizität*

active objectivity: the identity of the activity realised concept and as the activity conceptualised reality" (Drüe, 1976, p. 366)[19]. The activity of concept and conceptual activity was to Hegel not only a monogue of "I" in its self-reflection, in *Tathandlung* (Fichte), but a dialogue of a subject, through which he or she learns to identify him- or herself step-by-step via the model of language, tools and social institutions, as "I, the We, and the We, as I, is" (Riedel, 1973, p. 133).

The work of concept and conceptual work is Hegel's modern – i.e. following Locke and Adam Smith – way of viewing the basis of society and culture. Hegel tries to solve an old *aporie* between Aristotelian *praxis* and *poiesis.* It goes as follows: When you are forming, through a working process (*poiesis*), the object of your work, you cannot reform yourself; and when you are forming yourself through activity (*praxis*), you are not forming an external, separate object – rather, you are forming yourself as a person. According to Aristotle there is no connection between activity, actor and work result: there is no kind of meditating process between the worker and the object of the work; the mediating process that Hegel called the *Bildung* effect of the work. This modern concept of work opens up the possibility of speaking about work as the basis of individualisation: "When *poiesis* in the Classical era was seen as activity, *telos* of which was a product separate from the activity", is work in Hegel's thinking: "making the subject into a thing, producing an outsider, in which, between the worker and the product, lies a new kind of relationship. Work is a *Bildung* process; through work that is produced, products and the worker him- or herself." (Kotkavirta, 1987, p. 108). "The work of an individual for his or her needs is liberating from the needs of others as one's own needs and being freed of one's own needs can be realized only through the work of others." (Hegel, 1952, p. 257 according to Drüe, 1976, p. 227).

The solution to the life-and-death struggle between master and slave opens up a new logic of development, the logic *Anerkennung*, reciprocal recognition. We can make our own recognition – *Aneignen* – and annihilate nature's creatures, but not other individuals, because then we annihilate ourselves. The recognition occurs according to Hegel's new social reality, I-I and I-We relations. "In the joint, two-sided process of recognition, each side is both an extreme, standing in opposition and contrast to the other, and at the same time it is the mediator through which the other self is recognized (or fails to find recognition). … When the twofold mediation occurs, there emerges a third over above the original two selves, namely the We, or social self. … As the concrete universals which are inclusive of and the result of the joint action of its members, the We is a social infinite" (Williams,

[19] "Der Zusammenschluß des begrifflichen Seienden und des seienden Begriffs, der als Logizität aktiven Subjektivität und der als Logizität aktivierten Objektivität: die Identität des in Tätigkeit realisierten Begriffs und der als Tätigkeit begrifflichen Realität."

1987, p. 10.) The *Anerkennung* of the others produces the need for the theory of the other and of the I in such a way that the result is the We, the social reality. The process of *Anerkennung* gives rise to the logic of *Entwicklung*, the development and start of the psychology of the spirit, i. e. the development of the concept, the spirit in its own freedom as subjective spirit.

After the Industrial Revolution, modern work was no longer the work of craftsmen but the labour of labourers. The labour cannot be work within the concept of *Bildung*. Why?

While for Hegel thinking is productive, thinking is the highest and most real form of work and the history of the development of thinking is an enclosed in the psychology of Concept, for Marx the key to the real psychology behind humankind lies in the history of industry: the concreteness (*Gegenständlichkeit)* of work and bodility (*Leiblichkeit)* of the worker, and the work as an exchange of materials with nature are the main elements of the concept of work. The archaeology of the industrial textuality – not language – opens the book to human psychology.

There is a good reason to remark here that in many European languages we can see a difference between two attitudes toward work. In Greek, we have *ponein* and *e gazesdai*; in Latin, *laborare, facere, fabrica*ri; in French, *travailler* and *ouvrer*; in English, labour and work; in German *arbeit* and *verken, schaffen*, i.e. labour as mühe, qual, last, not *or* as leistung, werk. (Riedel, 1973, p. 125.)[20]

Christian society reversed the meaning of labour from negative to positive. The idea of emulating Jesus Christ, who through his suffering saved humankind and offered a prototype of the individuality of an *individuum* by his/her own suffering, inspires one to regard the suffering – the labour – as joy: It is a sin to be like God. Everyone has to produce his/her own individuality through his/her own labour in order to earn one's eternity. The labour of monks and nuns in the monasteries, as a sort of *masochismus*, as "slaves to God", with the askese and the strict timetables, formed the mental model of factory labour later on. Protestants introduced the christlich masochismus into the secular world and with their labour-oriented mentality helped the early modern state reform the voluntary christlich suffering into a necessity. The religious motive of positive suffering turned into a secular social object with the rhetoric of economic rationality. "This way all the formally free men of modern times were submitted to minor forms of activities, which were, in antique expressions, slavehood and suffering" (Kurz, 1997, p. 4.) The old form of serving God turns now into the new form of labouring; the time, place and order of work are outside living, culture, education and games. This purified activity – labour – is the new secular religion. (Kurz, 1997.)

[20] Arbeit < *arba* Knecht, slave (Riedel, 1973, p. 126). In Finnish the etymology of *työ* goes back to working with flax to produce linen as the Finnish word *sivistys, Bildung*

The machinery of the first Industrial Revolution and the divisions of work in those days strip the experience of work to the skin, to the abstract question of using energy. The overturning of concrete-sensate work to abstract-universal labour is a necessity to be able to form societal boundaries in a negative way, through the "*Seele*", "*Geist*" of commodities, which we produce/see in the market when reading the "hieroglyphics" of the commodities: As I noticed earlier (see p. 32). The dead products of living work are not in the literal sense a crystallization of living work, which is how we tend to see them, but rather social representations, "hieroglyphics" of the work already completed. They express a social way of thinking (*Gedankeding*). The social value of the labour is not produced through the work process, but later in the market of commodities, by estimation of dead products; that is, not as products of concrete-sensate work, but as abstract-universal labour, as a commodity. There is no real social object of work and the return, a dialogue between the worker and the object of the work in the sense of *Bildung*, i.e. forming a social space, texture of individuality. But we do have a global *communis* of commodities, not *communis* of work, the great idea of labour movement, i.e. "global networking of the content of human reproduction" (Kurz, 1994, p. 290.)

This *communis* commodities is a product of modern times. It does not follow the logic of *theoria*, *praxis* or *poiesis*, science/fine art, politics or production. We can understand the logic of *communis* of commodities as a process of *consumere* or – as lately in sociological discussion[21] – as *consummare*, i.e. as productive consumption. The *communis* of commodities is – in its negative way – a social institution, time and place for individuality of non-identity. We have this time and place, if we have the means of freedom, money. We are in the market concrete-sensate situation with our needs and money. We are not only reading but also writing the (material) texture in/on commodities, our social boundaries of the production process, by voting on the possibilities of combining dead work and living work once again in production through the use of our money. The economic interest within the market is so high that we have a whole special industry of advertising devoted to handling the situation. The enormous teaching process of how to read-write the texture of commodities is needed. The fictive capital produces the fictive world.

We are no longer using "dump tools" of craft-like work with the immediate experience of the object of the work. The machines "did not make the labourer free from labour, but his/her labour free from content" (Marx according to Oetsel 1978, p. 178). The graft form of work, which still had the three basic sources of sensible sense (*sinnliche Vernunft)* as part of the work process – i.e. the search for truth, the action for goodness and the work for beauty – was demolished during the Industrial Revolution and the formation of the modern national states through new institutions, such as science, state and fine art.

[21] See e.g. in Finnish, Noro (1995).

Labour is not a neutral but a social abstraction; in the first place it meant the activity of those who had lost their freedom. Hegel reformulated the relationship between *praxis* and *poiesis*, giving a new position to *poiesis*, to production. He had in his mind the work of craftsmen, but Marx was thinking of the labour of the industrial labourer and for Marx this form of work held no possibilities for *Bildung*.

While Hegel has the system programme of forming the substance into the subject, Marx reverses it and tries to turn the subject into the substance (Theunissen, 1980). Marx's starting point in *Grundrisse* is the individual and his/her work; to be more exact, the idea of craftsman work and the hope that through it individuality was enriched. In industrial labour, the worker has lost all his or her traditional societal boundaries: they are transferred outside the work process into the market. This abstraction of the work content and the enormous forces of the market need the logic of the Enlightenment.

The basis of education in modern times is here: the state has the task of enlightenment via the educational system to abstract the content of work expressed through the sciences and the market, in which we learn our societal relationships, into the Spirit of our time in a quasi-concrete, even sensual way under the terms of exchange. These two processes are two sides of the same coin, a result of the structuring of the modern times: the starting point was work with the idea of *Bildung*, but industrialisation with private capital created a new division of work, through which industrial work returns to labour without the idea of *Bildung*.

2.6 Transensitivity of man

Karl Marx put forth at least three families of concepts to express the human condition:

1. Activity-related concepts such as activity, being active, actuate, deed, action (*Tätigkeit, tätig sein, betätigen, tat, Handlung*)

2. Behaving oneself -related concepts such as behave, behave oneself, proportion, intercourse (*verhalten, sich verhalten, Verhältnis, Verkehr*)

3. Consciousness-related concepts as instinct, reflex, disposition, feeling, sensorial, supersensory, (un)consciousness, alienation (*Instinkt, Reflex, Gemüt, Gefühl, sinnlich, übersinnlich, (un)Bewusstsein, Entfremdung*).

It is most important to note that the main interest of Marx does not lie in these three families per se, but in their relationships. Marx uses such expressions as *sinnlich übersinnlich*, *tätige sich verhalten*, *bewusste instinkt*, *theoretische praxis*. He is trying to form a conceptual circle, event or place of fusion, or even fullness in which activity is not only *energeia* but also *potentia*; or praxis is not only *potentia* but also *energeia*, or *theoria* is not a saying/state of being but *potentia* of *poiesis*. This melting pot is not a place for mimesis, representation, place of fine art or science, but for *poiesis*, producing something, a place of living work with three open clues of the situation: *theoria*, *praxis* and *poiesis*; truth, virtue and beauty. The question is not one of mediating or non-mediating processes but of trans-meditated, trans-reflexive, trans-sensitive; i.e. the real life process of man, man as a suffering, *needy* creature of nature.

To repeat: to be *tätig* is a pre-condition of existence, for what the "*sich verhalten*", doing, gives a social form, time and place; the making of existence under the form of *praxis*, doing, is a question of aesthetics, to give a practical form for *Sinnlichkeit* as an expression of the natural needs of humankind. For Marx, the melting pot, fusion, is alive work, in which should be present all the three elements – sayings, doings and makings.

Marx does not to want to go the same route as Hegel in psychology – the reflective work of *Begriff* (Concept) in its development with itself – but he instead tries to find a possibility of social individualisation with the common melting pot of the individual and the world: inside of the world is an inside world, to use Michael Theunissen's expression (Theunissen, 1981). The two are interwoven. There is, then, not a process from outside to inside mediated with tools or words. *Tätige verhalten* means putting together construction and reflection in a very special way. To form a reality out of the world – the inside of the world – means radical constitution of every sense in their fullness; every word is a work of art (but not fine art!) and reflection on these works reveals a more concrete, more colourful *sinnlich übersinnlich* (Marx) texture of the world.

We see and hear only the result of our body functions, i.e. how one can survive in a situation as an individual of the human race. For this aim it is not necessary to know how we see or hear, to see the seeing, hear the hearing. We are not only reproducing, mirroring the world around us but in a very radical sense producing "the way out" in situations, i.e. our senses propose how to manage the situations from the point of view of the human race. Senses are, in a way, automatic tools/means of producing a solution to a situation, what is needed to see, hear, smell and feel from the natural historical point of view. This basis of life processes is not a thesis but *aisthesis*, conscious but not always with awareness. The autarchy, not the autonomy of self, is denied. The being is a trans-reflective being. To Marx, self-transcendence is ontic and the ontological basic character of man. (Frank, 1992, pp. 34–35; 1989, pp. 231–233; Röder, 1989, pp. 537–538.)

Marx makes the relation between *Begriff*, Concept and sensefulness relative: object activity is not opposite to the conduct via concept. The contrast between adoption (*Aneignung*) and recognition (*Anerkennung*) does not open as a self-development (*Entwicklung*) of Concept, as in Hegel's psychology, i.e. withdrawal from the out-/inside world. On the contrary: the process is an ever-increasing fullness of senses, going inside the worlds via making/producing the inside world. The object activity (inside world = inside of the world), in a way sucked from and stuck to the form based on the concept formed before the activity, is a form of behaviour. This *tätige sich verhalten*, behaving oneself through activity, is a melting pot, a fusion, in which, in a way, nature observes itself via a concept. In this process, the concept is an open border zone, an ever con-/disjuncturing texture of context and content. This real life process becomes richer the more we can keep open our own *Sinnlichkeit*, sensefullness embedded with sayings, ethics and aesthetics, without forming a reflection, mimesis, representation but sensing through the concepts, i.e. sense the otherness (history, a world a way) which is not present. Then art (= producing something which is present) is the original aspect of the life process, not the fine art (= representing something which not present).

Unexpectedly, there is a situation in which a very common thing, a commodity in the market, can be seen as a *mime*-dancer, a social hieroglyphic, i.e., representing something that he/she is not:

> …. Quite the contrary: whenever, by an exchange, we equate as values our different products, by that very act, we also equate, as human labour, the different kinds of labour expended upon them. We are not aware of this, nevertheless we do it. Value, therefore, does not stalk about with a label describing what it is. It is value, rather, that converts every product into a social hieroglyphic. Later on, we try to decipher the hieroglyphic, to get behind the secret of our own social products; for to stamp an object of utility as a value, is just as much a social product as language. (Marx, 1999a).

To make a comparison, let us take the same passage from the first edition of *Das Kapital*. It reads as follows:

> …In order to relate their products to one another as commodities, men are compelled to equate their various labours to abstract human labour. They do not know it, but they do it, by reducing the material thing to the abstraction, value. This is a primordial and hence unconsciously instinctive operation of their brain, which necessarily grows out of the particular manner of their material production and the relationships into which this production sets them. First their relationship exists in a practical mode. Second, however, *their relationship exists as relationship for them.* The way in which it exists for them or is reflected in their brain arises from the very nature of the relationship. Later, they attempt to get behind the mystery of their own social product by the aid of science, for the determination of a thing *as value* is *their* product, just as much as speech. (Marx, 1999b).

As we can see, there is a radical reformulation of Marx's "labour value" theory. "Unconscious instinctive operation of their brains" has transformed into "a social hieroglyphic". Products, commodities in the market, represent something no longer in existence; i.e. the living work of the labourer, their art. But – and this is important – when something, in our case a commodity represents something no longer in existence, we do not have a discussion in simple terms of *needs* of production anymore. As representing something which is not present and which is already history, the hieroglyphic thing commodity as a purely physical object, cannot stand before us embedded in the situation in which it was produced. We must read-write it with all our cultural knowledge and experience. This happens all the time as our second nature, conscious reflex, habit or instinct. We have a *sense* of things as we have a sense of humour, justice or a game. This sense of things is open to desires and pleasures; commodities are not possible to sum up with languages of needs. So this phantastisch object, commodity has the same characteristics as objects of fine art. Our real relationship to fine art can be read from our relationship to wares as the real history of human psychology can be read from the history of industry, from the history of living and dead labour. Industry and *habitus* are brothers-in-law. They have a common mother – outside and inside nature – but different fathers, i.e. tools and words.

But if we see our everyday life in the market as an enormous house of fine art, a place of read-writing something, that is not present with our second nature, instinct or *habitus* and with or without "passionate thinking" of needs, desires and pleasures and not only setting alike different kinds of already-gone living labour, we have to have be some kind of sensible sense (*sinnliche Vernunft)* (Kurz, 1994, p. 294) for a global *communis* of commodities i.e. we have at the same time in our melting pot three identities without a solution but with a mutual transparency: activity/behaviour, living /dead labour, sense/concept.

2.7 Craft as a methodological mirror for reforming labour[22]

The Developmental Work Research programme, which has in the last few years served as a valuable organising factor in the field of Finnish work research, buried craft work in the rubbish dump of history. According to the programme, craft work was replaced with industrial work, with the humanistically oriented work development programme evolving as a counterbalance to industrial work. From a synthesis there emerged the idea of theoretically mastered work (Toikka, 1982, 1984; Engeström, 1990, 1995; Kuutti, 1999).

[22] This section has been published earlier (Volanen, 2009).

This interpretation of history looks at craft work from the perspective of modern industrial society and labour at the same time as it submerges itself almost uncritically in the modernisation process that has reshaped work. A smooth production process became a central – sometimes nearly the sole – criterion of the modernisation of work.

The concept of theoretically mastered work privileges knowledge over skill. Apart from making this epistemic postulation, it deconstructs the ethical and aesthetic moments of work as questions lying outside the manufacturing process. It is true that the first modern pushed, by crippling craft work, these moments of work beyond the boundaries of labour. Postulating them, methodologically, as issues external to work makes it impossible to assess labour as shaped by industrialisation from the perspective of history and, as a result, also from the perspective of the future.[23]

However, we must examine the question concerning the form taken by work, and for this we need craft work as a mirror. Naturally, we cannot return to craft work. However, we find ourselves obliged, in an emerging new production situation, to look for the conditions under which forms of work take shape. If the classical economy was grounded in agriculture and craft tools, the first modern was grounded in machines and machine systems. As i earlier noticed machines have learned to use language, languages to use machines, and languages have become a central means of production. This has meant the formation of a *texture* of machineries and languages: machines cannot work without languages, nor can languages work without machines. The tools of work activity and work-related communication are becoming intertwined. They are metamorphosing into moments of one and the same work process.

In many respects, the same technical process has pushed the subjective agent of production outside the manufacturing process proper, turning it into a monitoring and regulating factor of production; in other words, *expertise*. This expertise cannot be adequately based on merely knowing things. The last few years have, as a part of globalisation, seen ownership, enterprises and factories increasingly becoming differentiated as each others' external preconditions. It seems that as a result of this deepening split, the relationship between wage labour and entrepreneurship is also being restructured in crucial ways (Wolf, 1999; Haug, 2003; Schumann, 2003; Peters & Schmitthenner, 2003; Glissmann & Peters, 2001; Bsirske, Mönig-Raane, Stergel & Wiedemuth, 2004).

Given this, we can open our examination with the thesis that craft[24] is a richer and more concrete concept than knowledge. As early as in classical philosophy, craft, the art

[23] It is true that different researchers hold different views on the subject, with Toikka in particular elaborating his ideas in an expansive manner, as regards among other things ethics (see Toikka, 1982).

[24] *Craft* < pull together, stretch; while Swedish *skilja* ('skill') < separate.

of making things, was a difficult problem and a challenge: how to account for the fact that women and slaves engaged in craft work could produce, make visible, something new and unprecedented? This had to be explained away, which demanded supermundane ideas (Plato) or the supernatural productive ability of nature (Aristotle). Otherwise there would have been no escaping the admission that slaves and women were giving birth to something that is non-divine and/or non-natural; in other words, human. This was, naturally, beyond the pale in a slave society. Thus, it was precisely the ownership/mastery of concepts, or, more precisely, the mastery of the linguistic articulation of concepts and the associated social practices that distinguished a free man from a slave. Craftspeople of those times had – had really had for ages – thoughts with hands and hands that thought; that is, an ability to make things. For the purposes of making things, those concepts took the form of and had their mode of existence as a *feel for* the making of an artefact; the associated concepts often lacked even an oral, let alone a written, expression.[25]

Where a knower is faced with a single question, the master of a craft must, as they construct their sphere of activities, ask themselves no fewer than three: How are things? How are they when they are well? How can they be made beautifully? Thus, the master of a craft describes, evaluates and changes the world in a beautiful manner, here and now, but in what is nevertheless a valid and universal way.

The methodology of a craft is a general theory about how the world can be changed. Thus, we can see that the programme of theoretically mastered work pays little attention to essential and central themes linked with the analysis of work. Accordingly, we must reinterpret the concept of "mediated activity", adopted from the cultural-historical school, associated with the programme's methodological core. Let's analyse a little bit more this "mediation" as productive ratio, *nous poietikos.*

• *Excursion 4: Nous poietikos and production*[26]

Let us use a couple of everyday situations as our point of departure. Ask anyone if they are able to lift up their arms, and they will certainly say yes and give you a demonstration of this skill. When asked whether they know how to lift up their arms, they may reply, "Like this?" and lift up their arms. However, it is more difficult to explain the details of the activity: "The arm just rises when I lift it up." Of course, we could ask a psychologist, neurologist

[25] We should keep in mind that classical philosophy started from and used as its basic metaphor the public craftsman, the demiurge. The basic distinction between theoria/praxis/poiesis arises from a process where the craftspeople's activity sphere was torn apart in a way that supported the ideology of the then-slave society. (See e.g. Thomsen, 1990; Cahoone, 1995; Solmsen, 1963; Dabrowski, 1990; Bartels, 1965; Riedel, 1973, 1976; Ulmer, 1953; Blumenberg, 1957; Agamben, 1999; Taminiaux, 1987.)

[26] This excursion has been published earlier in Finnish (Volanen, 2007a).

or physiologist to give us a more detailed description of the process of lifting up one's arm. This description may be plausible and accurate, but it is of no use to anyone moving his/her arms – it does not facilitate the actual process of lifting up one's arm. Arm lifting is a voluntary body movement, but we have only an outsider's experience of the skill itself: the arm rises when it is raised.

We examine only the starting point and the end result. Furthermore, we are convinced that it is our willpower that moves the arm, nothing else. We can gain a conceptual description and knowledge of the chain of events through research, but it does not help us much. What if I ask someone: "Are you able to hammer a nail into the wall?" While the respondent might be able to give me a detailed description of how this happens and the stages it includes. However, this does not guarantee that he/she really is able to hammer the nail into the wall. It must be separately verified. Thus, a person may have very detailed information on the matter, but no skill.

On the other hand, it would be rather difficult to assume that we are proficient in this respect, without even being aware of the skill in question. We usually know whether or not we are able to hammer a nail into the wall. It is true that we can be aware of a skill that we possess without being able to express the skill in words – we can express it through demonstrations, actions.

For now, I will call this form of knowledge the *knowledge of skill*, which does not necessarily have a verbal or written description, but which, after all, demonstrably can be used in the form in which it is acquired. Therefore, we can be aware of various skills without being proficient in them. By the same token, we can be proficient in various things without being aware of the principles and processes related to this skill. We simply master the skills.

Nonetheless, there is a fundamental issue to be considered: if modern physics can be trusted, we and the world around us are ultimately determined by energy fields and the changes in their energy levels. In one way or another, from all this, we produce an extremely rich network and tapestry of perceptions, almost without a clue as to how it all happens. Somehow we also manage to define some of our perceptions as belonging to the outside world and some of them to our inner world. They even seem to be taking place independently of us. We can think, like psychologist Pjotr J. Galperin, that we do all of this in order to *orientate* in the world (Galperin, 1979).

Generating an "image" of the world has undoubtedly been crucial at some point in the development of species. It is characteristic of animals to form an image of the routes and the immediate environment in which they move. Unlike animals, we humans typically separate this image as a world of its own, which we can elaborate in our minds without the immediate presence of its origin. We do not necessarily have any knowledge or experi-

ence of its origin. Indeed, we fluently use even a large number of words whose etymology we do not know.

Of course, through science and research, we can find out a great deal about this incredibly complex perceptual process, but only as seen from the outside. Properly organised, demonstrations give us a clue as to what happens within us when we observe or think about the world or ourselves. After all, everything that we get from the world has been, to a varying degree, produced, acquired, and adopted by us: the inwardness of the world, both burdened and revealed by the development of species, by tradition – by the immeasurable effort of former generations. It is part of a world invigorated by the long development of *human* nature.

Let us next examine a trivial object; let's say a domestic table. How can we acquire information about a table? By turning it around, by looking at it from different angles, by touching it. We will notice at once that a table can look different depending on the direction from which we look at it. Irrespective of the angle from which we observe our table, and irrespective of the table leg which we knock on, we will form an association – a mental image – some kind of an idea of the table. In our heads we develop a condensed image of all the different perspectives. We can develop an overall image of the table even if it is not immediately present.

But what if the individual table we are observing is a very special case, after all? Should we go to a store and have a look at all the tables, their differences and similarities, in order to be able to say what a table actually is? We will notice that there are quite a few different types of tables, made from various materials, in various sizes, colours and weights. Even the number of table legs may vary considerably, as well as the surface material used.

Then we suddenly realise that these modern tables may not fully represent the archetypal table. In the past, there may have existed tables that are no longer available today, so one must go to a museum or library in order to see them. Even if I look in books and see pictures of very different tables, to my surprise I am usually able to immediately recognise them as tables. What is the table actually? I try to ignore the individual table qualities in the pictures – weight, colour, size, number of legs, material – in order to discover the idea of a table: What must all tables have? What is the essence of a table? As modern humans, we are no longer able to think that somewhere there is a heaven of ideas, in which the "table" idea lodges, and that the essence of the table is then transmigrated into the wood of its descendents: the modern tables.

We are more willing to think that a "table" is part of our tradition and society. It has been expressed conceptually in the language, and actual tables and the concept of "table" have their own history and life, expressing our cultural history in their own way.

Neither are we able to think that a final *truth*, independent of humans and tradition, would exist relative to the table, and that we would finally discover it after having examined

and turned around our table. Instead, we mainly think that the future of the table is open, and that it depends on us what kinds of tables we design and manufacture, both restricted and enabled by nature and tradition. It would seem slightly strange to argue that we know the whole truth about the table; or that we can, in principle, eventually find this truth. This means stepping beyond time and space; in other words, beyond history, taking the place of God. Fortunately we do not succeed in this. In any case, is there something that is present in all tables? Do all tables have legs? No. Do all of them have some kind of a surface that is more or less horizontal? Would this be a good starting point?

Yet not all surfaces are tables. I guess the surface will also have to be at a certain height – at least, as a rule. Thus, I am able to talk about the table without knowing what it actually is.

After all, mere observation and generalisation based on observation may not lead us anywhere. What if I adopt the role of the user – or, as the user is often called today: the consumer? Tables have various functions: they are work tables, dining tables, office desks, etc. It is easy for me to imagine a wide variety of occasions in which tables are used. In relation to the use of the table, I can describe a good or a bad table. A kitchen table is not a good work table, nevermind a living room table. An engineer fitter's work table must be different from that of an IT worker. Knowledge of history would also be useful now: in the different phases of history, the table can have had various functions in facilitating or representing the life of various social groups. For instance, the Speaker of the Parliament's table will definitely tell us something about the power institution.

Analysing different functions thus opens up new perspectives to the table. Indeed, it does not take long before I get the idea of creating a good table for myself – a table around which my friends and I can gather to eat and discuss the state of the world, to spend a nice evening enjoying wine and freshly baked goods.

In any case, this might turn out to be a problem for me. Even if I had been making the most meticulous observations of hundreds – maybe even thousands – of tables, and had even tested dozens of them, I might not have gathered much information about how to make a good table to be used for social gatherings. I might be able to say some things about the size, material, colour, and model – but how to implement all the good qualities? What a dilemma. Production obviously entails something which I cannot discover by merely watching or using tables; evidently, skill and knowledge of skill are involved as well.

The knowledge and experience of an observer, user or consumer are not enough for the producer to create a table. Martin Heidegger's approach also proves to be inadequate: in order to define a table, the observer must go everywhere to find all existing tables – both in time and space (*Vorhanden/present-at-hand*). The user, for his/her part, is not interested in the table per se, but rather in its purpose, function, in a specific situation. The table thus serves the user; it is at his/her disposal (*Zuhanden/ready-to-hand*). Yet, this information is not enough for the producer. If the producer is designing a table for him-/herself, he/she

will think about its place and function; not so much about the table per se, but its relation to his/her own need. In order to produce a good and functional table for a specific space and situation, one must be able to answer various *if-then* questions: If I do this, then what will follow? (*Mit-handen*). (See e.g. Backman, 2005, pp. 189–193.)

In fact, this producing mindset will face a challenging situation. On the other hand, it is dependent on and to some extent bound to everything we know about the table. This encompasses the tradition associated with the table and the tremendous amount of *if-then* knowledge that former generations have gathered about table manufacturing and the basic principles related to tables, both with regard to raw materials and usability. They weigh on our minds as heavily as lead.

As stated above, we do not usually think that we are implementing the divine idea of the table, about which we – as some sort of geniuses – would have received a divine revelation. Neither do we often imagine revealing in our product some natural, hidden table potential, which our eternal, i.e. divine, productive mind would bring out, as if it were a servant of nature's cosmic *demiurge*.

We rather tend to think that the future is genuinely open, within the limits set by tradition and nature, in the sense of criticising and surpassing these limits. Therefore, to a certain extent, we can choose what knowledge to apply, and even produce new natural *laws*. In doing so, we bring together natural qualities which would not "naturally" come together. As part of nature, we can open new opportunities for ourselves and nature. We invigorate nature, as well as our own nature, into producing reason/intellect, by producing natural laws and, later on, communal rules, i.e. a second nature. We do this by placing a third element between the two – a hand, tool, machine, machinery, or production system. In this way, we produce a new *if-then* relation. By doing this, we get two different "pictures" of the target: one that is experientially direct and another one that is communicated via the element in-between. A tree, irrespective of whether it is being observed, cut down by hand, or chopped into pieces with an axe, always follows natural, though different, laws. As part of nature, we of course are unable to produce anything but natural laws, and reveal the opportunities of nature for the *human* nature. Our consciousness and craft are nature, regenerated by human nature. Petra Röder characterises this train of thought, typical of early German Romanticism, as poetic work, *Poeta Faber* (Röder, 1989). When we place something new – a hand, tool, machine – between *human* nature and nature, nature will become more spiritual and humans will become more natural. We will find a new flavour, a new edge in the focus of our work; it will open up for us through our activities as new, more spiritual, in the same way as we open up for ourselves. We not only acquire, adopt – or perish in – the focus of our activities, but we acknowledge each other: by man spiritualized nature – just like other human beings – is no obstacle to our freedom but is, instead, its realisation.

Now that I have a decent table of my own, I certainly could start manufacturing tables for others, too – I guess others also gather together with their friends. This will lead me to a new situation again: the viability of producing tables depends on other producers' abilities to produce them. Production must be quick and economical, otherwise the business will not have long-term success. In addition to all the preceding definitions, a table becomes a *merchandise* whose financial value is determined through exchange. I will thus have to create a new community, in which the value of work is determined by its material worth. As a matter of fact, I will be able to assign other people to manufacture tables and start to find out how to convert into money the value produced like this. At this point, I actually do nothing else but think about the profitability of the value, i.e. not of table manufacture: how could the stated value produce surplus value? However, this question is only indirectly connected to our topic, so I will not be dealing with it in detail. I will briefly return to the topic at the very end of our story. Instead, let us briefly summarise our results.

We have discovered that our work involves motion in various directions. This includes motion of thought, in which one tries to figure out and to position, for instance, the relations between general, specific, and individual issues, as well as try to establish the links between them. This motion of thought naturally requires skill. The utilisation of skill primarily focuses on analysing and connecting, as well as on conceptual deduction and conclusions. The language with its concepts and rules is the main field of operation. All of this takes place in an abstract world that is more or less independent of time and space. This world, in other words, is the observer's world. It encompasses motion of thought consisting of deduction and induction, analysis and synthesis, in which analysis contributes to producing a theoretical summary, a synthesis.

The second form of motion took the shape of a more functional, but not yet productive activity. It formed an implication that considered what would benefit us or be an acceptable goal, and how it could be set. Or the other way round: what good or bad things have happened which led to the situation the way it is now. The motion takes place forward or backward *in time*: we form hypotheses on what has happened previously, or on how to implement the things we consider to be good. We are thus looking for realistic options and their realisations.

This is when a diagnostic deduction, *abduction*, sets a hypothesis regarding the reason for something potentially good or non-desirable. *Practical* deduction, for its part, *expresses* or *determines* a possible way of acting in order to achieve something good and desired. We are thus users who interlink the experience of use and the possibilities to improve it.

The third form of motion that we established is the one in which we accomplish something – produce the necessary output, space or situation. Here we, in a way, invite our own force (*poiesis*) and that of others into a joint process, which we believe will lead us to the determined good – and even in a beautiful way. We utilise our former experiences in

equivalent or, rather, *nearly* equivalent situations. We rely on analogous deductions (*analogos* – according to relation/in proportion to): the basic relations of a situation that we have experienced in the past appear as new variations in new situations, whose mastery is based on the identification and application of these previously experienced relations.

Each of the three approaches that we outlined – that of the observer, the user, and the producer – focuses on applying different modes of reasoning, activity, and production, in accordance with its individual nature. Their different relations to time and space are crucial in this respect. The observer aims at making general, firm observations that will remain valid everywhere and at all times.

The observer tries to discover an eternal and universal truth, i.e. to step outside of time and space, as if he/she were God watching the world events. The user, for his/her part, taking a slight distance from the location, arranges his/her thoughts and activities with regard to what good there is and what good there should be. The producer is bound to both time and location: the key issue is to bring out something good and true in a specific time and space. Typical observer's "tools" include deductive and inductive reasoning; the user focuses on diagnostic and practical positioning, and the producer on analogies and paradigms. It seems as if the observer's thoughts were moving up and down, from concrete to abstract and back, whereas the user's thoughts move backward and forward in time. The producer, instead, dovetails the then-available forces within time and location. By adapting the fourfold scheme developed by Hans Rämö (2004), we will get Table 3.

Table 3. *Positioning the modes of reasoning in relation to time and space*

	Spaceless	**Space-bound**
Timeless	Chronochoric Observer: Deduction/Induction	Chronotopic
Time-bound	Kairochoric User: Abduction/Pracduction	Kairochoric Producer: Analogy/Paradigm

(As you can see, one field in the table is not considered in this context. It ultimately focuses on economic and political theology).

The traditional question addressed to the producer and to the user – "how are things?" – is only the first question, after which the user will certainly ask about goodness and the producer about beauty. We will consequently have to delve into the question of the nature of knowledge and its sufficiency for the needs of the user and producer.

According to the classical definition, knowledge is a well-justified, true belief. It is easy for us to understand that a belief must be justified properly. How should one then understand the second requirement: it has to be *true,* truthful? We suppose that this truth is not a notification from a prophet, based on which the one being notified will know that it is truthful. Then the first thought, of course, is that the idea corresponds to a specific phenomenon, which is exactly as the belief claims. We are thus dealing with the interrelation between the concept (*logos*) and the truth. In a way, the concept offers us eyeglasses to see the truth. Here, focus is on the viewer's – observer's – knowledge. Ultimately, seeking the *whole* truth about a concept means placing oneself outside of time and space – becoming God's eye. However, here we cannot discuss whether our glasses are good or bad. We are prisoners of our language. In the observer's "universal language" (Kusch, 1989), the multiple meanings and references of concepts, *semantics*, have been ignored. This is, anyhow, not a feasible exclusion for the user and the manufacturer of a table. For them, one single concept "table" refers to various things. Indeed, they consider expressly what this concept means to them and to people in general. The user will consider the functionality of the table in relation to its use in different situations. The table manufacturer also needs skills that are based on the experience accumulated by generations of craftsmen. The manufacturer will need knowledge of *causal* relations, e.g. on how to fix a table leg: if I turn a screw clockwise, it will become tight. This is therefore not a defined *truth* but (a certain degree of) *certainty* (as, in fact, a screw can sometimes be fastened by turning it counterclockwise). This complies with the *Verum factum* principle by Giambattista Vico, a critic of the Enlightenment: the truth is not determined through observation but through production. The producer's truth is certainty. The truth is spoken about by the one who denies nature, certainty is spoken about by the one who sees nature and the world as open, and gives it room to function. (Berlin, 2000; Amoroso, 2006.)

After all, perhaps we can argue that something is true only when referring to things that we ourselves have produced – such as mathematics or logic? The truth thus refers to itself, to the interrelations between symbols in the language that we have created, which have been defined in the default settings of the language game. About everything else, such as the world or ourselves, we can say only something more or less certain: if I turn the screw clockwise, it will become tight. That is to say, these are empirical facts (*Tatsachen*) that we have produced in collaboration with nature, not independently. But this would transform our classical idea of knowledge as "a well-justified, true statement" into "a well-justified, definite statement." Consequently, we will have to reflect on the interrelations between the three forms of reason/intellect: the truthful reason (*nous theoretikos*), the expressive reason (*nous praktikos*), and the producing reason (*nous poietikos*). In order to clarify the matter, we will for a moment delve into the world of deduction from a perspective that is essential for *skill*, namely, that of the *modus ponens* rules.

In our daily activities, we use an endless number of *if-then* clauses. As a matter of fact, we utilise them continuously. Even if we do not always utter them aloud, we are usually able to express them if we are expressly asked to: "If I turn the switch on, the light will go on." Yet, we do not always know – and neither do we even need to know – what actually happens then.

Traditionally, there are three approved methods that can be used to analyse our *if-then* knowledge: *deduction*, *induction*, and *abduction*. We are often very sure about deduction. If the hypotheses are true, the conclusion is a conceptual truth or a causal certainty: the same things will always happen in similar situations. Induction implies determining a hypothesis and verifying it as reliably as possible. However, abduction is a more complex issue: in order to function, it requires that we move within time, and even backwards. The reasoning is diagnostic: we deduce what has happened previously from what can be seen now. The missing piece in this puzzle is practical syllogism, which I will call *pracduction* in this context[27].

Pracduction means moving forward in time: between a set goal and the present state, we place something that, based on our experience, will lead to the desired outcome. Let us examine these modes of reasoning in three different situations: a conceptual, operational, and actor-referring situation (see Tables 4–6).

Strictly taken, logical reasoning focuses on the interrelations of concepts – on what we have verbally, propositionally produced. Logic does not say anything about the world, only about concepts and their relations beyond time and space. However, we can carry

Table 4. *Reasoning in a conceptual situation*

	Timeless	**Starting from time**
Spaceless	Deduction A The triangle has 3 angles B This is a triangle C It therefore has 3 angles	Abduction C This now has 3 angles A A triangle has 3 angles B Would someone have made a triangle?
Starting from space	Induction B This is a triangle C It has 3 angles A Would a triangle always have 3 angles?	Pracduction C I need 3 angles A A triangle has 3 angles B Then: I'll make a triangle

[27] I am referring to practical syllogism and related broad discussion in the 1970s (see von Wright, 1966, 1971a, 1971b; also e.g. Wilenius, 1967; Volanen, 1977). Abduction and the methodology of discovery, see Paavola (2004).

out *modus ponens* reasoning also in a causal sense. Causal observation introduces the time perspective: something is there before someone else, and the same thing always happens in the same situation. In Table 4, deductive logic clearly seems to be valid.

In induction, we set a hypothesis that should be verified. In abduction, we make a diagnosis that is not necessarily correct. Pracduction opens a possibility for an eligible measure.

Within causal reasoning, abduction and pracduction are each other's half-brothers in terms of time: abduction provides a diagnosis of what has happened or presents a hypothesis for it. Pracduction, instead, sets a vision for the future, defines an *if-then* rule, sets a condition for the *if-then* clause, and believes that the set vision will be achieved in this way. Traditional pracduction reasoning is user reasoning. It does not ask where the set goal emerges from – whether its origin is logical or causal, a genius' fancy idea or God's revelation. On the other hand, practical reasoning presumes a certain power relationship in the execution. The choice of *if-then* reasoning is usually not relativised. The logic resembles a free man's, politician's, or decision-maker's logic. The person who is reasoning has freedom with regard to the goal, and supremacy with regard to the choice of measure. It thus refers to reasoning by practical intellect.

What does pracduction actually imply in the operational situation of Table 5? Is reasoning there logical, causal, or something completely different? Is the *if-then* hypothesis (A) logical or causal? Of course, one first feels that it is a causal relation perceived in practice. But on the other hand, someone has designed screw threads so that the

Table 5. *Reasoning in an operational situation*

	Timeless	**Starting from time**
Spaceless	Deduction A If a screw is turned clockwise, it will become tight B I turn the screw clockwise C The screw will become tight	Abduction C The screw is tight (t) A If the screw has been turned clockwise (t–l), the screw is tight (t) B I wonder if the screw has been turned clockwise (t–l)
Starting from space	Induction B I turn the screw clockwise C The screw becomes tight A Is it so that always when I turn clockwise, the screw becomes tight?	Pracduction C I should tighten the screw (t+l) A If the screw is turned clockwise (t), it becomes tight (t+l) B Then: I will turn the screw clockwise (t)

screw becomes tight when it is turned clockwise. There is also a conceptual connection between clockwise turning and screw tightening. Turning the screw clockwise implies that the screw becomes tight, i.e. the active/production process (*poiesis*) and the passive/activated process both refer to working, tightening. The phrase thus expresses one possibility, potential, "tightening" at work. Existence is not just being present-at-hand/ready-to-hand (*vor/zuhanden*), but being at work in a power relation to the other (*mitdasein* / *mithanden*).

What about the entire reasoning process: does the goal "tight screw" also involve turning the screw? Can turning the screw be explained with my *intention*, by the fact that I want the screw to be tight? Or is it so that, as a consequence of tightening the screw, the screw becomes tight? Is the relation thus logical or causal? Would there even be any other possibilities?

If the relation is causal, the reason and the consequence are like atoms. The reason "activates" the consequence; in other words, my intention "to make the screw tight" will "activate" my hand to turn the screw. If the relationship is logical, my conceptual *intention* regarding a tight screw will logically lead to my own deeds. Is this therefore a process of stimulus–reaction or stimulus–my deed –reaction? In both cases, we naturally may speculate or analyse long if we are just dealing with necessary but not sufficient conditions for accomplishing the result. Anyhow, I am not going to fall into this trap in this context. The presented goal, *intention*, expresses something, highlighting the goal "get tight".

In *if-then* reasoning ("tighten–turn"), the production process (*poiesis*) and the passive process both equal being-at-work (energeia). If the relation is logical, no other force is needed: tightening implies turning. Analogously, the whole conclusion goes: goal and intention, "tighten", implies turning; both of them equal being-at-work – a *synthesis*.

However, if the relation is causal, no new force is needed, either. The tightening intention is followed by the activity of turning "under the influence of natural forces", automatically. In both cases the actor, the table manufacturer, remains in a secondary role: either he/she remains the verifier of nature's cosmic demiurge or is overridden by natural laws. A third example is needed to clarify the matter (see Table 6).

What is the situation in the pracduction of Figure 4 now? The goal "I should leave" has been set, as well as the rule "when it is 4 o'clock, I leave." Both of them are set by the author him-/herself: both the goal and the rule providing the conditions for accomplishing the goal. In addition, the conclusion that "it is 4 o'clock" implies *re-interpretation*: it is not only 4 o'clock, but it is also a signal that I should leave. In this case, the actor is thus involved in all of the three elements. The actor has produced the whole situation. Or not exactly: in order to understand this reasoning, we must form an idea of why the goal "should go" has arisen. For example, your children are waiting for food at home or the doctor has not arrived at the appointment, which gives rise to the idea of leaving, as well as to its condi-

Table 6. *Reasoning in a situation referring to the actor*

	Timeless	**Starting from a time?**
Spaceless	Deduction A When it is 4 o'clock, I leave B It is 4 o'clock C I leave	Abduction C I leave A When it is 4 o'clock, I leave B Ah: it is 4 o'clock
Starting from a space?	Induction B It is 4 o'clock C I leave A Do I always leave at 4?	Pracduction C I should leave (t+l) A When it is 4 o'clock (t), I leave (t+l) B It is 4 o'clock

tions. All of these elements require that we make observations, form a rule, and interpret them in the situation. The actor has thus produced a temporally and spatially significant time-space (*kairotopic*, see Table 3). The conclusion is no longer traditional practical reasoning, *pracduction*. The situation has arisen through production: one single thing, "it is 4 o'clock", has obtained a double meaning. Something essential has obviously happened in the relation between the actor and the statement "it is 4 o'clock": a re-definition, which cannot be brought out through practical reasoning.

Let us clarify the situation with one more mode of reasoning, *production*. In order to accomplish something (*pro-ductio*) – i.e. to produce something from existing materials on the basis of our aspirations, and moreover in a beautiful way – we will have to activate forces whose force relation (*pathos/poiesis*), at its best, follows the proportions determined by beauty. In a certain sense, we can say that we are then performing *exemplary* – *esimerkillinen* in Finnish – work. What does this strange expression mean? Etymologically, esi used to refer to a plot of unharvested hay, and *merkki* to an objective, aim, or goal (Itkonen & Kulonen, 1990, 108; 1995, 160). Consequently, exemplary work produces a new relation between the objective I have defined – between the goal and the hay field. The hay field will be cut and the hay harvested but, at the same time – in addition to horses and their feed – I will produce a new *relationship* between me and the field. If after the reaping I can state "well, this went beautifully", something substantial has happened between my own "forces" (*poiesis*) and the natural forces (*pathos*) I have been faced with. I have adopted a new position in relation to the opposing forces, i.e. a new bond between me and this sunny hay field.

In German this is expressed in a slightly different way: *Beispiel* is translated as "example", but the word is constructed in a way that differs from the Finnish: in German the word refers to "*side*play"/"additional play", i.e. what we produce when we play. The Ital-

ian philosopher Giorgio Agamben has analysed the corresponding expression in Greek, *paradeigma*, defining it as "what shows itself beside" (Agamben, 2007). When our work is paradigmatic, we do not just produce an *artefact*/object, but simultaneously produce and/or renew our relation to the world in three different senses: what is, what had to be, and what came to the world. The result of the work is thus not only the product, the *artefact*, but also the *relation* that it produces or maintains. The producer thus not only produces the artefact (a product of human conception or agency) but, as a by-product, he/she also produces a relationship that contributes to changing the world.

Consequently, an *artefact*/a man-made object, is an expression of our relations to the world. However, artefacts may remain mere objects for us, as if they were *hieroglyphics*, secret drawings. If work is mere labour exploitation, paid labour in the narrow sense of the word, the auxiliary relations produced while working will not become visible at all but will, instead, remain conceptual machinery that operates unnoticed and without our contribution.

Craft just like its younger sister art, is inevitably and irrevocably linked to observation and perception. The observer's reason experiences perception as a restriction that has to be surpassed. The observer believes that he/she sees things the way they are always and everywhere, whereas the user believes in the voluntary nature and supremacy of expressing goodness and setting goals for implementation. On the other hand, the producer has to consider the situation, determine what is good, define a rule for accomplishing what has been defined as good, and re-interpret the world in relation to all three aspects. This is how truth, goodness, and beauty coincide and are defined in relation to each other. Here not only the truthfulness, goodness, and beauty of the result are significant, but also the process leading to the result. Beauty is thus a *composition* formed by the emergence of all these three aspects, which have been produced in a surprisingly smooth, rich, and gracious way. *Production* as a mode of reasoning requires that goal-setting is regarded as having an origin.

Nevertheless, this origin is not God but a conclusion determined by tradition and situation, i.e. a conclusion regarding the relation between life and what has been adopted and is possessed; a touch of: What is the situation? How are things when they are all right? How could one implement them in a beautiful way?

What is the interrelation between these questions: logical, causal or something else? There is a conceptual relation between the questions. The concept expressing deed is a consensus with regard to three relations: truth, goodness, and beauty. It also involves the causal element *if-then*, both as laws and rules, but these are also evaluated in relation to what is true, good, and beautiful. Most importantly, the concept expressed by these three values, as well as the operational horizon it opens, is evaluated as a *process* in accordance with the conditions for beauty. An action is thus not only motivated by its goal – goodness – but also by the aim to produce this goodness in a beautiful way, perceptually.

The producing reason (*nous poietikos*) and its use therefore simply require that the ancient professional *demiurge* – originally an ordinary public craftsman located in heaven or nature – be returned from the heaven of ideas, the celestial world, from being nature's cosmic actor, from intellectual cunningness, from the concept's historical work to being a part of the concept of work, as well as to being the implementer of work. Work is organised in compliance with the principles of education and culture; what has been adopted and, therefore, what is possessed, is open for life, one's own life. But that will be another story (Volanen, 2006).

End of excursion 4.

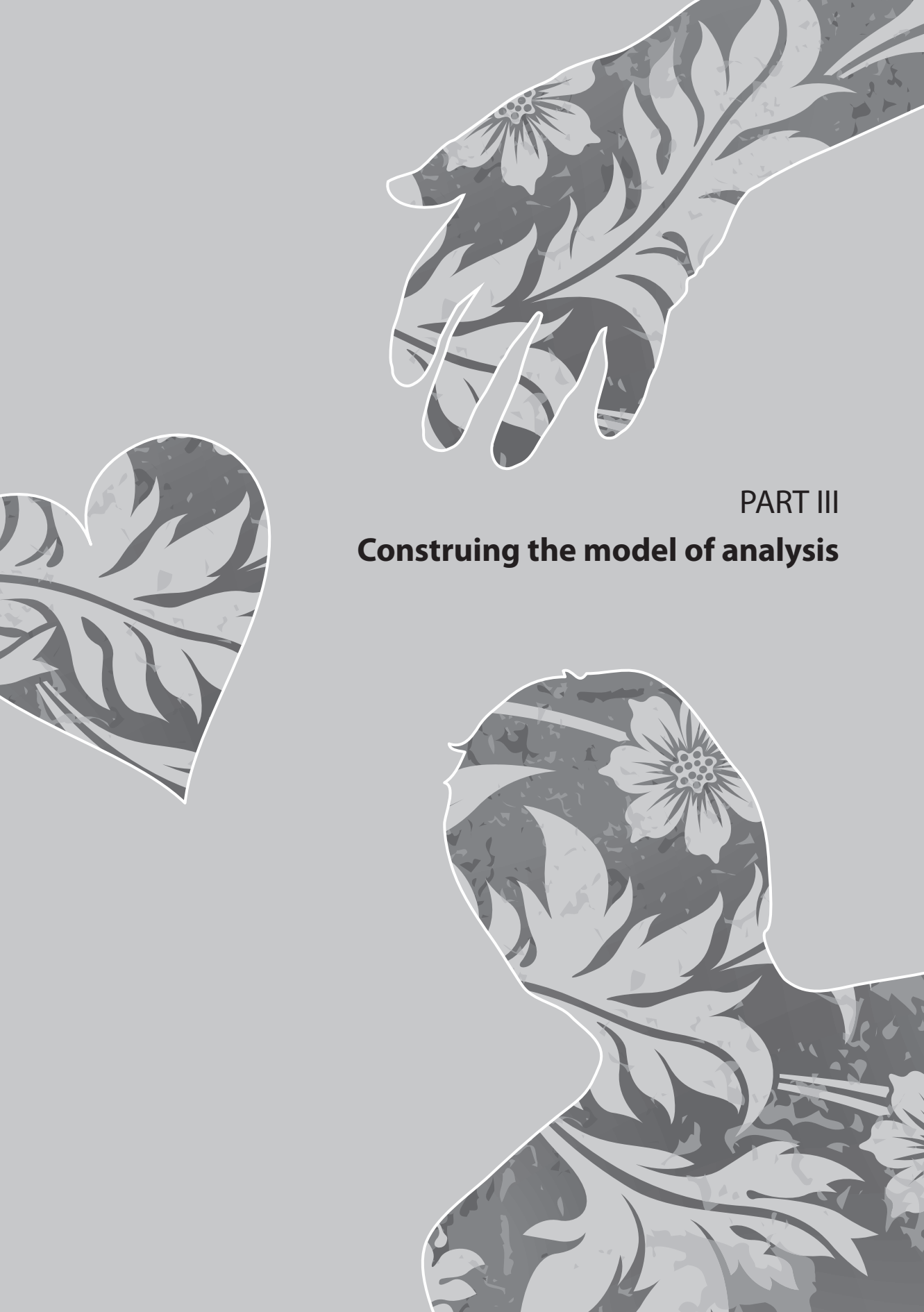
According to the excursion above, craft work as methodological mirror opens a new way to constitute the work process, as process of *pro-duction*, as a synthesis of de-, in-, ab- and pracduction. Work as productive reason gives also conceptual and practical possibilities to reconstruct the triad theoria|praxis|poiesis to overcome the division in two, i.e. liberal and vocational education.

2.8 Conclusions

We started our explorative analysis with the idea of three moments of texturing. Social individualization is the social space, the comprising three open-ended questions: How are the facts, how to do them well and how to make them nicely. In our analysis we found a neglected aspect of texturing – its relation to *poiesis*, production – and we highlighted trans-sensitiveness as an important part of human activity. The distinction between individual and individuality was then analysed, and our conclusion is that individuality is relational and has constitutional quality. This means that the social space, "the inside of the world" and socio-individuality, "the inside world", are one and the same in terms of textuality of the world.

We also found that the historical basis of *Bildung/Vocatio*-division is heavily involved in the relations between *praxis/poiesis*, work/labour, living work/ dead work. Overcoming these divisions leads to two very different kinds of social individualization processes: differentiation and inter-activity, and constitution and intra-activity. The modern solution to the Enlightenment goes with dismemberment of Being, Doing and Making, epistemics, ethics and aesthetics to the lane of differentiation and interaction. If we want to overcome the division *Bildung/Vocatio*, we have to find a new relationship between the Doing – behaving oneself, and the Making – object activity. This lane is the other one, the lane of constitution and intra-activity.

Then we made an excursion, exploring the three aspects of individualization. Interestingly, we found that the aspects we are researching have also a logical foundation in de-, in-, ab- and pracduction. The result was that *poiesis* in the field of production is an aspect of forming examples, i.e. an aspect of the very process of texturing a reality, and so the very process of social individualization.



PART III

Construing the model of analysis

3

Social individualization and psychology

3.1 Macropsychology

In the early 70s, Yrjö-Paavo Häyrynen started a research programme he called "macropsychology". His aim was to shift the pathway from traditional psychological research "microproblems", which focused on the social development of detached individuals, to the more "environmentally active" idea of human conduct. Man is "then not only a product of societal circumstances and social relations. From this mechanical point of view, one has not noticed that the thinking and experience of humankind is in active interaction with circumstances and man transforms the circumstances into a reaction/response to the influences coming from the environment..." In this description of macropsychology, Häyrynen "would include both analysis and influence: one should research the interaction between man and broad systems of circumstances, and one should be aware of the necessity of reforms." The methodology of psychology should not be only passive, a theory on "how things are", but also active, in other words, researching the changes and the terms of reversals. (Häyrynen, 1971, pp. 1–2; 1979, pp. 78–81.) Some years later Häyrynen writes that the prefixes "macro-" and "micro-" are not very clean, "even if all psychological fenomens have societal roots, expres important psychological traits themselfs in concret individies. Micropsychology is in fact a 'pseudoscience' … ." (Häyrynen & Hautamäki, 1976, pp. 124–125).

When I try to build up in the following chapter some aspects of the psychology of social individualization[28], I have the very same basic motivation as Häyrynen regarding macropsychology: acknowledging the necessity of change, making analyses and thinking in terms of reversal; that is, trying to find a methodology of reform – upper secondary education reform, in my case. This is possible only if I put myself within the tradition of psychological research and rewrite some of its very basic aspects. I agree that the prefixes "micro-" and "macro-" are not comprehensive enough to adequately address our problem. I have used the metaphor of harmonics of sound: as the composite harmonics of any sound determines the quality of that sound, so is each concrete individual a composite of the harmonics of history, with the potential to reform some composites of his/her harmonics. He or she is then a *per-son*, who has an identity via a tune.

3.2 On the problems of the cultural-historical theory of mediated and unmediated activity

There are at least two traditional interpretations of Marx readings related to questions of mediated activity. The first one, chiefly a part of sociological discussion, sees that Marx has a dogma of mediation prohibition (*Mediatisierungsverbot)*; i.e. that a "human individual can fulfil (*verwirklichen*) himself only when in his self-relations (*Beziehung*) comes nothing which is not from himself. Any mediated self-relationship is disclosing itself, according to Marx's own criteria, as alienating/alien relations" (Theunissen, 1980, p. 485; Lange, 1978; Gronow, 1984).

The other tradition, steeped in psychological discussion and research, is a position in which the mediated activity has a very central methodological status; by which I mean the tradition of cultural-historical activity theory with the founding fathers Alexander R. Luria, Lev S. Vygotsky, Aleksei N. Leontjev and followers.

There are manifold misinterpretations of Vygotsky framed by Leontjev's theory of "object activity" (see Keiler, 1999; Veresov, 1999). Vygotsky did not research activity but consciousness. The universal basis of behaviour, according to Vygotsky, is "the basic law of behaviour, the law of stimulus-reaction" (Vygotsky, 1960, p. 165 according to Budilowa, 1975, p. 123). In the case of human behaviour, there is a new form of stimulus or stimulus-tool: the sign. It transmits/mediates between the conjunction of stimulus-object and reaction. This mediation yields a new possibility for humankind, one that is not pos-

[28] In English "individualization" connotes a separation from society. I use "social individualization" in the sense of *Gesellsaftung,* with the idea that "individi" means individable, i.e. s/he is fullness, *pléroma.*

sible for other species. Using an analogy of the mediating function of tools, Vygotsky gives an Aristotelian interpretation: where tools are for re-forming the objects of activity, signs are "means of reforming (*Einwirkung*) one's – or somebody else's – mind or behaviour, and not a means of reforming the object." (Vygotsky, 1960, p. 228, according to Budilowa, 1975, p. 124.) Tools have the aim of changing something in the outer situation, whereas the function of signs is just for reforming the reaction and behaviour of man. (Budilowa, 1975, p. 124.)

The three concepts Vygotsky likes to group together are: higher psychological functions, cultural development of behaviour and mastering one's own behaviour. With mediated activities, via tools and signs we open both the inside of the world and the inside world, our cultural existence. The key to mastering one's own behaviour, to forming conscious behaviour, is the mastering of the stimulus-tool. Human behaviour is no longer dependent on the stimulus-object but rather on stimulus-tools, which are artefacts and have no direct relation to stimulus-object. This offers man a new psychological process, a new mediated way to master one's own reactions: the stimulus-tool gives the possibility of auto stimulus. The very focus of higher psychological processes is on signs and the ways in which they are put to use; i.e. in the process of mastering one's own behaviour. As "all higher psychic processes are inter-relations of social order" (Vygotsky 1960, p. 198, according to Budilowa, 1975, p. 126), via the stimulus-sign we can master our own behaviour, and this process is at the same time one of becoming conscious.

Vygotsky's methodological basic solution was then the stimulus-mediated sign behaviour. Mediation is the basic type of relationship between consciousness and environment. If there is a mediating process, there must be at least two units/systems between which the mediation takes place. Mediation is then also the explanatory principle of Vygotsky's "monistic objective method of analysis of the mind" (Veresov, 1999, p. 194).

Vygotsky tried to find a solution to the crisis of psychology during his time. There was in those days a very strong Pavlovian research tradition in the Soviet Union, and the behaviourist ideas were the starting points of research. Back then it was easy to differentiate between tools and signs, tools and languages, and to see the former as primarily outer and the latter as primarily inner aspects of the psyche. In a way, Vygotsky tried to overcome these divisions, but he was in a situation "in which saving the method (mediation, mvv) was impossible without changing the initial postulate (two systems: external, internal; mvv) and changing the initial postulate was impossible without changing the method" (Veresov, 1999, p. 226). Individual development, for Vygotsky, involves something moving from one place to another, from outside to inside, not one psychological level to another. It is Leontjev who tried to ground the organic basis of the methodological core within the theme of activity, but in doing so lost the role of language, communication; i.e. the constitution of the other and of oneself. They share the common features of a methodological

starting point of inside/outside, as well as subject and object as outsiders to each other, mediated by activity.

If we take as a reference point the development of Hegel's Spirit, it seems that Vygotsky tries to jump from the level of adaptation (*Anpassung*) to that of the development of Spirit. The whole theme of *Tätigkeit*, activity as adopting and recognising (*Aneignung*, *Anerkennung*) is out. We then have the following problem: on the one hand, the principle of stimulus-sign forms a new outside social determination of the psyche, and on the other, the same stimulus-sign formation is a means or tool with which to master the inner natural psychological functions (Budilowa, 1975, p. 128). This double function of stimulus-sign opens up a possibility for a behaviourist interpretation, i.e. social relation/structures can interiorize themselves without any active partnership with the subject. It is exactly this possibility that Leontjev tries to exract from the cultural historical theory with his idea of "object activity"[29]. The problem is that he does it in such a way that in his methodological core there is no theme of recognition of the other, no constitution of oneself, no communication or the possibility to do deeds (*Tat*). This means that Leontjev cannot, in a strict sense, discuss at all questions of social alienation. There is then not in the methodological core of Leontjev's theory the other as an independent individual or as an activity. Where Vygotsky tries to find the solution to the genesis of consciousness without the theme of activity, Leontjev tries to find the solution to the problem of psyche development without *Anerkennung*, recognising the otherness, or, the other way round, without the theme of constitution of oneself. The division outside/inside is predetermined and outside of empirical research.

3.3 A possibility to overcome the problems of the cultural-historical school

If we wish to overcome the Vygotskian solution with two dualities – internal/external, higher/lower – we have to make relative and transsensitive both these divisions. Making relative the internal/external -divisions opens also the higher/lower -differentiation and possibilities "one system" or "systemic" approaches (see Rubinstein, 1977; Veresov, 1999; Järvilehto, 1998a, 1998b).[30]

[29] The expression is often used by a young Marx, but in a very romantic way. For young Marx, a human is a man with needs. The three basic common needs, seen as fundamental to culture – do not kill your father, do not have sex with your mother and do not eat your friends; murder, incest and cannibalism; human needs, pleasures and desires – are not only categorised as stimulus-objects with the natural forces of need, pleasure or desire, but also stimulus-signs with the possibility to draw a line from concept to content.

[30] See the intense discussion of the basis of Timo Järvilehto's (1994, 1998a, b) hypothesis of "one system"; i.e. the "man-environment"-system or "systemic psychology".

In the 20th century, the very question of inside/outside, insider/outsider, "me"-ness/"other"-ness has been one of the most discussed themes of methodology in the social sciences within the realm of postmodernism. At the heart of this theme is language, not only as a looking glass or as a means of modelling, but also as a means of constructing reality, and one can even defend the constitutional role of language in the making of existence.

Actually, if we follow Vygotsky's theoretical development we can see that the explanatory concepts turns from "speech as a system of social reflexes" to "signs as meanings in human drama" and the methodology of inquiry from "analytical-objective method" to "semiotic analysis of the systemic and semantic structure of consciousness" (Silvonen, 2010, p. 185, see table 7). Vygotsky's methafora "human drama" breaks down the earlier image of "internalisation" (*Verinnerlichung*). This Vygotsky's third epistemological solution opens the relation of subject and the context on an undeterministic basis: How I constitute myself with other subjects and my-self is now mediated via context. "I cannot approach the others if I don't make it via my surroundings, via *my* world … The others in our conrete social reality constitute my relations and self-relations, and set me in a special constellations of movingness and engagement with them. Also the very act of understanding and self-awareness is activity with relations (*relationale Handlung*), a drama – the word used by Vygotsky. We can understand the others as actors only in a spesical social space" (Papadopoulos, 2010, pp. 322–323). During the days of Vygotsky this position easily opens the possibility of narrow down the very context of the drama into culture: content of human drama = culture.

Table 7. *The development of Vygotsky's theory of signs as semiotic mediators (CHP=cultural-historical psychology, EB= epistemological break) (Silvonen, 2010)*

	Socio-behaviourism		**Early CHP**		**Late CHP**
Explanatory concepts	Speech as a system of social reflexes	Mediated activity, EB one	Signs as instruments, psychological tools	Semiotic Mediation, EB 2?	Signs as meanings in human drama
Methodology of inquiry	Analytical objective method		Instrumental method of double stimulation		Semiotic analysis of the systemic and semantic structure of consciousness

The word "drama" comes from Latin *drama* "play, drama," and from Greek *drama* (gen. *dramatos*) "play, action, deed," from *dran* "to do, act, perform", especially some great deed, whether good or bad, from Proto-Indo-European **dere-* "to work" (Harper, 2010). In contrast to Vygotsky's time, these days our post-industrial tools and machines run with languages, and languages need machines to survive, and moreover, languages have become an essential part of industrial production. It is no longer possible to clearly differentiate between tools and signs, or between machines and languages. The relation of the higher psyche to signs and the lower psyche to tools is overlapping more and more, which means that, at the same time, we can discover even fuzzier relations between the internal and the external: we have nowadays thinking hands and handy thinking in our workprocess. Drama is not anymore a question of a play on the scene but the very situation of work.

To help understand this very crucial point, it is perhaps better to make a very formal but illustrative cross table with 2 x 2 classifications.[31] In our perception of any situation, there are at least three moments: the content, concept and context.[32] We can have two basic attitudes: On the one hand, the material, object(ive)/*Gegenstand* of perception is dominant in forming the content with concepts within a context; that is, a concept can make a true reference to one and only one content, independent of context. We see language as a universal medium. On the other hand, we can see concepts in expressing contents as the dominant moment in the results of perception: we can make a reference with one concept to a number of different contents depending on our context. This is the main idea of model theory: language is a calculus (see Kusch, 1989; Kusch & Hintikka 1988).

We can open this first twofold division into four if we take into consideration the horizon of time. We can put the differentiation in a very simple but heavily formal way: either -(-A)=A or -(-A)≠A; i.e. either we think that things simply are or are not, *or* they are in a process of changing over time. We can then develop Table 8.

The looking-glass theory (A) is tightly intertwined with content, so tightly that we cannot discuss the qualities of our glasses; there are no semantics in the strongest sense of the word at all. The model theory (C) is more distant to the content. Any symbol can make reference to many things. The main interest lies in the relations between these symbols. The classical German philosophy (B) tried to open the Pandora's box of semantics with the idea of historical development. However, in this conception, there is – often – a

[31] Here I combine Martin Kusch's and Gotthard Günther's work. Kusch has made significant attempts to find out the roles of language in science (Kusch, 1989; Kusch & Hintikka 1988), in seeing how things are. One aspect of Günther's extensive work is investigating how to formalise natural-historical development within the dialectical tradition, development as an organic, and thus hierarchical, process (Günther, 1959).

[32] Here I mean con-tent (keep together), con-cept (with the intake), con-text (with the text or knitted together)

Table 8. *Four ideas of language*

Dominant aspect	The observer out of context -(-A)=A	 in context -(-A)≠A
Content	A Language as universal medium	B Language as indicator of nature-historical development
Concept	C Language as calculus	D Language as means of design

supposition of an organic and thus hierarchical process of history towards more and more concrete and general concepts. In postmodern thinking (D), we lose touch with the content and we are only interested in the process of making concepts. The transition from one concept to another is no longer hierarchical but instead connective, a form of networking. To an increasing extent, we are embedding new aspects within the concepts via glossing over the contexts. We are not, actually, making but doing information and there is always a tendency to lose touch with the content.

Are there any possibilities other than these four? Could we be in touch with content via concepts in some contexts without commitment to an organic, hierarchical process of development: can we combine language as a means of design with a touch of content? I think there is – at least – one possibility: the constitutional approach (Hardt & Negri, 1994; Krahl, 1971; Gorz, 2004; Papadopoulos, 2010; Shukaitis, Graeber & Biddle, 2007). My thesis is that the constitution of any situation means "do-making", a minor deed (*un acte petit*)[33] of what is outside and what is inside, the otherness and innerness. To "do" the outsiders means doing the insiders *and* making, i.e. mediating on the self/other-relation. It refers to the constitution of the circle of the inside world/inside of the world. The constitution is a process of informing con- and disjunctions of contents via concepts in context. Contents are formed in the very relations. There is no content outside of the relation; the relation has be done and make. It is both material and conceptual. Do-making is not interactivity *between* contents, concepts and contexts, but *intra-activity* (Barad, 1998) within the three. There is no fixed being of content before setting up concepts and contexts.

There is no need to make an absolute division between the inside and outside; it is a matter of forming experiences. Likewise with the higher and lower psychological functions:

[33] This deed is, in a way, psychologically analogous to Pierre Bourdieu's minor distinctions.

tools are also signs and signs are also tools. Using any tool, such as a hammer or a potter's wheel, is as much informing the senses/meanings as using any signs and vice versa. The use of symbols and signs yields a possibility to sense the fullness of touch to content, to the materiality of activity if the relation to the object(ive) is not only symbolic or mimetic but there is the touch of phantasmatic[34] impresence, i.e. we can learn by making.

We are then not in the situation proposed by Leontjev (1977):

subject – mediating activity (tool/sign) – object

in which case the subject is an outsider to the activity and to the object of activity. In reality, the situation for the activity is constituted via the inside/outside-relations between all three elements, subject, activity and object.

The constitution of the situation of activity does not refer to outside relations to the object only via the mediating weapons, tools or signs, but the subject must constitute – one way or another – inside/outside-relations to the object. This is the very basis of mediating activity.

3.4 Activity and behaving oneself

There has long been a debate on activity and behaviour: which one is the more universal and more fundamental aspect of human acts (Rubinstein, 1977; Ananjew, 1974; Riedel, 1976)? The ability to behave oneself (*sich verhalten können*) we can see as a very fundamental feature of life; we can even qualify 'life' using this quality. On the other hand, activity is a very fundamental starting point of the modern era, i.e. the question of life is not a question of being/non-being (essence as such) but a question of existence: to exist means to be active, one exists via activity via the otherness (Riedel, 1976). The constitution of a situation is always socially charged, it is the dis- and conjunction of social relationships, informing a concept. The situation is formed *via* the other and otherness via the individual, i.e. the process is not socialization or individualization but rather social individualization.

Psychologically, we have a constitutive process via two moments of minor human deeds: behaviour/behaving oneself (*Verhalten/sich verhalten können*) and activity/object activity (*tätig sein/gegenständliche Tätigkeit*). We can say that we *do* our behavior but we *make* our activity with or without a mediating mutual constitution of the self/the other-relation.

[34] Phantasma=light

The doing makes an impression on the setting up and the making of the object(ive)s (see Table 9).

Table 9. *The relations between activity and behavior*

Moment of minor deed	organ mediated	self/other-mediated
doing	**Behaviour** ***Verhalten***	**Behave oneself** ***sich verhalten zu***
making	**Activity** ***tätig sein***	**object(ive) activity** ***gegenständliche Tätigkeit***

We have the following three steps. First: Vygotsky's transition from stimulus-object to stimulus-tool is the transition from behaviour to behaving oneself. In other words, we open with the stimulus-sign the world of the inside or the inside of the world, which is the same thing. To be able to behave oneself means the possibility of *doing* the line between inside/outside, insider/outsider, "me"-ness/otherness, doing the inside of the world, the world of meanings/senses. Doing the concept, the construction of a concept, opens a contingent situation, i.e. a possibility of constitution, making the content, forming the deep surface between the inside/outside, inside of the world and the world inside.

Second: When we have a discussion under terms of activity/object activity, we are saying that to make is to produce the inside of the world, the process of making always has a content, an object(ive)s to work with, and it is exactly those object(ive)s which inform the inside/outside textures.

Third: to have a constitutional process of social individualization one must have both of these elements in the process of minor deeds: we have activities with object(ive)s in behaving ourselves; or other way round, we behave ourselves with object(ive) activity. This process is social individualization or, in other words, texturing one's own situation. This process is cultural and historical – of course – but the cultural is not only mimetic participation on the otherness, on re-representation which is not here and now. It is historical not only because of the use of the tools and signs but also because of the forms of institutional reproducing situations: e.g. *labour* is the modern form of the work situation.

From the constitutional point of view, the means of development cannot be Vygotskian – *mediating* between two systems – but instead *enriching* one system, the inside of the world/the world inside; constitution of individuality by the making/production of the self

via otherness and others, texturing a content via concepts within a context. The explanatory principle of social individualization is then not (psychological) internalization or (sociological) functional differentiations, but orientative fusion/synthesis with the world; forming the sense fullness of touch of the situations with three very basic questions, open all together and all the time: How are the facts? How should the facts do to do good? How can we make them do good nicely/beautifully? The richer, i.e. freer, this developmental process of social individualization is, the more possibilities, i.e., freedom, are available to everyone.

• *Excursion 5: The question of media(ting) in activity theory*

Two key researchers behind the development of activity theory, Yrjö Engeström and Georg Rückriem, have both recently addressed the problem of mediation involved in the development of activity theory (Engeström, 1999; Rückriem, 2003). Engeström solves the problem of mediation by adding mediations between mediations but does not, in this context, engage in any more general questioning concerning the fundamental philosophical nature of the concept of activity.

The concept of activity is used in at least two comparatively different senses. Activity (*Tätigkeit, energeia*) has, particularly in the modern period, developed into an ontologising concept; that is, activity is a precondition of existence. Understood in this sense, the concept of activity is much used, in both very mundane and very philosophical contexts, as a serviceable general concept.

On the other hand, the epistemological aspect of the concept of activity – that is to say, object-oriented activity – never assigns advance qualities to that which is to be its object; instead, any attributes emerge only *after* the relevant activity has been completed: if activity involves reshaping the object, for example by using a tool, the object *informs* the agent, in one way or another, about its resistance. The object is recognised/identified only after the activity. This feedback, which remained in many respects hidden from classical philosophy, opens up a possibility of gaining an understanding of the *civilising* essence of craft work. Moreover, this is an understanding lacking also in the modern philosophy of the Enlightenment and, thus, in industrial labour and often also among those studying it.

In Hegelian terms, the concept of object-oriented activity is a phenomenological rather than psychological notion. The concept of activity finds its psychological counterpart in behaviour or disposition (*sich verhalten/lassen können*).[35] Here the thing that serves as the object – that stands before (*Gegenstand*) – is given *in advance* some characteristic and

[35] Thus, this is not a behaviourist S-R interpretation of human behaviour but a perspective revolving around "behaving oneself", a concern with our ability and willingness to behave ourselves. On the mutual relationship between behaviour and activity see e.g. Riedel (1976); Rubinstein (1977).

feature that then becomes the focus of activity. Accordingly, when we rewrite mediating activity we are defining the relationship between behaviour and activity.

In psychological terms, the concept of mediating activity presupposes at least three elements: two elements with a third mediating between them. Vygotsky equated this mediating factor with the word (in a verbal sense) or the tool; Leontjev with activity: subject – activity – object. However, mediating activity conceived as that which makes human mental activity possible left Vygotsky facing a formidable methodological dilemma: the logical structure of mediation alone divides the mental in two, into something that serves as the source and something that serves as the target of mediation. This was against Vygotsky's endeavour to present human mental development as a process of unity. Leontjev inherits the same problem: the agent and the object of the agent's activity have an external relationship with the activity and with each other.

Rückriem (2003) has grasped the limitation and problem involved in the concept of activity. He would like to break away from the cultural-historical school's basic image of "tool" as the factor that mediates activity and reground the discussion, instead, in the Luhmannian systems theory and the theory of the mass media by suggesting "the media" as the mediating factor. His concept of the media is a very strong one, possibly too strong. He even wonders whether new information technology is the *media* that will open up our whole age and its challenges as a research subject.

Rückriem asks also another question: given that Leontjev sees the relationship between the human being and the world as mediated by activity, is communication basically a form of activity or something quite different? In Luhmannian systems theory, it is the process by which individual life is constituted as meaningful. It drives us to communicate and form shared and mutually agreed meanings to serve as materials from which we construct our life. Thus, social meanings are not objective facts to be assimilated through activity but facts that are in principle open, contingent, coincidental: For the system-subject, the communication process is about simplifying one's environment, about abstraction, with a view to helping one master one's own life, not about conceptualising a complex reality. Facts do not open up to their author as something made (*Tatsachen*); instead, the external world remains something that has been ripped away from its author, something that is abstract. The system-subject ontologises the world and simultaneously themselves as separate but interacting, communicating elements, which shuts out the possibility of constituting a shared sphere of making.[36]

This brings us to the key question: are interpreting the world, the process of communication, and changing the world, the process of activity, separate, as is assumed in Luhman-

[36] My interpretations of the Luhmannian systems theory have been influenced by, among other writers, Peters (1987, 2001); Kurz (2004), Knudsen (2006).

nian systems theory and as Rückriem argues activity theory should also assume? Rephrased in psychological terms this question becomes: are interpreting the world, *behaviour*, and changing the world, *object-oriented activity*, two different processes?

Culturally, as a fruit of the philosophy of the Enlightenment, we are under particularly great pressure to generate this split. We can even say that the first Industrial Revolution split the central moments of craft work apart, turning them into opposites: it splintered from craft work *theoria* (Being) and *praxis* (Doing) and the main part of poiesis (aesthetics), reducing wage labour to the use of physical force, the labour force. On the flip side of this, science and scholarship, politics, and the arts all acquired, in nation states, corresponding institutions, which became the loci of externally conducted research into and externally administered protection of labour – which led to, among other things, the emergence of scientific methodologies of work research such as Taylorism, humanistic work research and, more recently, the concept of theoretically mastered work. It led also to the emergence of poor relief and – with time – the welfare state. Further, in the course of time there evolved a massive and relatively independent machinery for the production of meanings.

Can we still today accept this object or thing of thought (*Gedankending*, Marx), that is, the real abstraction adopted by the first modern concerning wage labour and its consequences, as a starting point of work research and work development? As far as I can see, the answer is no.

It ceased to be an acceptable starting point when the external relationship between the machine and language became intertwined into a single system, *a texture*, in which it is no longer possible to make an unambiguous distinction between communication and activity. Accordingly, work today is, increasingly often, communicative activity or activity-oriented communication. Meaning production is no less an industry than is the production of artefacts, themselves invariably carriers of a varying weight of meanings. Thus, we are not speaking about a difference between meanings carried by language and meanings mediated by artefacts but – to put it briefly – of a power relation: how much time and social space do we as employees, citizens, consumers, fathers, mothers and children have to ourselves produce, diversify, enrich, in other words individualise and localise produced artefacts/meanings; and this not only outside working hours but also and in particular precisely when we are at work? It is this process of individualisation and localisation that is the process par excellence in which the mental and the social are born: individualisation is about the production of the social.

In psychology, the relationship between communicative activity or activity-oriented communication translates into an endeavour to define the relationship between activity and behaviour (*sich verhalten/lassen können*). This is a question of the relationship between form (behaviour) and content (object-oriented activity). This is true under the assumption that communication and activity are understood as different power relations vis-à-vis the

object. Communication recognises (*Anerkennung*) – in principle – beforehand the relative independence of the object, while in activity it is only retrospectively that we can form an idea of the object's own character (*Aneignung*).[37] A deed (*Tat*) is a fundamental act that determines the relationship between behaviour and activity by constituting a social time/space locus that brings together the agent and the object. Thus, mediation is not something to be got over and done with but, instead, a setting for enriching constitution, for the construction of a social time/space locus.

End of excursion 5.

How does the social open out to the expert, the modern craftsperson? Experts are not, of course, given assignments, nor do they get their hands dirty except in a metaphorical sense. The expert sets out to generate a sphere of activity that encompasses him- or herself and the object of his or her work. This act of constitution, this sphere of activity thus established, is a social space that makes it possible to frame and solve the three questions mentioned above. Thus, activity is not about transferring something through the medium of something else but about an act of constitution, about the construction of a space/sphere of activity. This sphere is a mediating space. And this constitutive act takes place every time work starts. When going to work or starting a new spell of work, every employee asks: How do they do things here? What is it that you are supposed to get done? What's the way to get it done beautifully?

Thus, occupational craft is a *constitutive* craft. This craft creates also the methodological field map providing the framework within which the three questions will be asked. It is these questions and the answers given to them that generate and shape the shared sphere, a social space for learning and activity which defines the basic character of the subject, the object and the mediating process alike. That is, it defines the content of the work. This is basically a matter of scale: every work situation involves, in one way or another, along one scale or another, all the three questions mentioned above. The challenge involved in work lies in the question of how far it is possible to clear away, while going about a job, "dead work" and social fixations by drawing on "living work".

Even if work tasks must be carried out according to a particular schedule, maybe even here and now, it is possible to frame the questions in a rich and concrete manner; in other

[37] I have here in my mind, as a heuristic tool, the different stages of the development of Hegel's subjective spirit – *adaptation* (*Anpassung,* anthropology), *assimilation* (*Aneignung,* the start of phenomenology), *recognition* (*Anerkennung,* the end of phenomenology), and *development* (*Entwicklung*, psychology). Vygotsky's concept of mediating activity means a jump straight from anthropology to psychology, with the result that it becomes impossible to overcome the duality of the theory (internal/external, high-level/primitive psychological processes) (see Veresov, 1999; Keiler, 1999). Leontjev's theory moves within a phenomenological circle (object-oriented activity and assimilation); its methodological core has nothing to say about recognising another human being or, hence, about language.

words, they are used to reveal as fully as possible what factors are *referentially* present within the *immediate* range of the sphere of activity (that is, what is the relevant description, *theoria*), what is there *in representation* (that is, what is the relevant value judgment, the conception of a good outcome; what does it represent, *praxis*), how could the outcome be brought about beautifully (*poiesis*).

This presupposes that work embraces – at its best – three different modes: productive *idleness*; exploratory, defining *play* and beautiful *production*. Each has its own characteristic rhythm and temporality, porosity and liveliness. Making that is concrete, making on a human scale, depends centrally on how skilfully the mutual relationships between these three temporalities are organised and what is the scale on which, in terms of both time and space, the three basic questions are framed and solved.

3.5 Intermediate conclusions

What is then the status of mediated activity in psychological and sociological research? Marx's *Mediatisierungsverbot*, from the constitutional point of view, is well grounded. If the constitution of oneself is not something which is transferred from one place to the next, from hands to heads or one person to another, but a process of mutual enrichment, then everything, which mediating activity only interiorizes, is something alien. From the constitutional point of view, the object activity does not transfer something from one place to another, but enriches both the maker and the object(ive) if and only if there is mutual recognition of each other.

3.6 Sociology as a science of individuality

We have come in our analysis to the very border of psychology and sociology. As a result of the analysis, the main objective of (macro)psychology is the constitutionality of social individualization. If we look at the history of sociology from this quite narrow point of view, we find that sociology has changed its approach to suit the direction of individualization in at least two different ways. The individual doings and makings are no longer something contingent upon or pale functions of social institutions. And the doings and makings of individuals are not simple relations between institutions and individuals, but they are constructed via the self-relation of individuals, i.e. there is a relation between *sich verhalten können*/object activity, inside the world and the world inside and institutions (see Table 10).

Table 10. *On the theoretical position of the constitutive approach (based on Schroer, 2000, 13; my reconstruction)*

Constitution / **Attitude**	**Individuals with institutions: Ideal individuals**	**Institutions with individuals: Ideal society**	**Via otherness self-related Individuals: Ideal process**	**The moments of the developmental process**
Negative individualization: threatened individual: destroying the being	WEBER Heroic individual	HORKHEIMER/ ADORNO Liquidated individual	FOUCAULT Disciplined individual	Behave oneself *(Sich verhalten)* inside/with form/ habit
Positive individualization: threatening individual: constructing the being	DURKHEIM Anomic individuals	PARSONS Integrated individuals	LUHMANN Functional individuals	Active Being *(Tätig sein)* inside form/industry
Ambivalent individualization: Individual with risks: constructing the process	SIMMEL Divided individuals	ELIAS Civilised individuals	BECK Flexible individuals	*Tätig sich verhaten*/doing the form for oneself
Constitutive individualization: Individual producing the sensefullness of touch	FREUD?	VYGOTSKY/ LEONTIEV Internalising individuals	Constitutive individuals	*Verhalten sich tätig*/making the content to form.
The main line of the process of individualization	Inside out	Outside in	Inside/ outside, transsensitive-ness: constitution of one's situation	

I see, then, "*constitutive individuals*" as individuals who via self-conductive activity constitute their own situation producing the sensefulness of touch with transsensitiveness. Let's take a naïve example: in Christmastime every little child is absolutely sure that Santa Claus is a real thing. Some years later, however, they are just as sure that Santa Claus is a complete fabrication. But then after a few more years, as young adults, Santa Claus is again a real thing to them, though in a very special sense: The real thing is now the *Beispiel*, the social play around the Santa Claus. A play, which one has to learn to see and form one's own personal relation to its social "hieroglyphic" texture while, at the same time, (re)producing it.

I do not have the opportunity to discuss in detail the entire table in this work, but instead I will focus on the ideas of Ulrich Beck in order to discover a new horizon between (macro)psychology and sociology.

Modern times gave rise to modern science, psychology and sociology. When asked "What is modernisation?", sociology responds with: social differentiation (Heiskala 1995). While pre-sociologists Marx and Smith discussed the division of work and its influence on the efficiency of production and covered exploitation of the labourer, later sociologists wondered how society was possible at all, what are its bounds, or what comprises the glue that holds together the different spheres within a society?

This idea of differentiation was further expanded with Jean-François Lyotard's *"La Condition postmoderne: Rapport sur le savoir"* (1979, transl. *The Postmodern Condition: A Report on Knowledge,* 1984), which shifted the discussion from social structures to the story of the cultural formation of identity. The phrase modern times refers to the metaphysics of the great story of the Enlightenment, science and progress, which offers local short stories and knowledge, and individual experiences. We have the sickness (Noro, 1989) of uniformity, and not only of fragmentation, in modern times. There is then an element of disclosure in modernisation, not only continuous happenings and openings, producing differentiation. This is in strong contradiction against the modern enlightened self-image.

Beck responds by presenting an individualization hypothesis in his famous book "Risk Society" (Beck, 1986, eng. 1992), and later a reformulation of it in *Kinder der Freiheit*, Children of Freedom (Beck, 1997). Beck's solution is in a way very simple: He combines the traditional sociological and structural approach with Lyotard's idea of cultural histories. We have then two states of modernisation: the first one with social classes and traditions, and the second in the form of a welfare state, which produce secondary institutions, the labour market, education, social care and so on, the aims of which are *dis*-embedding the young ones from the traditions of social classes and *re*-embedding them in two ways: in the traditions of state society, the basis of which is – at least in Nordic countries – (social) science and Enlightenment and leaving them under the forces of markets, the labour and commodity markets, and later on, the education market. "Both dis-embedding and re-embedding … do not occur by chance, nor individually, nor voluntarily, nor through diverse types of historical conditions, but rather all at once and under the general conditions of the welfare state in developed industrial society, as they have been developed since 1960 in many Western industrial countries." (Beck, 1994, p. 196.)

We can understand the freeing or uprooting of the young people as *ende der Individuum* (uniformity) of traditions or as a birth of *Individualität ohne ende* (differentiation). "Individualization" means the dis-embedding and then the re-embedding of the ways of life of industrial society, in which the individuals must produce, stage and cobble together their biographies themselves. Thus the term "individualization" arises. (Beck, 1994, p. 196.)

The main task of the educational system of the second modern period was the process of dis-embedding oneself from the habits or traditions of one's own class and culture and then re-embedding into the great story of progress, Enlightenment and state society. The schooling outside of schools – street, market, and later on the media – has also had a strong dis-embedding impact. For each, the logic was the same: mass individualization.

The uniformity of students in comprehensive school is actually a process of individualization without the tradition of society, but with the new tradition of the social state and the great story of Enlightenment and progress of science. What seems to be in the eyes of tradition and culture a uniformity of the young generation is in the eyes of the welfare state a question of liberation, open possibilities for everyone with the hope of social progress, science and enlightenment, a process of individualization.

This solution has produced its own side effects which have turned into the main problem of our time and erode from within the basis of the solution, the trust in the great stories and enlightenment. Then we can give only the space of voidness to the young generation. The sociological process of individualization is no longer a psychological process of identification but one of non-identification (Beck, 1997).

Beck sees the relation between social structures and the individual without tradition or culture as the mediating factor. His mediating factor is abstract: the feeling of risk. He is then able to make a very strong break between the first and the second moderns: the cultures of social classes do not transfer to the structures of social institutions. The new form of culture is risks, which must be calculated individually.

To make his idea more concrete, Beck proposed an idea of "self-culture" (Beck, 1997, p. 183): "The double meaning of the mutual recognition of the self (its indefinite, indefinable conflicts, crisis and developmental possibilities) which open and bind the bindings of self-orientation.... Self-culture … characterizes the force and lust of managing one's own uncertain life and determining others' own kinds of life." As a solution to the two cultures of the first industrial society – proletarian and bourgeous – self-culture is not a generalised, middle class society, but a cultural hybrid of different social circles. One of its basic values is "own time and own space" with a strong consciousness of freedom and self-organisational attitude, as a result of the self-managed circles with politics and society. This "my life"-circle in a way forms a third sector, the active trust, and not *con*-sensus but *di*-sensus. Self-culture depends on the recognition of "my life" in a cosmopolitical world. On the other hand, this is "One's own life, one's own misery – this is the crucifixion of self-consciousness." (Beck, 1997, p. 188.)

Beck uses wire rope as a metaphor: "everybody tries – under constant risk of crash, with more or less self-induced self-consciousness – to master one's own life... We can identify in society the "wire rope" as the binding, its high tension, attractive artificiality and angst tied in every bounce and collapse of them" (Beck, 1997, p. 196).

When Beck sees the consequences of the second modern solution as a central problem, he also takes at least two steps outside the classic form of enlightenment: First, the border between culture and nature is blurred, giving rise to a new phenomenon, hybrids, as termed by Bruno Latour, which arise from the interaction between culture and nature. Second, the process of individualisation with the starting point of empty place and the process model of non-identity are also outside enlightenment. Actually, the possibility of non-identity opens the realm of hybrids. Beck tries to find with these steps a psychological basis for his theory, but the psychology is only an empty place and a non-identity, something which is contingent and occasional. Beck states that we are doing/making not the place but the pathway, but he does not say much about the paths along which we walk and the themes that open the paths to us. If there is psychology in his theory at all, it is only *sich verhalten zu*, doing "the empty places" and "non-identity" without making the object of activities, i.e. motifs.

To be able to overcome this theoretical problem we need to make one basic statement: Psychologically, there can be no empty places or non-identity. Beck perpetuates in his theory the traditional sin that besets sociologists, which has its very foundation in the tradition of viewing a person as a role or mask, as some kind of loose skin to be chanced upon and donned in various situations. This sociological fixation easily closes out psychological themes from sociological discussions. From a psychological point of view, a person is not a social mask but *per-son* – stemming from *personare*, along with sound. This means, metaphorically, the identity, i.e. the social individuality is to be heard. This means that social individuality can be sensed as a voice, as a rich texture of tunes. The constitution of each person's own situation is a process of enrichment, of continuous doing inside/outside the deep surface, of sensefullness of touch in life-sessions. There is never an empty place but a making with the materials of the world. The constitution of social individuality, inside the world and the inside world, is one comprising three motifs open at the same time all the time: epistemic, ethical and aesthetical motifs.

To expand the (macro)psychological horizon, we still must take two steps forward (see Table 10): one from Vygotsky and one from Ulrich Beck. The first step: We see the minor deeds as relations between "behave oneself"/ "object(ive) activity", as the constitution of the self/other-relation via the others, and at the same time, as the recognition of the otherness. The second: we have to take a step away from Beck to understand the content, the materiality of activity, it cannot be abstract risk or contingence. Individuality is always constituted by the individual via otherness, do-making the texture of in/outside. Individuality is situated in social generality (*allgemein*) and general sociality and is done-make by individuals. Situated social generality exists through minor deeds of individuals and social individuality exists only through major deeds in social generality, i.e. in publicity.

In order to continue, we must make a little historical excursion to psychology.

• *Excursion 6: Forming a science out of psychology*

During the early decades of the last century there was intense discussion of the crisis of psychology. One of the main themes was an anti-psychology attitude, a struggle against "psychologism" in philosophy and sociology. It was this very discussion that formed the (first) modern psychological science, its aims, objectives and the subject of research (see e.g. Kusch, 1995, 1999). The first steps toward the empirical science called "psychology" are deeply embedded in the struggle to find this unsubstantial, un-metaphysical basis for philosophy. Ironically, this philosophical discourse established the base for later discussion of second, late or postmodernism. (Danziger, 1990).

The construction of the subject/object relation for modern psychology was at the very core of the formation of the discipline's own philosophical basis and its independence as a science. As is evident, the handcraft work lost its potentiality to *Bildung* during the Industrial Revolution. Work was broken down to labour. The questions of truth, beauty and goodness were abstracted from the work process and translated into questions of science, fine arts and policy within the nation state. From that position, science began to research the work process and industrial society as a whole. The birth of the science called psychology as an expression of the needs of the (first) modern time, of the needs of classification, handling and control, for example – in our case, the transition from school to work. This approach is only in a narrow sense psychological. We can reconstruct in theoretical concepts only limited activities of our research objects, but the subjectivity or "generalised competence of activity" of the subjects we cannot open with this approach. (Holzkamp, 1983, pp. 531–532.)

Psychology of the first modern time was essentially the result of the "great transformation" (*Polanyi*) to modern society. This means that the empiria of the new science of psychology comprises not bold data but facts. Empiria is constructed in this modernisation process via the new status and institutions of science. The essential process of the first modern time, the process of forming national labour markets and labour-based work processes, meant that the old idea of craft with its three basic questions – how things are (saying/being, theory, episthemology/ontology), how things should be (doing, praxis, ethics) and how to bring them forth (making, poiesis, aesthetics) – was broken down. The questions of theoria, ethics and aesthetics were transformed outside the work process inside new institutions, science, nation states and fine arts. Robert B. Gordon and Patrick M. Malone write about this in their book "The Texture of Industry" as follows:

> A central part of artisans' skill is the capacity to carry out complex, industrial processes in the face of incomplete understanding and incomplete information on which to base decisions. In puddling iron (the principal nineteenth-century method of converting pig iron to wrought iron),

> decisions had to be made about the temperatures to be used, the rate of charging the pig iron into the furnace, the type and amount of fettling (oxidizing agent), and the amount of slag to be drawn off. The puddler had no instruments to read and no analyses of the raw materials; the progress of the process and the quality of the product had to be judged through subtle indications conveyed by sight, sound, smell, and touch.
>
> Artisans' work skills can be thought of as a mix of different proportions of four components: dexterity, judgment, planning, and resourcefulness. In addition to the ability to manipulate objects, as measured in standard psychological tests, artisans' dexterity skills include the capacity, learned by practice and experience, to manipulate tools and machines so that they will produce work of superior quality. The dexterity achieved by the artisans who shape materials is directly visible in the artifacts they make through features such as smooth, continuous curves, flat surfaces, right angles at corners, and good finish. While such features may be aesthetically pleasing, there is also a functional basis for the standards of workmanship used to judge mechanical dexterity; smooth curves and the absence of deep tool marks reduce the stress concentrations that are a common cause of cracks in the metal parts of mechanisms. Superior workmanship is a manifestation of an understanding of the properties of materials that was shared by artisans and artists but not achieved by materials scientists until well into the twentieth century. It is curious that this deeper understanding of craftsmanship has been widely rejected by many practitioners of the fine arts today. (Gordon & Malone, 1994, p. 39.)

Under the terms of first modern time, under the rising industrial society, after the abstraction of work to labour – i.e. the translation of the questions of truth, beauty and goodness to questions of science, social science and fine arts – after the institutionalization of science and art to part of the nation state, after forming the idea of empirical research and its object, after seeing from this position the industrialization process as a problem of differentiation, and after the construction of the theoretical idea of "structure" as a principle of explanation, the question of human activity opens itself as one's behaviour in the sense of behaviourism under the structures *or* as activity with the previously established structures, as adaption *or* – in the more positive case – as an adoption of the social structures.

The philosophical discussion of late, second or postmodernity has its roots in the first decades of the 19th century. There was a call back "to the things themselves" and the starting point was the concept of experience. We can identify at least four basic concepts of experience (Feenberg, 1999): experience as an epistemological foundation; as life (*Erlebnis*); as *Bildung;* and as an ontological foundation.

The first one, the epistemological foundation or "empiricist idea of experience as the basis of knowledge versus dogma", is linked to scientific and technological modernity. It refers to access to knowledge and to power over nature. Experience is "real" or counted only if it is shared and measurable, i.e. data without any "subjective" dimensions. The second concept of experience is a more romantic conception: experience as life – *Erlebnis* – even

as a "stream of consciousness", experienced experience, "not sensation as object of thought but feeling comes to exemplify experience". (Feenberg, 1999.)

Experience as *Bildung* introduces temporality and the self-constituting interactive process of the construction of the subject itself. Experience is a process the subject undergoes rather than a sensation or datum it receives. Here we have Hegel and his four forms of development of *Geist*/Spirit: *Anpassung* (anthropology), *Aneignung, Anerkennung* (phenomenology), *Entwicklung* (psychology). The expression often used in modern activity psychology – "object activity" (*Gegenständliche Tätigkeit*) – is found not in Hegel's psychology but in phenomenology.

The fourth concept of experience, the call "to the things themselves" (Husserl) opens the experience as "an unsurpassable horizon of being versus objectivity understood as a detached 'view from nowhere' " (Feenberg, 1999). There we have a radical transcendence of the subject-object split. Usually we think that the experience is somewhere in the mind, the self "has" experience. This presupposes that our self exists outside experience and is independent of it, the self as a "knowing thing", a substance or "rational animal". This not the case. On the contrary, it is experience which "has" a self. The "I" is not a spectator of the experienced world, but merely an aspect of it. Experience, not the self, is what is ultimately real. The subject is "a localized actor/seer, and as a first person viewpoint, it cannot be objectified or reduced to the determination of a rational system or science." The subject is not a datum but a fact, *Tatsache*, it is factual, not substantial. This means rejection of the Kantian thing-in-itself and of God, the "ontologically absurd idea of the possible viewpoint on experience that is not located in experience". (Feenberg, 1999.) There is no causal interaction – at least not in the traditional sense – during the process of constituting the fusion of the subject/object (*Gegenstand*). It is a *selfcessity*, to use a neologism of Ole Kirkeby (1997, pp. 11–16): a combination of self-evidence and necessity.

"A transcendent object supposedly 'worked up' in the mind has no reality prior to its givenness in experience". This "givenness" or "presence" ("pure consciousness" – Husserl, *Lichtun*g – Heidegger) lays down the ontological foundation for "being organised according to the structures of finite subjects", structures which are relative to acting, not to contemplating. (Feenberg, 1999.)

In Husserl's critique of "psychologism", he aimed to break away from the traditional metaphysical ontology, the ontology of substance. Descartes' substantial ontology presupposed a thing called consciousness rather than "a logical 'correlate' of objective being". Husserl's "pure consciousness" refers to this correlated dimension, "which is not a perceiving thing but a redescription of objectivity in the structures of this givenness." (Feenberg, 1999.)

End of excursion 6.

3.7 Texturing a reality

Texturing a reality, weaving together one's own *Wirklichkeit*, constructing a *Heimat*, a home, is a process of constructing via concepts dis- and conjuncture of the context and content of an experience. It is not only a process of activity (*Tätigkeit*) but also of *sich tätige verhalten*, active behaviour of oneself. It is not a process of mediating outside in or inside out. It is a radical process of construction and reflection, a fusion – i.e. constitution – in which the reality is brought forth into *Wirklichkeit*. There is not a model of reality inside us but a subtense for the situation. In this fusion, the subtense acts in a way as the harmonic wave power of the tone of history, natural, human species, cultural, social and individual. This subtense I have labelled "texture". It is our conscious being. It is nothing more and nothing less. It *is human* nature as it is. *Sich verhalten können*, the ability to behave oneself, is a principle of life. It has different forms of existent *energeia*, activity in relation with in- and outside nature. This activity, on the other hand, maintains and gives existence to the ability to behave oneself.

Every individual and every thing is pre-sent, *prae-esse*, but everything is not present. The majority of the present is trans-present but not absent. We have three main forms of "showing" the unpresent in present as transpresent: we can form a reference to the unpresent by using *symbols*; we can do/make a (re)presentation and use *mimesis*; or we can make a depresentation and use *phantasia*, i.e. make something visible. To use more common words, we can read the things, form a theory; we can stage a play, or we can read-write things, i.e. make or produce a work. Working, but not labour, is the only form of *Bildung* or process in which we can make a thing visible in two different formats: as a product by being active, *Tätig* with *Gegenstand* (energeia), and as potentiality by reflecting at the same time our behaviour (dynamis). Together, these dis-/conjoin a piece of work.

Every thing is a piece of work in the sense that we have to produce every thing in(to) precent (*in praensentia*) by working, i.e. by con-/disjoining the thing, artificial or not, with our own living work of senses. On the basis of our cultural knowledge (*techné*) we give to each thing the good/useful (*agathó*) and the purposeless/beautiful (*kalós*) characters (Capurro, 1995, p. 2).

One opens an event, which is an aspect of a situation; the tasks form a horizon, a context, inside of which one forms a texture, read-writing, a constellation, a fusion, a melting pot of the event, (s)he uses concepts to tune the content of the event. Here we have the process of *tätige sich verhalten*, i.e. forming and reforming the relation of, con- and disjoining, concept and content in a context, read-writing a texture. It means constructing *dynamis* with *energeia*, and using the latter with the potentiality in a reflective relation with the context.

Textuality is then the transsensitive melting pot of concept and content, which likely has new forms of fusion-dependent context "on the table", present. In order to give a meaning to or to signify an event or situation, I have to sign/assign an object – and the object is me – to be the same or *tätig* with the object as presentence. Then I have to construct a difference/make a disjunction with the object, i.e. I behave myself and I pre-sign/pre-assign the object with a concept and I give a re-form for *Tätigsein*, for content; the concept fuses with the contents of *Tätigsein*. This process of de-signing, *tätige verhalten*, is an open melting pot, a fusion or process of phantasma. The starting point is the undefined sameness between the "I" and the object; the next step is the undefined difference and then the defined difference. The signifying needs still a fourth step up to defined sameness with the object, one's conduct with the situation, i.e. transsensivity or anamnesis of the "place" where the I has been: sense with text, context, via a concept, the content. This fourth step is not a step of *theoria*, seeing, or praxis, doing, but *poiesis*, production. Signifying an event/situation, the construction of a semiosis has then all these elements present: *Tätigsein* with object, behaving oneself, conducting. Semiosis is then not a triadic relation of three subjects: sign, object and interpreter (*Peirce*). Sign, pre-sign, de-sign are signifying between interpreter and object, an existence based on this "working" relation. Signing is a tool, not a subject.

3.8 Conclusions

1. The individual and individualization are inexhaustible. We can always find or define a new feature of an individual or individualization. Which contents, concepts or contexts we use to make a reference to individualization is a matter of power, concealed within the structures of social institutions.

2. The individualization takes place inside society and is not meant to go outside society: it is a process of dis- and conjunction between the individual and social institutions.

3. Individualization is the individual's – and the institution's – form of social existence, to live informed and as informer. They both exist, i.e. they are inside, alongside.

4. Structural sociology has no possibility of understanding the individualization process. For this type of sociology, the individualization is either contingent or liquid, a process without structure.

5. A constructive approach in sociology sees the process of individuals designing the inside of the world, or in other words, the inside world, mainly from the viewpoint of ensigning, or writing, playing. On the other hand, the phenomenological way of thinking opens the existence as a process of signing or reading. The design of the inside world, i.e. the inside of the world, must have both sides – signing and ensigning – in one: read-writing. I call this process texturing.

6. Individualization is no longer, if it ever was, possible only through praxis, playing and mimesis. The idea of individualization via praxis and mimesis, playing (Doing) is an ideological relic of citizenry.

7. From the psychological point of view, individualization can be opened as a relationship between three form-giving elements: content, concept and context.

   The designing the inside world – the inside of the world – is a process of making, *poeisis*; the signing and ensigning, informing and being informed through trans-sensitive contact with the objective/object is the time and place of fusion, forming *phantasma*, giving a form to the objective/object, its actuality, *energeia*, and at the same constructing the potentiality, *dynamis*, of the objective/object. This process between content and concept is related to contextualization: individualization is exactly the relation between two dis-/conjunctions: content-concept and concept-context, i.e. the process of signifying, giving a sense to a meaning or vice versa, a meaning to a sense. This melting pot, fusion or phantasma of individualization is a process of making, production, not finding (Being) or mimicry of the world (Doing).

8. Activity expresses actuality, the potentiality of behaving oneself. To inform the object, to give it an actual form, means at the same time to construct the potentialities of the object, i.e. form an objective and the potentialities of the individual self, to open the process of individualization. To form a relationship with the objective/object is not only a question of activity but of reflection as well, to behave oneself in relation to the objective.

   To be able to signify, to turn the sense formed with the activity and behaving oneself in relation to the objective/object into the meaning or vice versa, is the process of texturing, i.e. social individualization, the inside of the world and the inside world at the same time.

9. There are three forms of reflection and four steps in the process of signifying: the relationship between the individual and the objective/object turns from undefined parity to undefined disparity via signing, or "cutting" oneself off, from the objective. Ensigning goes from undefined disparity to defined parity by "teaching" the objective/object. Designing this defined parity means going to/through defined disparity, i.e. seeing/sensing the undefined parity, via the objective/object.

PART IV

Forming three movements of learning

4

Constitutional individuality

The results from construing the model of analysis yield the possibilities to form dimensions for empirical studies. I first handle this task as a problem of learning, and then I open the dimensions of social individualization.

4.1 Learning by Making

In our understanding of learning, there has been on-going expansion of the space, which we should be able to open for reformulation as the result of learning. It is no longer a question of changing individual activities or the mental constructs and habits by which we master these activities. We must also ask how we can learn to produce the learning processes, which open up possibilities to develop the mental images, concepts and habits of learning. The question then grows from "how to learn to learn" into "how to learn to learn to learn"; i.e. proto-learning, how to learn a content, has turned from a question of how to learn habits of learning (deutero-learning) into one asking how to learn to cancel these habits of learning for reformulation (Bateson as Bauman reading, 2001, pp. 123–124).

This drift of the concept of learning into the concept of "tertiary learning" or "third-degree learning" indicates a theoretical dead end: are we obliged to establish also the fourth and fifth degree? My hypothesis is that this theoretical expansion of the concept of learning (Engeström et al., 1999) is a result of abstract understanding of learning under

the terms of "acquisition" or "participation", i.e. learning the Being by being or learning the Doing by doing.

Historically, it seems that learning and learners have slowly won independence from teaching and teachers, or put in another way, there is a story of the empowerment of learners and learning. If we see learning as a process-relation between the learner and the material or content of learning, then the content of learning is the very first teacher. As we know, teaching does not always yield learning and learning does not always need teaching. We can learn a concept with content in a context with or without any kind of teaching or with or without clear experience of learning. This means that learning and teaching were once one and the same process. In this kind of situation, informing the material gives back the content as a concept in some context without formal teaching. One result of the formal and usually academic tradition of teaching is the disintegration of this kind of learning situation, i.e. encapsulating teaching and learning material as outsiders to each other.

Traditionally we list two main forms and two different kinds of relations to learning material. We can learn the form and we can learn by the form; i.e. we learn the Doing and we learn by doing. On the other hand, the relation to the material of learning is either referential or mimetic. We see our learning as acquisition of the Being or as our participation in the Doing. These four forms of learning – being and learning the Being, doing and learning the Doing – are the main forms of formal education and training (see Table 11).

Table 11. *Moments of learning*

Moments of learning / **Relation to materiality**	**In Context**	**With Concept**	**Forming the Content**
Being: Symbolic reference	Learning by Being	Learning the Being	*Theory*, the acquisition of a phenomenon
Doing: Mimetic representation	Learning by Doing	Learning the Doing	*Praxis*, participation in a mimetic situation
Making: Phantasmic impresentation	Learning by Making	Learning the Making	*Poiesis,* constitution of an impresent situation

Over and above *Theory* and *Praxis*, Being and Doing, we have a third tradition of learning, the tradition of *Poiesis*, Making. We can understand informing the content, the material of learning, into a concept within a context as a process of making, of producing, not only a new conceptualised content within a context, but also producing the space of learning.

This space of learning is sensefullness of touch[38] with the material of learning, the content. And this space of learning is at the very heart of craftsmanship. With the tradition of craftsmanship, we can truly open a new horizon to learning.

4.1.1 Overcoming the modern threefold division?

We don't usually *do* love, knowledge or things (to do, *tithemi* – to put, to place, to set) but we *make (poieo)* love, knowledge and things. Every fact is one of making (fact > facere = to make) and every thing is an artefact of making. In contrast to doing, we must have materiality impresent for making knowledge, things, love. We need also a sense of the material, i.e. a sense of the content *and* context to make our concepts.

We cannot make anything without the sensefullness of touch of context and content. If we lose touch with context, we are doing/making matter without any sense. If we lose touch with content, or if it is for us without sense or not contingent, we are doing/making senses without materiality, content. And if we are not making or doing anything, i.e. if we are losing our sensefullness of touch with context and content, we are slaves to seeing, theory.

This is exactly the original modern solution: *theory* is seeing the being, *praxis* is doing the meaning and *poiesis* is making the things, all outside each other. The synthesis of these three processes, the main three aspects of human living work, took its place not as a result of work but in the market, in the form of buying and selling dead work, commodities.

But living work is not found at the swap spot anymore. If we are exchanging the amount of living work with a piece of living work (i.e. A=B according to Marx, and not A≠B according to Pareto), we have to have some kind of sense of touch, a memory of the living work textured in the goods, a concept for each good – in a way, a hieroglyphic of living work. With this sense of touch we in-form a thing into a good. And as a good, the thing is conceptual, part of the social texture. A good has information about living work which is no longer present in the good, but is textured in the situation in which we meet the good.

In the situation of exchange we are not remaking knowledge of production – i.e. how this commodity has been produced – but we are doing a mimetic representation of the living work curdled to the commodity. Usually, in our culture, at the swap spot, we seek out the producer only if we are buying a piece of artecraft. The situation 'outside of the swap spot' is mostly the other way round: there are extreme difficulties in determining who has

[38] I use this homemade idiom in a rather unusual way in order to express the fullness of senses and not only the sensations of a situation with which we are trying to cope. Perhaps the work of a potter is a helpful metaphor.

made the commondity and there is an enormous machinery of information to turn our doing/making of the texture of the good by way of the future promises it holds.

But information is not knowledge. We do information but we make knowledge. The concepts of making and the making of concepts are not only questions of being and theory or doing and praxis, but central questions of *poiesis*, forming sensefullness of touch, i.e. knowledge, facts inside the situation of three questions, open together the questions of episteme, ethics and aesthetics. In the goods developed from things, these three questions have a social and cultural solution, second time and inverse form. The first time, during process of living work and under the original modern solution, the sense of touch of content and context was either impossible or extremely abstract; in other words, theoretical. The questions of episteme, ethic and aesthetics were transformed outside living labour, inside new institutes of science, which had no possibility other than to try to form a theory, not a sensefullness of touch, of living work: a theory of labour.

As previously stated, the sensefullness of touch with/to working situations has throughout history constituted the core of draftsmanship. Learning by making means that we are able to form the sense(fullness) of touch with the materiality of a situation. Sensefullness of touch within a working situation is not tacit knowledge. In a sense, it is not knowledge at all – an abstraction of the situation – but vice versa: embedding in the situation. It is not only a process of forming knowledge but *texturing* of the concept with content within a context. This means that one must be able to participate in the production of a situation by posing three basic questions: How are the things (facts)[39]? How should things do to be good? How can we make them nicely? Sensefullness of touch in the learning situation is possible to learn only by being able to produce or make the situation. Learners should not be functions or products of learning situations, but co-producers of them. In learning, the main questions are not about the acquisition of or participation in learning situations, but about how to produce these situations. Learning is then not only an internalization via something mediating the activity, which is outside, but enriching, in-forming one's inside world, i.e. the inside of the world.

4.1.2 The contents, contexts and concepts in learning

As one result of our analysis above, the *Demiurge*, the old public draftsman, has a new public form: how can we produce a learning situation of a work process in which we can

[39] In the sense of *Tat-sache*

form new concepts with content in a context? This reformulation of learning processes means that – to use technical expression – not only does the output of the process change, but the parameters *and* the process structure can also change (Müller-Benedict, 2000, pp. 35, 245) without losing the sensefullness of touch of the situation. Rather, it is produced.

For reasons of analysis, for a moment let's suppose that the context, concept and content are independent from one another (see Figure 3). In this kind of arrangement, learning has, as a question of theory and praxis, Being and Doing, very light footing to contents. It even yields the possibility of seeing the content as a function of context and concept, i.e. it is possible to specify the content via the concept and context, and not vice versa. Our tools of construction, concepts, as well as the choice of context should then be more powerful than the content, the materiality of situation. We are then, in a way, free to design the world via crossing the borders of different contexts and/or levels of abstractions. The content follows us; we do not follow the content.

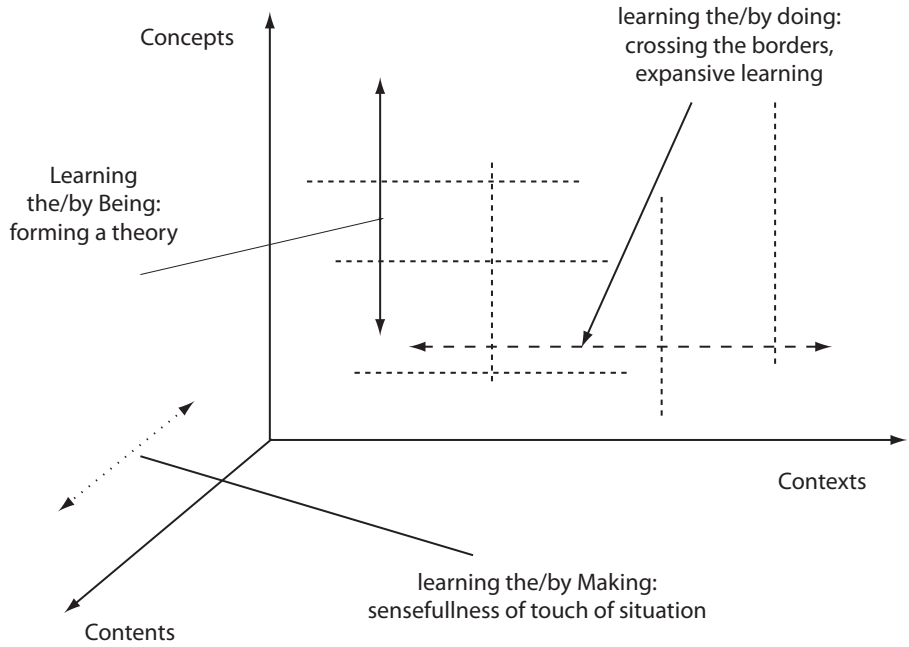


Figure 3. *Three dimensions of movements of learning*

This kind of analysis is, of course, misleading. The contents, concepts and contexts depend on one other. Movement in one dimension, i.e. learning, means also movements in the other two dimensions. But this kind of construction of the learning space makes visible

one very important risk: Our understanding of the learning as crossing the borders, from one context to another *and/or* one abstraction level to another, is always in danger of losing the sensefullness of touch, i.e. the content, the material of learning. This risk is very difficult if not impossible to handle within the domain of formal education and academic institutions because the it is a result of the modern solution of the division of duties among science, policy and production.

To handle the situation, we should be able to see a strategy of knowledge from the point of view of making; in other words, we learn – via producing the content – the concepts in contexts and not vice versa. The idea is then that the constitutive moment of knowledge is not in the movement within the narrow space of theory/praxis, but within the wide space of theory/praxis/poiesis with the three always-open questions at the very location of making: how are things (facts)?; how should they do to be good?; how are they made according to the rules of beauty?

The main question of learning is then not the formation of competence of second-, third- or fourth-degree learning. This line of learning theories stays within the modern constitution of institutions, which means that social individualization must have the same basic quality of disintegration: the outsiding of cognition, motivation, skills – or, in popular terms, the head, heart and hands – from one another.

Social individualization is not only a question of Being or Doing, but above all, of Making, forming the sensefullness of touch of the impresent situation. We have to do with this touch all the time when awake and we are forming the sensefullness with the help of Being and Doing. The sensefullness is a textural concept which melds together a content within context. I call the individual – institutional – relations social texturing or social literacy depending on the point of view. Texturing is a more processual approach, and literacy more structural.

We can say that social individualization can have its content enclosed within the Being, within the institution form (family, school). It can also become transparent via the institution with representative practices of Doing (schools). The third moment of learning is in the situations, in which the formation of concepts within a context has constitutional character.

The institution usually gives a form to content. This form together with the content produces via habits, a "natural" way of activities within the form. We have can activities as fish in water without knowing the form in which we are living. Social literacy expresses the individual's concepts of these kinds of habits.

In order to further examine the boundary between the institute and the individual with new conceptual dis- or conjunctions, we must have the three aspects together: being, doing and making. We must approach the deep surface of this process as seeing, doing and making. The place, the depth and richness of the fusion depends on the constellation

of social institutions. The modern institutions of the being (education, science, fine arts), doing (policy) and making (production) are outsiders to each other.

The dis- and conjunction of being, doing and making take their places in the conceptual form of social literacy and as processes of texturing one's inside world, also known as the inside of the world. Our problem is as follows: how to organise these process in such a way that the head, heart and hands – that is, cognition, motivation and skills – are not outsiders or only transparent but *transsensitive* to each other. These processes must be, I think, ones of learning by making with the help of learning by being and doing.

The material – the content of social individualization – found at the very junctures of sensefullness of touch are composed of the people, goods and (natural) things with which we live.

• *Excursion 7: Modes of learning movements at work*[40]

Anna Sfard (1998) foregrounds in her well known article two very different metaphors of learning, emphasising a need for both: learning must be seen as acquisition (*theoria*, Being) and participation (*praxis*, Doing). She then argues that learning is a union between the acquisition of a theory and the construction of oneself as the member of a community, *praxis*; which leads to the conclusion that we need yet a third metaphor of learning: making (*poiesis*). How do these three relate to one another?

This is a matter of the relationship between concept formation, interpretation, and content production; in other words, between concept, context and content. Concepts are not like bricks or billiard balls, related only externally. On the contrary, establishing a locus of learning brings into play a constellation of content, context and concept, in which each of the three moments influences the others. A classic example from the art world is taking a bottle rack (=concept) to an art exhibition (=context): this constitutive act transformed views (=content) of both bottle racks and art exhibitions.

As a rule, whenever learning is being consciously organised, one of these three perspectives is adopted as the starting point. At the same time, the mode of movement considered most important in learning must be chosen. Formal learning is traditionally associated with learning concepts in a confined and regulated environment, such as schools. The time/space locus of learning is set aside from other pursuits and separated from the immediate vicinity with a view to fostering internal, cognitively oriented learning. Thus, formal learning is a matter of concept formation, of searching for and defining levels of abstraction/concretion, through activity that is emphatically theoretical.

[40] Part of this excursion has been published earlier (Volanen, 2009)

To promote and enliven this activity, the learning event is often augmented with opportunities for students to gain an insight into the ways in which concepts are relative and open to a variety of interpretations. The most common solution is to use different presentational and representational methods to place that which is being taught into various contexts. To take an example, if we want to get to know Heikki, then by placing our Heikki, in our imagination, at an art exhibition, on a playing field, in a hospital, at home or at work we see him each time in a different light, gaining an even more concrete idea of our Heikki than before. When we succeed in this we arrive at an understanding of our Heikki as an *example*[41] of some general phenomenon. Finally we can come back to Heikki and understand him – and hence ourselves – more concretely as a person.

Thus, there are two interlinked learning movements: abstraction, ascending to the concrete, *and* relating/interpretation, particularisation. At its best, this learning movement proceeds along the following circle (see Figure 4).

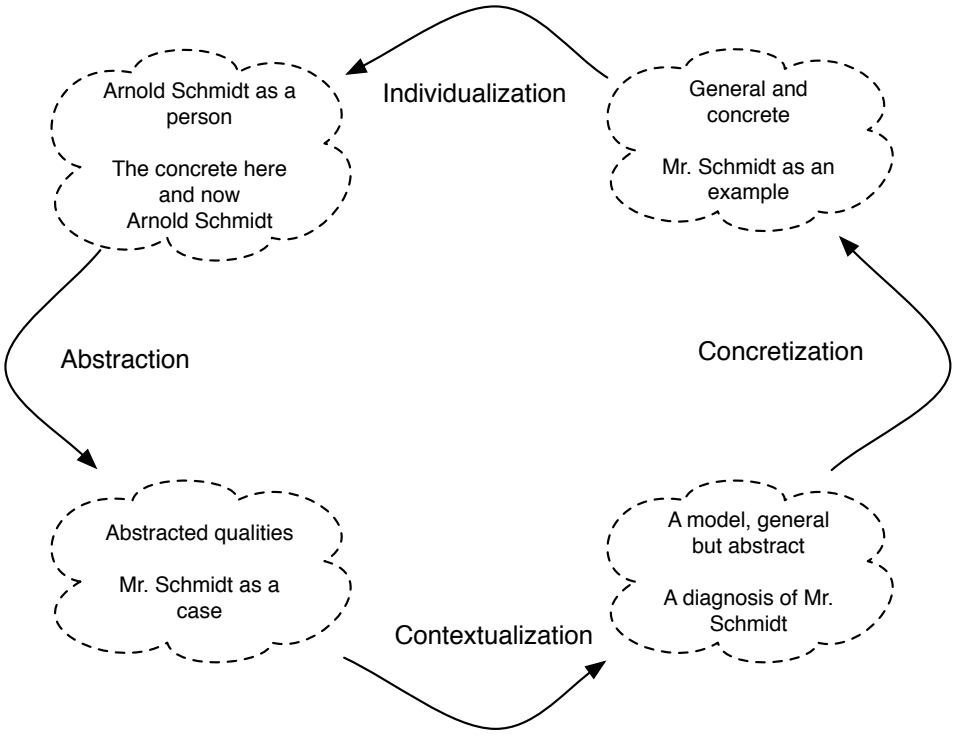


Figure 4. *A circle of movements in learning (Volanen, 2009, adapted)*

[41] In the sense of a *paradeigma, Beispiel,* that which has been discussed in addition to something else (see e.g. Agamben, 1993, pp. 8–10).

The problem with this circle of movement is that those involved therein drift into a mode of work that foregrounds cognition. As a result, the process often – though not always – stops at the definition of a general but abstract model: a diagnosis about Heikki is identified with Heikki. From the perspective of this diagnosis, Heikki's special personal characteristics are contingent, of secondary importance, and can be ignored when drawing conclusions about activities to be undertaken. Our only grounds for deciding which characteristics are significant: the power that we represent through the *praxis* of our own institution.

A central "reason" why the learning movement comes to a halt is that the systems and model theories bring into play the relationship between linguistic signs, words and reality, the Pandora's box of semantics. As a result, ascending to the concrete, to Heikki or to the individualisation of meaning, as examples, becomes unnecessary, even impossible. Why? Because Heikki is a labour, health, social or educational policy *case*, and the practices of these institutions make no provision for ascending to the concrete; on the contrary, they often see it as a threat to their mutual division of labour. The essential point is that Heikki's and our prospects for growing into richer and more concrete personalities are narrowed down because we are unable to use these institutions to gain a *feel* of ourselves and other people.

The third mode of learning movement involves learning the making and learning by making. This introduces a completely different perspective: How do we as individuals, as Heikki or Liisa, make our own world, both at work and in other areas of life? The movement of learning oscillates between me and the object. I cannot control the direction or rhythm of this movement by answering just one question; instead I face, in my mind, three.

If I was a potter shaping clay, I would give the clay a form and become myself *in-formed*: I would learn what can and cannot be done using any given kind of clay and simultaneously I would learn about myself, what I can or cannot do. And naturally I would – as I gained experience – learn to shift these limits in directions that I desired. Thus, as a potter I would learn *by making*. Today, when activity and communication have – as I pointed out above – become intertwined into a single texture, this learning movement must be supported and accompanied by the two previously mentioned movement directions. Thus, the expert – today's craftsperson – moves simultaneously and separately in three different directions. From a research analytic perspective, we can break this down as presented in Figure 5.

This is a matter of how we read and write the work situation. What things can we read as open up, as a part of the situation, as its referential elements (theory), what things as elements at hand in representation (praxis), how are they manifested in that which is immediately there? In other words, how do we describe, form value judgments and make things beautifully as we work? The essential point concerns the scale of the questions and answers in terms of time and place: must we be content to challenge, as a part of our work,

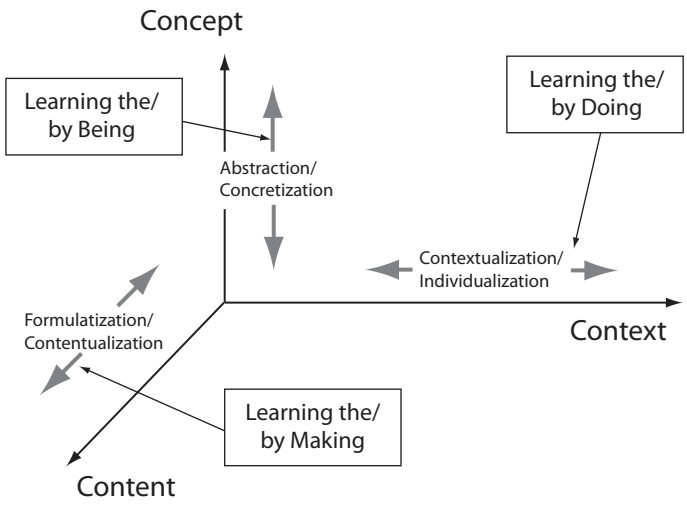


Figure 5. *The three movements in learning (Volanen, 2009)*

only the questions of this day, this week or this quarter, or can we, rather, address them from a longer-term perspective, possibly even as the problems of our age? Must we be content to frame these questions as involving only our own work, workplace, company or locality, or can we pose them as facing Finland, Europe or even humanity as a whole? Thus, it is the time economy that determines how far we are able to embed into our work its epistemological, ethical and aesthetic ideals. The requirement alone that we learn on the job – and in the final analysis the organisation of work, under the principles of a general education, as work that civilises us – presupposes placing time at the disposal of those doing the work.

How about Bateson's first, second and third degree of learning after our analysis? We can imagine the third degree of learning, i.e. to unlearn the bad habits of learning. How about the fourth degree? How to learn to unlearn the bad habits of learning to learn? And is there a fifth degree?

Is the attitude held by Bateson and his followers regarding learning of this type? Not at all. The learning is usually seen as questions of organising the learning environments (by being), or representative processes (by doing) to produce learning. The main metaphor is transferring something from one place to another with or without participation from the learners. In *Learning by making* we are not transferring but enriching one another and the object(ive) of our work; producing, not only the result of learning, but also the learning situation. Each person enters the learning situation as a fully empowered learner.

End of excursion 7.

4.2 A paradigm for the connective curriculum[42]

In Europe we have two main traditions of structuring the contents of education: *Lehrplan* and *Curriculum*. It is not possible here to go into the large spectrum of thinking, debate and practices within and between the traditions. Let us say only this: With *Lehrplan* we open up the discussion on teaching and schooling, and with *Curriculum* the discussion is on learning and the life course. We find a lot of discussion in both traditions from the theoretical and practical points of view: deriving the content of learning from the chosen theoretical starting point opens up the spectrum of scholarship. On the other hand, taking the practical approach, we try to derive the content of learning mainly from working life.

In Finland, Pekka Ruohotie has recently proposed the general qualifications and competences needed in working life (Ruohotie, 1999; see Table 12).

Table 12. *The general qualifications and competences needed in working life (Ruohotie, 1999).*

Mastery of life:
• Learning to learn
• Ability to organise and control time
• Personal strengths
• Problem solving and analysis
Communication:
• Human interaction
• Listening
• Verbal communication
• Written communication
Leading processes:
• Coordination
• Decisions
• Handling conflicts
• Planning and organising
Innovation and speeding up change:
• Conceptualisation
• Creativity, innovation, sensitivity to change
• Handling risks
• Vision

[42] Part of this section has been published earlier (Volanen, 2008).

Ruohotie's proposal is interesting: he is actually saying that *all* labour is embedded in a necessary process by which everyone personally and collectively evaluates and values the tasks that comprise his/her work. In a way, he is transforming the traditional "best practices" of researches and officials into a fundamental aspect of all work. He is not only asking questions about *theory*, e.g. how does the world stand and what capabilities do we have to this find out? He also asks questions of *praxis*: what should the world be like and what abilities must one have to be able, together with other workers, to conceptualize the idea of a good result?

In my view, there is one fundamental shortcoming in Ruohotie's proposal. How can we be sure that the qualifications and competences listed are learned during the course of education? For example, the structure of the *Lehrplan*/curriculum of upper secondary general education is not formed according to that structure but on the basis of scholarship. In what kinds of situations and learning environments and with what kinds of methods should traditional scholarship-based content be taught so that these general abilities are formed? Or the other way around: How should vocational content be taught so that these kinds of general qualifications and competences are learned? We can see that learning content derived from *theory* and *praxis* does not open up the horizon of "learning by making", the horizon of social individualization.

Deriving the content of the *Lehrplan*/curriculum from the starting points of theory or praxis gives us different results. But we have – as I discussed earlier – a third possibility to derive the contents of upper secondary education: production, *poiesis*. How in this case do we start to outline the contents?

A good starting point is – I think – to re-enact the classic three elements of the work process: workers, tools and objects of work. The basic quality of the work process is heavily dependent on the relations between these three elements. Nowadays they are not outsiders to one another but mediated conceptually: none of the three can be defined without making a reference to the other two, and at the interface of the three there is a need for new content. We can open up seven content areas for vocational education (see Table 13).

The three main approaches to forming the content of education – Beings, Doings, Makings – lead us to different results. It should be noticed, however, that the *Bildung* is not the monopoly of any one approach. Vocational and general *Bildung* are sisters, not step-sisters. The question is how to incorporate the two kinds of *halbbildung*, not melding them into a single mass: What is the place and function of the three approaches: Learning by being, by doing and by making? This is the key question.

When the icon of the modern era – the *machine* – turns into as we say in Finland the *knowledge* machine, we also have a new order of production: machines have learned to use language, languages have learned to use machines and language itself is a very basic element of production. Work cannot proceed without languages nor can languages function

Table 13. *Seven content areas for vocational education*

I Vocational *general Bildung*
• Questions of the economy of humankind. • A general picture of our era, its formation and basis of production, history and main challenges. • An analysis of the relationship between living and "dead" work, their terms, composition and limits as economic, social, natural and human resources. • Qualifications and competences needed in every vocation (i.e. Ruohotie's list)
II Vocational *Bildung*
1. The methodology of production • Content which analyses how a vocation is connected to the production units as a whole, and to national and international economic development on the basis of the vocational objective. 2. Mastering craftsmanship/profession • General methodology of vocations: Questions of personal view and attitude to work; questions of epistemology, ethics and aesthetics in vocational praxis. 3. Methods of work • An analysis using tools/working methods; conceptual and/or technical. 4. Objective • An analysis of the objects of work independent of work, i.e. research-based picture and analysis of the features of the objects of work. 5. Gestaltung • Learning to master tools/working methods in work situations, and in the service and development of work. 6. Specific vocational skills • Methods of enriching/handling/producing the objects of the vocation, traditionally the central part of vocational education.

without machines. When languages and machinery are combined into a single work process, we have a network of networks, work as *poeta faber* (Röder, 1989), poetry and work; or better still, poetic work. In this situation, we need a new *Gestalt* beside the production process. The modern cultured experts have to be able to generate a social situation through which all the three questions of *philotechne* can be posed and solved.

This means that the division of labour established in the early days of the modern era is fundamentally over. This does not mean, of course, the collapse of the division of labour, but rather a transformation of its principles. The fundamental elements of traditional craft work – i.e. verifying (Being), valuing (Doing) and enhancing (Making) – are now the fundamental aspects of all work.

In order to handle this situation, the education of cultured experts must not be only a synthesis of heads and hands. To use a traditional, even romantic expression: the development of experts and citizens with "a bright head, hot heart and golden hands" (Shuhomi-

linski, 1977) is to be formed and informed according to the rules of Beauty, by making the sensefullness of touch a fusion of all three – head, heart and hands – under the government of beauty.

The question is not only how to learn a set of specific skills and knowledges, but also how to learn a set of virtues (Volanen, 2007b; adapted from Kirkeby, 2000):

Euboulia	• Broadminded prudence
Euphoria	• Enthusiastic sense of reality
Hyponomé	• Brave patience
Prolepsis	• Competence for anticipatory visualisation
Epibolé	• Practical intuition
Maieutike tekhne	• Craft of giving birth to Goodness, Faithfulness and Beauty

It is a long journey from being a master in a medieval guild, from the "nobility of the common man", to modern-day professions. Nor will society any longer represent itself as an organic whole or a machine in which each individual can work for the good of all as a differentiated cell or cog. Vocation has increasingly become a job. All individual bonds with the whole have been transferred outside the work of any given profession, to be mediated in public, in a public domain. This public domain is not our own creation either, but rather a packaged publicity.

It need not be so. We can see that *Bildung* is currently being measured in a new way. Alongside the measure of traditional national *Bildung* comes a time-related qualifier. The yardstick of *Bildung* is linked to an ability to define and solve the basic problems of our age. Let it be added for the sake of clarity that, of course, in order to illuminate our own age knowledge of other ages is also required. Ultimately the question is how to implement practical humanism and a fully mature *Bildung*. The goals, significance and meaning of human activity on the one hand and the tools for carrying out that activity on the other should not be separated from one another, nor should people be cut off from each other on this basis.

As professionals we all find ourselves confronted with a conflict between our work and the basic problems of our era: How would I solve the problems I face in my own work if I look at them, for instance, as a parent, a citizen or a human being, and not just as an employee? What solutions emerge from my examination when I consider my professional problems from these various angles? The motives involved in our work clearly transcend the boundaries of our various occupations.

The reality of *Bildung*, its link with life on earth, is in the last analysis decided in the actual work of an occupation. The era-relatedness of *Bildung* is apparent in its ability to provide us with the means to live in the global village, to see a time span and its problems here and now. Working in an occupation is one area of *Bildung* where those problems are settled for us all if only we have the ability and the freedom to perceive and read them in our everyday life. This in turn requires a fully matured *Bildung* and fully empowered citizenry – also at work.

Epilogue: Moments of social individualization

Now it is time to return to our starting point: the relation between institutions (school, labour market, work place) and the individual. In our analysis we have found three basic aspects in the process of texturing a reality: Being, Doing and Making. Relating the result to our question of departure – social individualization and the twofold division of upper secondary education – we can now take the following position: the institution – in our case, school – is the Being, the context within which the relation between praxis, Doing and Poiesis, Making has a different kind of solution to liberal and vocational education. And we saw that in this division there are embedded very fundamental ideas of learning, and even ideas of social existence.

According to our analysis, we can say we have three plates of movement in learning. The first is the dynamics between abstraction/embedding (concretization) *and* contextualization/individualization. The second one is between forming/informing *and* contextualization/individualization. The third one is the relation between forming/informing and abstraction/ embedding (concretization). In classical philosophical terms, it is expressed as the relations between reflection/behaving oneself, object activity/behaving oneself and reflection/object activity.

To be sure, in real life we do not have three different plates of learning but a single complex one. There is no zero-point of any moment of this textured complex. All three are here and now in one way or another. It is a challenge for social institutions not to disjoin but to conjoin these plates.

The three movements we have found in learning give rise to possibilities of speculating on a more general theory of development: that social individualization is *par excellence*

the process of producing the social/psychological (constitutional) space of development involving epistemological, ethical and aesthetical moments.

Let us make a short summary at a little more general level. *Philotechne* – the love of craft – is an old idea, but has not been much cultivated by the lovers of knowledge, by philosophers. Philosophers have forgotten what to do with their hands. Craftwork binds the three basic questions of *philotechne:* What are things? How are things when they are in a good state? How can we produce them beautifully? In other words, epistemological, ethical and aesthetical questions are practical challenges, work; and the collaboration of the head, heart and hands. Craftwork is, at its best, educative work. We can use it as a methodological mirror to cross-enlighten modern industrial labour and its three cousins: science, politics and fine arts.

Modern craftspeople do not dip their hands into clay. They produce social situations in which all the three questions of *philotechne* are posed and solved. To be an *expert*, a person wise from experience, knowledge is not enough. The questions of truth, goodness and beauty, abstracted from craft work as a result of the first modern Industrial revolution, must be embedded once more in everyone's labour. This is the new poetics of communities – *poeta faber* – which we need in the industries based on knowledge and commons. It is then a negation of the negation of traditional craft. A negation which "does not re-establish private property for the producer, but gives him individual property", a property "which is proper to the proper *subject*" (Nancy, 2010, p. 149); in other words, the general intellect of producing commons.

As we have seen, modern industrial labour has its historical roots in the classical triad of *theoria/praxis/poiesis* (as spaces: *skhole/polis/oikos*) and in the three forms of reason (*nous theoretikos/praktikos/poetikos*). Synthesis between the head and hand – Being and Making, *theoria* and *poiesis* – leaves out the third element, the heart, questions of *Doing*, *praxis* and *ethics*. Synthesis between head and heart – theory and praxis – without hands is also abstract. We need to pose *three* questions to open up the horizon of *philotechne*: What are things (theory)? How are they when they are good (ethics)? How could we produce them according to the laws of beauty (aesthetics)? The tradition of *philotechne*, love of craft, is older than the love of knowledge (philosophy), but its history is part of the history of craft work. The history of craftwork is a fundamental part of the European tradition of work. In this tradition, work is not a matter of an occupation but of a vocation.

Nevertheless, even at that time craft was already a method, a means, a route from raw materials to making a product, an artefact. Unlike knowledge, craft refers to something that is immediately present, to a situation, a sphere of activity, a workshop. Where a knower is faced with a single question – such as, how are things? – masters of a craft must ask themselves no fewer than three questions as they construct their sphere of activity. Thus, the master of a craft describes, evaluates, and changes the world in a beautiful manner, here

and now, but in what is nevertheless a valid and universal way. The methodology of craft is nothing less than a general theory about world-making.

In modern times, via the Enlightenment and capitalism, we have lost the common basis of the triad of head, heart, and hands, the core idea of craftwork (Sennett, 2008). Culturally, as a fruit of the philosophy of the Enlightenment, we are under pressure to persist in this omission. We can go so far as to say that the first Industrial Revolution dismantled the central moments of craft work, turning them into opposites, severing *theoria*, *praxis* and the main part of *poiesis* (aesthesis) from craft work, reducing work to the creation of physical force, the labour force.

On the other side of the coin, in the nation states, science and scholarship, politics, and the arts all acquired corresponding institutions, which then became the loci of externally conducted research into labour and externally fostered the protection of labour – which among other things led to the emergence of scientific methodologies of labour research. The result is that episteme, ethics, and aesthetics no longer share a common core. As mere labourers, we are not granted a view of the production of commons. The main opportunity provided to form social bonds is to make choices on the terms of the market, and to labour for money to pay for those choices. But as common experts in the knowledge-based society – as modern craftworkers – all labourers need a new solution, *poeta faber,* a reunification of theoria|praxis|poiesis.

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THE MAIN INSTITUTIONAL STRUCTURE of upper secondary education comprises two sectors: general education and vocational training. It also assigns young people to different social tracks in life. Our understanding of social individualization is intrinsically related to the division between *Bildung* and *Beruf*, education and vocation. The basis of this division is at the very heart of the process of social individualization, within the division between *theoria*, being, *praxis*, doing, and *poiesis*, making. The *learning by making*, not by doing, opens a new possibility to understand social individualization.

Philotechne – the love of craft – is an old idea, but has not been much cultivated by the lovers of knowledge, by philosophers. Philosophers have forgotten what to do with their hands. Craftwork binds the three basic questions of *philotechne*: What are things? How are things when they are in a good state? How can we produce them beautifully? In other words, epistemological, ethical and aesthetical questions are practical challenges combined in the collaborative work of the head, heart and hands. Craftwork is, at its best, educative work. We can use it as a methodological mirror to cross-enlighten modern industrial labour and its three cousins: science, politics and fine arts.

The questions and answers in this work are not empirical but practical in the sense of *praxis*. Moreover, the *praxis* in this work denotes institutional praxis with reference to the institutional duality of vocational and general upper secondary education and training. This is also an attempt to find a theoretical basis to overcome this division. Achieving this would at the same time open a new horizon in understanding how to write the curriculum and how to organize learning connected with liberal and vocational studies.

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