Learning and Learning Organizations
A Philosophical Discussion

Thomas Tuerlings
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1. Preface and acknowledgements

Ever since life came into existence, learning has taken place. For a very long time this happened only through the basic principles of evolution; Trial and error, survival of the fittest and natural selection. Species of life have been stuck with incidental, unconscious learning for millions of years, slowly changing and adapting to a slowly changing world. It was only until recently, in terms of the existence of life, that one species developed reason. This brought about a rapid increase in the pace of evolution and with it an increase in the pace of learning. The use of reason allowed this species to start learning consciously. Since then, everything changed and this world has never been and will never be the same again. This paper is about conscious learning.

One of the difficulties of all research into learning being done so far is that there is not a single framework to fit all different theories. In chemistry there is the periodic table of elements that acts as a framework for all different elements out there. If you take this as an analogy for human learning, we have a lot of different elements (theories of learning) but we lack the periodic table in which they fit neatly. In his book 'Towards a comprehensive theory of human learning,' Peter Jarvis tries to build this framework, but he acknowledges that we might never fully succeed (2006, p. xii).

2. The philosophy of learning

2.1. Introduction

“The processes of learning are a fundamental stimulus for life itself and without it the human body could never transcend its biological state, nor could the individual function effectively in the wider society. It is essential to our humanity and, in fact, it is an existential process. This does not mean that studies of learning need only to be philosophical, but it does demand that we recognise the philosophical underpinnings of all theories of learning, in whatever academic discipline they are based.” - (Jarvis, 2006, p. 3)

As Jarvis and many others have said, learning is essential to our humanity and what makes us human. Conscious learning is what enabled us to create civilization and it is what separates us from animals in the first place.

Soon after conscious learning, learning about learning found its way into the spectrum. Even long before the ancient Greeks, man kept himself busy with processes of learning, although not as professional as we do today. All theories of learning, no matter how old they are, have in common their dependence on the concept of humanity and the concept of man used at that time. Where Plato used the rational Socratic method, Aristotle preferred a more empirical approach. Descartes caused a philosophical earthquake with his division between mind and body. Philosophical questions hundreds or thousands of years old, some of them even unanswered yet, still have a massive influence on theories of learning from nowadays. Different theories of learning use different approaches and are based on different philosophical ideas.

This paper aims to hold a philosophical discussion about learning and learning organizations. It is focused at a more contemporary branch of the science of learning. Age-old theories are less suitable than modern theories and therefore I will mostly focus on modern theories of learning but to conduct a proper study into learning and learning organizations as an aspect of society, the old philosophical ideas mentioned above are and need to be at the basis of said research.

2.2. I exist, therefore I learn. I learn, therefore I exist.

In the introduction of chapter 2, I mentioned that Jarvis said that learning is an essential part of our humanity. Because Jarvis’s approach to this is so spot on, I will largely follow his order

of reasoning with additions of other authors that I find compatible. The claim that learning is an essential part of our humanity is broadly accepted in the field of learning and many others have said something similar. Amongst these many others is (Heidegger, 1968). He states that learning is an essential part of being. It is a driving force in human existence. Bergson was already far ahead of his time in this sense when he said that “for a conscious being to exist is to change, to change is to mature, to mature is to go on creating oneself endlessly” (1998 [1911], p. 7).

Cooper states that the two main bases for existentialist thought are the existence enjoyed by human beings and the existence that distinguishes it from all others (1990). Cooper’s views consequently connect with a UNESCO report from 1972 on lifelong learning:

“Contemporary science has made a singular contribution to our knowledge of man by showing that he is biologically unfinished. One might say that he never does become an adult, that his existence is an unending process of completion and learning. It is essentially that incompleteness that sets him apart from other living beings, the fact that he must draw from his surroundings the techniques for living that nature and instinct fail to give him. He is obliged to learn unceasingly in order to survive and evolve.” - (Faure, 1972, p. 157)

Anthropologist Hall found that humans have a drive to learn that’s equally strong as, but to humans more basic than the drive to reproduce, which is the main drive for animals (1997 [1976]). Lifelong learning expert Knud Illeris writes:

“The human ability to learn developed together with other characteristics of our species in the struggle for survival of the various species, and this can be understood as one of several tools for the continued struggle.” – (2002, p. 43)

Simpson also makes this point but goes even further. For Simpson, the necessity for man to keep learning through life is an indication that humanity is still an unfinished project (1995). Thus humanity is still evolving.

Jarvis concludes from these theories, and I agree with him, that ‘existence is the process of realising what we might become - being is always becoming: human becoming is achieved both through our learning and physical maturing’ (2006, p. 5). However, as modern day humanity is still evolving, it is not yet completely what it might become.

As there is a big difference, but also coherence between mental and physical maturing, we should take a look at Descartes age old theory of the ‘cogito’. How does the mental relate to the physical? You can learn something purely by mental effort, but also purely by physical effort. Through a thought experiment of radical doubt, Descartes narrowed our certainties down to a necessarily existent immaterial thinking entity.

“But immediately I noticed that while I was trying thus to think everything false, it was necessary that I, who was thinking this, was something. And observing that this truth, ‘I am thinking, therefore I exist’ was so firm and sure […], I decided that I could accept it without scruple as the first principle of the philosophy I was seeking.” – (Descartes, 1985 [1637], p. 127)

This idea has become one of the most famous philosophical sentences ever in the form of ‘I think, therefore I am.’ In 1973 (Macquarrie, 1973) questioned the meaning of ‘I am’.

“But what does it mean to say, ‘I am’? ‘I am’ is the same as ‘I exist’; but ‘I exist’ in turn is equivalent to ‘I-am-in-the-world’, or again ‘I-am-with-others’. So the premise of the argument is not anything so abstract as ‘I think’ or even ‘I am’ if it is understood in some isolated sense. The premise is the immediately rich and complex reality, ‘I-am-with-others-in-the-world’.” (1973, p. 125)

For philosophical purposes, I will shortly discuss I-am-in-the-world first. After that, I will discuss I-am-with-others-in-the-world.

2.2.1. I am in the world

How I as a human relate to the outside world, is a much-debated topic. Views on this differ from Plato’s world of ideas I can only know by using my reason, to Berkeley’s disappearing world when no one is looking but luckily for us God keeps an eye on it. Epistemology is the study that deals with it and it is way too broad to discuss all of it here, but some philosophers and theories are worth mentioning.

I already mentioned René Descartes and his method of radical doubt. One of the things he doubted, are human sensations. Because we have illusions, we cannot trust our senses: for if they fool us some of the time, they could be playing tricks on us all of the time (1985 [1641] cited in Dooremalen, De Regt, & Schouten, 2007, p. 65). Descartes also started to doubt his

logical and mathematical certainties and found out he was fallible. To support the claim that he could even be wrong in the simplest of things, he needed help.

“I will suppose therefore that not God, who is supremely good and the source of truth, but rather some malicious demon of the utmost power and cunning has employed all his energies in order to deceive me. I shall think that the sky, the air, the earth, the colours, shapes, sounds and all external things are merely the delusions of dreams which he has devised to ensnare my judgement. I shall consider myself as not having hands or eyes, or flesh, or blood, or senses, but as falsely believing that I have all these things.” - (Descartes, 1985 [1641], p. 15).

This approach has been modernized and is now also known as the Brain in a vat theory. It is a sceptical reply to any claims of certainty that is very difficult to counter, if not impossible. There are some logic-based arguments to counter the BIV theory in a theoretical way, but I will not discuss this any further because it is of too little value to my topic.

Through God, Descartes finds a way around the evil demon problem. This also allows him some certainty on his physical body. God doesn’t deceive him and he can thus say the physical things he experiences must also be true. Descartes concludes he is both a thinking entity called the res cogitans and a physical entity with height, width and length called the res extensa (1985 [1641] cited in Dooremalen, De Regt, & Schouten, 2007, p. 67). For Descartes, the res cogitans and the res extensa are two separate entities, but he thought the res cogitans was located in the pineal gland and only connected to the res extensa from there.

John Locke was inspired by Descartes philosophy and in his Essay Concerning Human Understanding he wrote “it was necessary to examine our abilities, and see what objects our understanding were and were not fitted to deal with” (1975 [1690], Epistle to the reader, p. 7).

“Whence has it all the materials of reason and knowledge? To this I answer. In one word, from experience. In that all our knowledge is founded, and from that it ultimately derives itself.” - (Locke, 1975 [1690], II.I.2)

In experience, Locke sees a combination of Descartes’ res extensa and res cogitans. He thinks knowledge comes from experience that is made up of external and internal senses he calls sensation (1975 [1690], II.I.3) and reflection (1975 [1690], II.I.4) respectively. He

continues his Essay by dealing with the qualities he applies to the world around us, but to us that is of little concern.

In line with Locke, David Hume thought that the science of man was absolutely necessary for any other science. In the same work, A Treatitise of Human Nature (1739, p. 43, Cited from Hume, 1985), he goes even further and wrote that ‘as the science of man is the only solid foundation for the other sciences, so, the only solid foundation we can give to this science must be laid on experience and observation.’

For Hume, what goes on in our mind are perceptions. This is somewhat similar to the experiences in Locke’s theory mentioned earlier. Perceptions, like Locke’s experiences come in two forms. Impressions are a bit like Locke’s sensations and are received through direct experience of data. Ideas are more like Locke’s reflections and are made up of former impressions (1739, p. 50, Cited from Hume, 1985). By stating that “all our simple ideas in their first appearance are derived from simple impressions, which are correspondent to them, and which they exactly represent,” (1739, p. 50, Cited from Hume, 1985), he founds the theory that ideas are copies of impressions. With the exception of mathematics and arithmetics, Hume now degrades everything that does not comply with this ‘copy principle’ to not being real knowledge (1748, p. 173, Cited from Hume, 1977, p. 13-173).

This brings him to his famous theory of cause and effect and his billiard ball experiment. According to the copy principle, we do not see or get the impressions of cause and effect between two colliding billiard balls but it is our mind that simply gets used to it happening. Our mind forms a habit of seeing a causal relation. Cause and effect is therefore not derived from impressions and thus, according to Hume, not real knowledge. After havig seen something happening a couple of times, it is in human nature to anticipate it will happen again. Dooremalen, De Regt, & Schouten put this into words nicely:

“Anticipation is simply drawing conclusions in the light of past experience: our experience teaches us to think the way we think. Concluding from cause to effect is the most important form of reasoning and (together with geometry and arithmetic) the basis of all our ‘knowledge’.” – (2007, p. 99)

That knowledge goes against Hume’s views so, in the words of Dooremalen, De Regt, & Schouten:

“He is forced to conclude that where human reason fails – which it does in almost every case – our habits are our guide to life. Reason is subordinate to our habits and customs, the result of a learning process instigated by the interaction between us and the world, which make us anticipate the future and believe that one thing is the cause of something else. But, again, we ought to be happy about this: without these habits, customs and passions we wouldn’t be able to do anything! Habit is, as it were, the great working hypothesis on which we base our actions and our thinking.” (2007, p. 99-100)

This learning process plays a major role in some of the theories on learning I will deal with in a later chapter. For Hume, this points to the conclusion that we actually cannot come to any real knowledge and Hume plunges into a scepticism that was even worse than Descartes’ radical doubt experiment. Hume decides to give up and surrender to this scepticism and just put it aside for the rest of his life (1739, p. 316, Cited from Hume, 1985). However sad it made him, his ‘habits of mind’ still prove very useful for modern day learning.

In his book Foucault and Social Dialogue: Beyond Fragmentation, Chris Falzon put it very beautifully:

“Encountering the world… necessarily involves a process of ordering the world in terms of our categories, organising it and classifying it, actively bringing it under control in some way. We always bring some framework to bear on the world in our dealings with it. Without this organizational activity, we would be unable to make any sense of the world at all.” – (1998, p. 38)

Cooper thinks an existentialist view on the world solves the basic problems that passed our review here. He explicitly mentions four of these in his 1990 book, being subjects versus objects, mind versus body, reason versus passion and fact versus value. We are not something separate of this world, but we are in this world and it is impregnated with human purposes and concerns, but at the same time we are a part of the outcome of our own interaction with the world (Cooper, 1990, cited from Jarvis, 2006).

The mind versus body reply of Marcel (1976) as used by Cooper (1990) is a very interesting view and according to Jarvis (2006) necessary to use when discussing learning. “The mind is embedded within the neurological mechanism of the brain and cannot eather be separated from it nor confused with it; indeed, we cannot saparate a self from its body nor a living body from its self. We are both physical and mental entities. Hence, when I do something it is not a

mindless activity, but neither is it two activities – thinking and doing – but it is one human phenomenon since I am my body as well as my mind."

These modern day replies on the famous classical philosophers give us a good base to continue. I am not going to discuss the philosophy of science any further, but the theories discussed so far, all have something to do with how we perceive ourselves as being in the world. A bridge between being in the world and being with others, is the period of time in which the philosophers mentioned above lived.

In 1990, S. Toulmin wrote that:

"Between 1660 and 1720, few thinkers were only interested in accounting for mechanical phenomena in the physical world. For most people, just as much intellectual underpinning was required for the new patterns of social practice, and associated ideas about the polis (the Greek city-state). As a result, enticing new analogies entered social and political thought: if, from now on, 'stability' was the chief virtue of social organization, was it not possible to organize political ideas about society along the same lines as scientific ideas about nature?" - (1990, p. 107)

Dooremalen, De Regt, & Schouten write that:

"Thinkers tried to achieve the same positive result with regard to the behaviour of man (both in predicting and explaining) as Newton did with regard to the behaviour of dead matter (cannon balls, pendulums and planets). The prevailing belief was that Europe could only be freed from the negative consequences of political upheaval if scientists succeeded in offering a scientific approach to the question how we ought to design human society." - (2007, p. 95)

2.2.2. I am with others

Descartes' radical doubt, Hume's scepticism and the modern brain in a vat theory could make you believe there is nothing to know about the world outside of us. That means we would also be unable to know anything about others around us. For all we know they could be nothing but illusions or electrical stimuli to our brain sent by a computer. For the sake of this research, we assume that we can know some things for sure. That we are not alone on this earth and that we live in a society are things we take to be facts. The history of how we look at society dates back as far as the history of how we look at science. Plato and Aristotle

are again more or less responsible for creating a field of study, as they did with the philosophy of science and science itself; the study into society and how we interact with other human beings. It is difficult to address this topic in the same way as I did with being in the world, so the approach is a little different here. I will not take a walk through the history of the social context of human learning. In his 2006 book, Jarvis writes that he thinks every theory of learning is an attempt to understand the process of human learning. For Jarvis, this is a process that is located within the wider context of human society. I will follow this approach, while first discussing some interesting parts of the wider context of human society.

Earlier I mentioned it is reason that separates us from other species. Reason made it possible for our species to develop a more complex form of communication than any other species. It is through language that we unlock the potential of being with others. Language is relative and subjective. It is closely tied to the world directly around us.

One of the biggest and most influential changes ever in human society is globalization and the information era. The world has become a lot smaller than it used to be hundreds and thousands of years ago and our social circle a lot bigger! Williamson points to two factors that have been heavily influenced by the ongoing globalization. “People live their lives in and through others, so that their understanding of themselves is inter-subjective and people strive to live meaningful lives” (1998, cited from Jarvis, 2006).

Earlier I mentioned the UNESCO Faure report in which it was written that man is biologically unfinished and needs to learn from his surroundings in order to survive (1972). Gehlen replies to this in 1988 by calling this ‘learning from man’s surroundings’ culture:

“In order to survive, he [humankind] must master and recreate nature, and for this reason man must experience the world. He acts because he is unspecialized and deprived of a natural environment to which he is adapted. The epitome of nature restructured to serve his needs is called culture and the culture world is the human world… Culture, therefore, is ‘second nature’ – man’s restructured nature.” – (Gehlen, 1988, p. 29)

Even Charles Darwin, the inventor of the theory of evolution, knew about the importance of social co-operation (1871). In 1902 Kropotkin wrote that Darwin:

“Pointed out how, in numberless animal societies, the struggle between separate individuals for the means of existence disappears, how struggle is replaced by co-operation, and how that substitution results in the development of intellectual and moral faculties which secure to

the species the best conditions for survival. He intimated that in such cases the fittest are not the physically strongest, nor the cunningest, but those who learn to combine so as mutually to support each other, strong and weak alike, for the welfare of the community." (Kropotkin, 1972 [1902], p. 9)

This quote is mostly directed at the animal kingdom. In his documentaries on ants for example, famous naturalist David Attenborough leaves little question on the truth of this quote. But it is not that difficult to apply this quote to humanity and with the words of Gehlen, if you understand the wider sense of culture to entail co-operation as well, it's even easier. What's interesting however, is that Kropotkin writes about the need to learn to support each other. In the animal kingdom, this is mostly through instinct, but the UNESCO Faure report (1972) has shown that humanity lacks this instinct and Jarvis continues on this. It means that we, human beings, have to acquire this second nature and pass it on from generation to generation (2006).

"Culture is all the knowledge, skills, attitudes, beliefs, values and emotions that we, as human beings, have added to our biological base. Culture is a social phenomenon; it is what we as a society, or a people, share and which enables us to live as society. In order for humanity to survive, it is necessary that we should learn our culture. Learning, then, becomes necessary for the survival of societies and in the process we, as human beings, learn to be. This learning occurs through personal interaction with significant others (Mead: see Strauss, 1964) in the first instance, and then within the wider life-world." – (Jarvis, 2006, p. 55-56)

In 1900, Dewey already wrote about learning to take place in this order. In his work on education, Dewey discusses the steps and stages that make us learn how culture and society works, the process of socialization. First, there is the small scale household learning at childhood phase, then the lower and higher education at school, and only after that, after being prepared in most cases, we enter the wider life-world (1915 [1900]).

Berger and Luckmann have divided this process of socialization into two phases:

"Primary socialization is the first socialization an individual undergoes in childhood, through which he [sic] becomes a member of society. Secondary socialization is any subsequent process which inducts an already socialized individual into new sectors of the objective world of his society." – (1966, p. 150)

Primary socialization usually occurs in the family situation, where the child learns the language and basic culture from the parents. Secondary socialization occurs in the phase of growth where the child becomes more self-aware and starts school, joins sportclubs, goes to university and starts the working life. Learning organization specialist Peter Senge, who will play a big role in later parts of this research, rings the alarm bells in his reply to the traditional view of how we acquire understanding of society, while at the same time emphasizing the influence of secondary socialization institutions. He warns us that the way we transmit our culture from generation to generation in these secondary socialization institutions has very negative side effects:

“Human beings are designed to learn. “The drive to learn,” says the anthropologist Edward T. Hall, “is more basic than the drive to reproduce,” (1997). Our primary social institutions, work and school, are designed to control – and with the breakdown of our family structures, these institutions are increasingly pivotal in shaping social norms and behaviours. The young child learns very quickly that school is not about learning. School is about avoiding mistakes. School is about getting the right answers. School is about gaining approval and avoiding disapproval. These are the same lessons the first time worker learns. Don’t screw up, do what you’re told, if something is screwed up make sure you don’t get blamed, at all costs look good.” - (Foreword by P. Senge in Markova & Powell, 1992)

By some this is seen as controversial. I use it mostly to stress the importance and influence but also the negative side-effects of the social education institutions that nowadays pass on our culture from generation to generation.

2.2.3. I am with others in the world

To show the importance of seeing both being in the world and being with others at the same time and as a whole, like Macquarrie wrote in 1973, I need the words of Jarvis again.

“Being, and therefore becoming, lie at the heart of our thinking about learning, but – and we need to emphasise this from the outset – thinking per se is but one element in it. Thinking is a function of our existence and not the proof of it. Because we are, we both think and act and by so doing we learn and, therefore, continue to become. Learning is the process of being in the world. At the heart of all learning is not merely what is learned, but what the learner is becoming (learning) as a result of doing and thinking – and feeling. Indeed, the mind really is not like a computer just performing functions, as it does experience the outcomes of

sensations […]. While it is conceptually mistaken to liken the mind to a computer, the computer may have some similarities to our brain. But as human beings we are much more than these computational functions. We do have experiences, feel and have emotions. And we do learn from and through our feelings. At the heart of this process, therefore, is the learner as a whole person and, therefore, the learner's self. But self is formed through existing and interacting with people. We actually learn to become a person and this occurs within our own life-world; it is a social process (see Mead in Strauss, 1964; Schutz, 1967). Indeed the demands of our life-world also determine to a great extent the opportunities that we have to learn. Learning then, is a much more profound phenomenon than just teaching dogs to salivate or rats to explore the mystery of a maze in search of food; it is fundamental to our humanity and to our society. It is about the way that human beings are in the world and the world in them – it occurs at the intersection of humanity and society – it is more than experiential, more than physiological psychological and so on. Understanding it more fully is a momentous integrated multi-disciplinary project." (2006, p. 6)

Jarvis points out the importance of seeing the human being, a human person as a whole. The impact and importance of seeing the whole picture comes back in later parts of this research. Another important point that has come up in this chapter is that of space and time (both physical and social space and time). Jarvis points out the major influence this has on human learning, which will come back when discussing learning organizations later in this research:

"It is important to note that we cannot escape from the concepts of space and time in our thinking about learning – both past time and future time – for we learn by reflecting upon the past and also from planning for future activities, and we also do so within a social context." (2006, p. 5)

Especially the importance of the space and time of the social context and culture we grow up in, has been shown in the previous section. We are hugely dependent on the culture we are born in, but with ever-increasing globalization, this effect is diminishing. Today newborn children grow up in a multi-cultural and multi-social world. They have not only to deal with the culture of their parents, but also with the cultures of their classmates at school, which are a lot more diverse than fifty or a hundred years ago… The clash between the non-multi-culturally educated people that are now adults and the children that grow up in a multi-cultural world and will become adults in the next five to twenty years is already showing in election results across the world for example. We are not living in an era of change but in a

change of eras. Being in the world with others keeps changing and will even more radically change over the next years. This is something to keep in mind for the rest of this study.

3. The Learning Person

3.1. Introduction

In the previous chapter, I have discussed the way we, human beings, are in the world with others. It was inevitable to discuss some points of the learning person already. In this chapter, I will discuss the learning person in more detail, while also looking at some important and well-known theories of learning. A very important note is made by Jarvis on the concept of human learning:

"I have used the term 'human learning' here because some scholars, notably some of those from an organizational learning background, want to use the term to refer to change and development in organizations and even to society. […] However, I will argue that this is a false understanding of learning, or at the very least a de-personalized concept of a human process, although there are considerable similarities between aspects of human learning and organizational change, since both have outcome, function, development and process. There is, however, one fundamental difference: learning is about experience, usually conscious experience. Organizations may have a life of their own but they do not have experiences and so, for instance, their learning cannot begin from seeing a green apple fall to the ground! It takes a member of the organization to have that experience and then to implement whatever learning that has occurred into the organization's procedures and structures in order to change them, thereby changing other people, their social context and their actions. To use learning to describe organizational processes is to try to de-humanize something that lies at the heart of humanity itself, of personhood and while it may reflect the tenor of this age, using the term in this way deprives learning of something fundamental to itself." (2006, p. 4)

Jarvis writes that it takes a human being, a person (!), to have a learning experience and implement it into the organization. In this chapter I deal with learning in the way Jarvis intends it, being the learning person. The next chapter however will deal with learning as a reference to change and development in organizations, hence the learning organization. There, I will try to argue that the point Jarvis makes is indeed a good point, but that there's more to it than meets the eye. I will also introduce the concept of 'learning by proxy' that I have not been able to find anywhere else, which would make writing it in this study a new contribution to the field of learning organizations theory and even to the broader field of learning theory itself.

Something else entirely, that must be mentioned here again, is that learning is a lifelong process and occurs from before birth until our final breath. As Dewey shows, children learn in different social contexts than adults (1915 [1900]), but Jarvis points out that “we should not seek to regard children’s learning […] as necessarily different from adult learning,” (2006, p. 4). This study focuses on learning organizations and adults. Children have very little to do with the part of the adult world that contains those organizations, so children’s learning is left out of this study, but not because it’s so much different. It’s just not relevant, but where it is, I will emphasize it.

3.2. Theories of learning

Before discussing some theories of learning that contain important pieces for this study, a general remark made by Illeris should be quoted. He, as did Jarvis (2006), points out that because a single comprehensive framework has not yet been created, it is very difficult to take a helicopter view on the field of theories of learning. It would have been very nice for this study if such a framework had existed, but it is not fatal [for this study] because Illeris discusses sixteen important and influential theories in his book Contemporary Theories of Learning (2009).

"Learning is […] a very complex matter, and there is no generally accepted definition of the concept. On the contrary, a great number of more-or-less special or overlapping theories of learning are constantly developed, some of them referring back to more traditional understandings, others trying to explore new possibilities and ways of thinking. It is also worth noting that whereas learning traditionally has been understood mainly as the acquisition of knowledge and skills, today the concept covers a much larger field that includes emotional, social and societal dimensions. For example, learning sometimes takes on the nature of competence development, which has to do with the ability to manage different existing and future challenges in working life and many other fields of practice. It is thus quite difficult to obtain an overview of the present situation of the understanding of the topic of learning." – (Illeris, 2009, p. 1).

With this being said, I will look into five learning theories that contain relevant bits for my study into learning organizations. I will start with the theories of Illeris and Jarvis. They have both tried to create the framework for all other theories I mentioned earlier, but from a different angle. Illeris was mostly involved with the process of learning itself and Jarvis' approach is mostly through the person that learns. I think these theories actually fit together quite well. Then I will discuss the theories of Mezirow and Kegan. Mezirow came up with a theory of transformative learning that has found a place in the theory of Illeris. Kegan goes into further detail of transformative learning. Elkjaer's theory is the last one I will discuss. Her theory is based on pragmatism and the writings of earlier mentioned John Dewey. She is also very close to some parts of what I want to study in learning organizations in the next chapter, so her theory is a nice bridge to that chapter.

3.2.1. Knud Illeris

Knud Illeris is a Danish learning expert and after Jarvis, he also tried to create a framework for all theories of learning. I have mentioned his book on that earlier. Apart from the framework he tried to build, he also presented an interesting theory of learning himself that was in his book The Three Dimensions of Learning (2002) and explained more elaborately in his book How We Learn (2007). I will discuss that theory briefly.

First off, Illeris holds the following definition of learning:

"*Any process that in living organisms leads to permanent capacity change and which is not solely due to biological maturation or ageing*. This very open definition is, as I see it, in line with important modern understandings of learning as something much broader and more complicated than the traditional conception of learning as 'the acquisition of knowledge and skills'." – (2007, p. 3)

For Illeris, learning occurs in a combination of two basic processes that connect three dimensions. These processes are on the one hand an internal psychological process of aquisition and on the other hand an external interaction process between the learner and its environment (2007). Illeris points out that many theories of learning discuss only one of the two processes, which is okay, but they narrow down the understanding of learning. Illeris stresses to see the whole, to get a complete understanding. Illeris draws the two processes to form a triangle. The vertical axis is the interaction process between individual (up) and environment (down). The aquisition process is the horizontal axis and is located on the individual level, to separate content (left) and incentive (right). The main point of his theory is that learning always involves these three dimensions (interaction with environment, content and incentive) (2007). A figure drawn by Illeris to depict the connections and give a better understanding of the whole is given below.

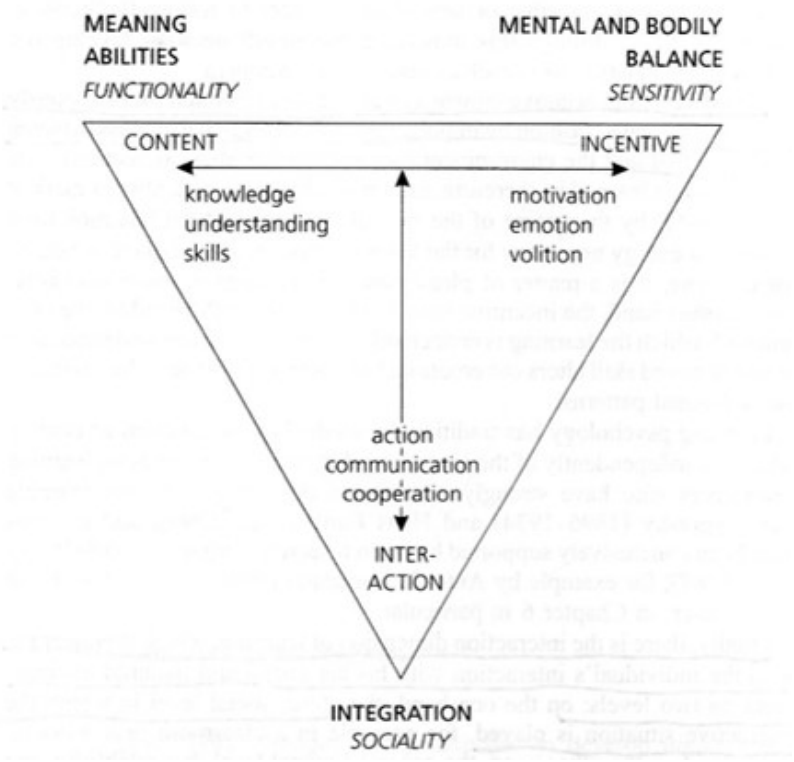

Figure 1. Illeris' 2007 model of three dimensions of learning

"The content dimension concerns what is learned. This is usually described as knowledge and skills, but also many other things such as opinions, insight, meaning, attitudes, values, ways of behaviour, methods, strategies etc. may be involved as learning content and contribute to building up the understanding and the capacity of the learner. The endeavour of the learner is to construct meaning and ability to deal with the challenges of practical life and thereby an overall personal functionality is developed.

The incentive dimension provides and directs the mental energy that is necessary for the learning process to take place. It comprises such elemats as feelings, emotions, motivation and volition. Its ultimate function is to secure the continuous mental balance of the learner and thereby it simultaneously develops a personal sensitivity. […]. The interaction dimension provides the impulses that initiate the learning process. This may take place as perception, transmission, experience, imitation, activity, participation etc. It serves the personal integration in communities and society and thereby also builds up the sociality of the learner. However, this building up necessarily takes place through the other two dimensions." – (Illeris, 2009, p. 10-11)

Illeris also writes about types of learning that are based on something we have already seen in the theory of Hume mentioned earlier. The habits of mind that, according to Hume, allow us to order and organize the things we know, Illeris calls 'mental schemes' (2009). What we learn is sorted and arranged in our mental schemes. The process of sorting and arranging,

was first given two types by Jean Piaget (1952, 1954). Illeris expands this view into four types of learning. These are cumulative, assimilative, accommodative and transformative learning. Cumulative learning happens when we have no prior knowledge of the matter. This happens most often in children. Assimilative learning is most common and happens when we simply expand prior knowledge. Accommodative learning demands more mental energy because it happens when we come across a situation that doesn't really fit into our existing mental schemes, so we need to reconstruct some parts of existing mental schemes to fit the new experience in neatly. Transformative learning is the most demanding type. It happens when we come across a situation that drastically changes the way we see the world around us and thereby changes us as a person. It is a life-changeing experience but it can also be achieved through such an experience. Mezirow (1991, 2000) and Kegan (1982, 1994, in Mezirow (2000)) write about transformative learning a lot more that I will discuss later.

Another important part of Illeris's theory of learning is that of barriers to learning and learning not to occur as a consequense of those barriers. Illeris makes a difference between non-learning because of 'defence mechanisms' and non-learning because of 'mental resistance'. Anna Freud was first to come up with a theory on these defence mechanisms in her book The Ego and the Mechanisms of Defence (1942) and Illeris picks this up. A very fierce form of defence is 'identity defence' (2009). This form of defence occurs often when people are fired and then forced to accept a completely different job than they used to have. A police officer that does the dangerous field work might have an indentity crisis when he or she is put behind a desk, because 'catching criminals' is his or hers identity and not writing forms… A welder might identify so strongly as a welder that a different job doesn't fit in his or her identity, or he or she can not imagine doing something else. 'Ambivalence' poses a defence mechanism where the person knows he or she has to learn, but doesn't really want to learn (Illeris, 2009). The welder knows that his or her days as a welder are over, because most of the welding is now done by robots, but there is a defence mechanism against learning a different job. Ambivalence and identity defence go hand in hand very well. Resistance is, according to Illeris, a psychologically different kind of barrier.

"In practice it is sometimes quite difficult to distinguish between non-learning caused by defence and non-learning caused by resistance. However, psychologically there is a great and important difference. Whereas the defence mechanisms exist prior to the learning situation and function reactively, resistance is caused by the learning situation itself as an active response. Thus resistance contains a strong mental mobilization and therefore also a strong learning potential, especially for accommodative and even transformative learning. Often when one does not just accept something, the possibility of learning something

significantly new emerges. And most great steps forward in the development of mankind and society have taken place when someone did not accept a given truth or way of doing or understanding things." – (Illeris, 2009, p. 16)

In some situations, Illeris advises, it is very useful to actively search for this mental resistance and promote it, because it can help aquire highly sought after competencies such as independence, responsibility, flexibility and creativity. It's a demanding technique to use, but the lessons learned through it are valuable (2009). Mental resistance and defence mechanisms will come back in later parts of this study.

3.2.2. Peter Jarvis

Peter Jarvis is a British lifelong education expert. His lifework on different educational topics comes together in his trilogy Lifelong Learning and the Learning Society, of which I have already mentioned the first volume (Towards a Comprehensive Theory of Human Learning, 2006). The other volumes are Globalisation, Lifelong Learning and the Learning Society (2007) and Democracy, Lifelong Learning and the Learning Society (2008). In these works, Jarvis tries to build a framework to fit in all theories of learning, which he approaches from an existential philosophical point of view. He claims that a proper philosophical analysis is, however, still missing from this framework (Jarvis in Illeris, 2009).

I have discussed Illeris' process based approach and will now discuss Jarvis' learning person approach. Despite the differences in their approach, they have some things in common, which is not entirely surprising as they both attempted the same thing. Jarvis's definition of learning is, except the differences in their approach, not so different from Illeris's definition:

"I now regard *human learning as the combination of processes whereby the whole person – body (genetic, physical and biological) and mind (knowledge, skills, attitudes, values, emotions, beliefs and senses): experiences a social situation, the perceived content of which is then transformed cognitively, emotively or practically (or through any combination) and integrated into the person's individual biography resulting in a changed (or more experienced) person*." – (Jarvis, 2006, p. 13)

Another similarity is that they both write that it is about the combination of internal and external processes:

“Our action is always in the world, always engagement with the world (both the physical and the human social world) that we experience and these experiences become data for our own thinking, so that the idea of experiential learning points us in the direction of philosophy, amongst other things, and it is what we ‘do’ with our experience that lies at the heart of our understanding of learning. Our experience occurs at the intersection of the inner self and the outer world and so learning always occurs at this point of interaction, usually when the two are in some tension, even dissonance, which I have called ‘disjuncture’. In fact, the desire to overcome this sense of dissonance and to return to a state of harmony might be seen as a fundamental motivating force in learning, and the disjunctural state may be said to be one in which a need has to be satisfied.” – (Jarvis, 2006, p. 6-7)

Jarvis, as did Illeris, stresses the importance of seeing the whole, that is, the combination of both the internal and external process (2006). For both, these are different processes through a combination of/at the intersection of which learning occurs.

In his own theory of learning, Jarvis, as said before, focuses mainly on the person that learns and the changes that occur in that learning person. For Jarvis, it is crucial to understand that an individual is social (in Illeris, 2009), but also mind and body at the same time. This combination, the human being as social and a mind-body thing, is one of the big themes in Jarvis’s theory, with the main point of his theory being an existentialist one. Being is always becoming and the person is continually changing and developing by learning new things. Put by Jarvis nicely:

“We see that as a result of learning, we become changed persons and so only in being can we become and in learning we experience the process of becoming. Indeed, I am changed and so, therefore, is the situation in which I interact. Consequently, we can conclude that learning involves three transformations: the sensation, the person and then the social situation. […]. For as long as I can continue to learn, I remain an unfinished person – the possibility of more growth, more experience and so on remains – or I am still learning to be me! Philosophically speaking, I only am at the moment ‘now’ and since I cannot stop time I am always becoming; paradoxically, however, through all that becoming I always feel that I am the same self. Being and becoming are inextricably intertwined, and human learning is one of the phenomena that unite them, for it is fundamental to life itself.” – (In Illeris, 2009, p. 29)

Through years of studying learning persons, both from their personal point of view and from an external point of view, Jarvis managed to upgrade the basic and famous learning cycle

created by David Kolb (1984) and published it in the book Adult Learning in the Social Context (1987). It's a complicated but, according to Jarvis himself, still too simple representation of our learning cycle (see figure 2 below).

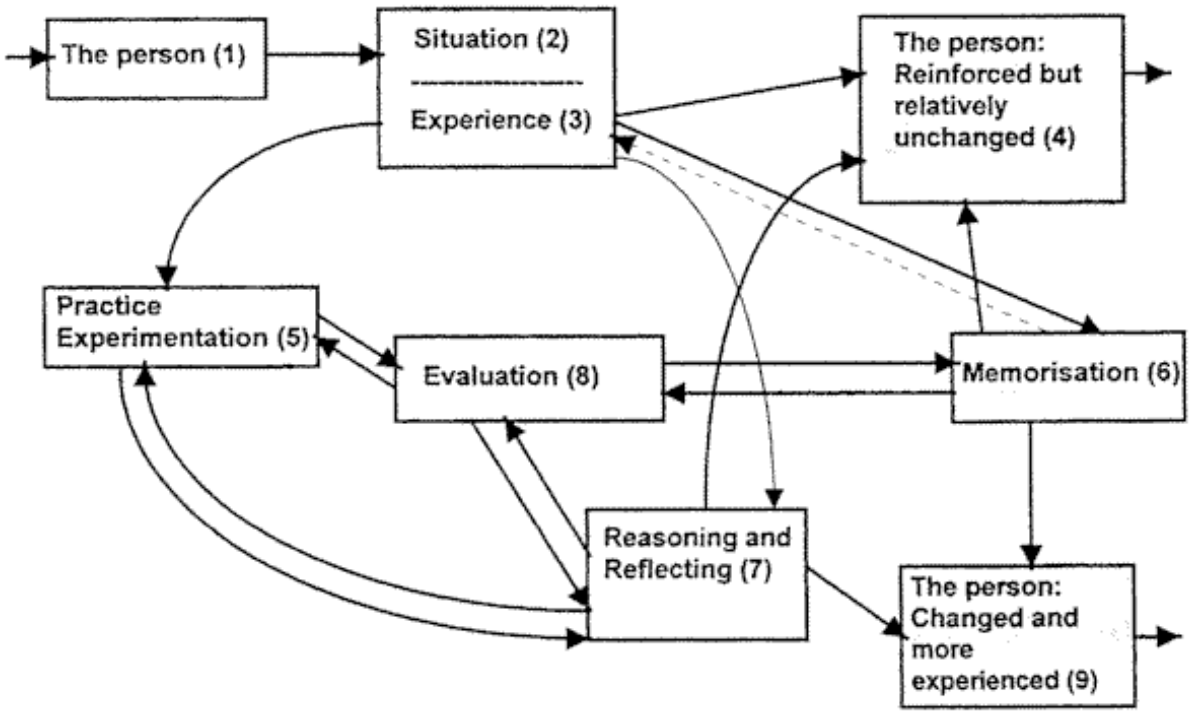

Figure 2. Jarvis' 1987 model of learning.

If we recall the types of learning Illeris wrote about, we can see the effects of assimilative and accommodative/transformative learning on the person in boxes 4 and 9 respectively. Cumulative learning doesn't occur in adult learning very often so it's not necessarily shown in this model. I will later come back on transformative learning and focus on Jarvis' theory for now.

In Jarvis' theory there is also a part we have already seen in Hume (1977 [1748]) and Illeris (2009). The mental schemes, or categories of mind, we use to order and arrange our knowledge and everything we learn extra. For Jarvis, this arranging and organizing our view on the world occurs when we give meaning to our sensations. We, as mind-body beings, give it a brain language and after that, as social beings, give this meaning through our social language, which is almost completely culturally determined. Jarvis puts it like this:

"Both adult and child have to transform the sensation to brain language and eventually to give it meaning. It is in learning the meaning […] of the sensation that we incorporate the

culture of our life-world into ourselves; this we do in most, if not all, of our learning experiences." – (In Illeris, 2009, p. 26-27)

It is also in this that Jarvis, probably not intentionally, confirms the worries expressed by Peter Senge that I mentioned earlier on:

"The more opportunities we have to practise the answer to our initial question, the better we will commit it to memory. Since we do this in our social world, we get feedback, which confirms that we have gotten a socially acceptable resolution or else we have to start the process again, or be different from those people around us. A socially acceptable answer may be called correct, but here we have to be aware of the problem of language – conformity is not always 'correctness'. This process of learning to conform is 'trial and error' learning – but we can also learn to disagree, and it is in agreeing and disagreeing that aspects of our individuality emerge." – (Jarvis in Illeris, 2009, p. 27)

As said before, Jarvis claims that a proper philosophical analysis is still missing. This is based on his ideas on the relation between mind and body. In Illeris (2009), Jarvis writes about five different theories on that relation as described by philosopher Keith Maslin in his book An Introduction to the Philosophy of Mind (2001). This is one of the big philosophical and scientific questions I wrote about in chapter 2 that still has no universally accepted answer (Maslin has five possible answers, for example). Before we can ever fully understand the process of human learning, Jarvis says (in Illeris, 2009), we need an answer to those philosophical questions that have kept humanity awake at night for thousands of years.

3.2.3. Jack Mezirow & Robert Kegan

Jack Mezirow

The two authors discussed before had an elaborate theory of learning based on certain philosophical principles. The next two authors focus on the more specific part of the field of human learning that is transformative learning. Jack Mezirow is more or less the inventor of this concept. Inspired by philosophers Paulo Freire and Jürgen Habermas, he first launched it as a professor of adult education (1978a) and introduced it in the field of adult education in the article Perspective Transformation in the American journal Adult Education Quarterly (1978b).

Mezirow defines transformative learning:

“The process by which we transform problematic frames of reference (mindsets, habits of mind, meaning perspectives) – sets of assumption and expectation – to make them more inclusive, discriminating, open, reflective and emotionally able to change.” – (Mezirow in Illeris, 2009, p. 92)

These frames of reference, mindsets or habits of mind are equivalent to the mental schemes in Illeris and Jarvis, so I can assume a consensus on this between them. This also applies to the next author. Mezirow writes that it is because of these frames of reference that we can function without having to think about every single sensation all the time. It’s an automated process in our mind. He also stresses “we have a strong tendency to reject ideas that fail to fit our pre-conceptions” (in Illeris, 2009). Which also supports the claim made by Illeris (2009) on barriers to learning.

Mezirow divides frames of reference into two dimensions (not the dimensions of learning Illeris writs about). These are habits of mind and points of view that result from these habits of mind and he explains them like this:

“Habits of mind are broad, abstract, orienting habitual ways of thinking, feeling and acting, influenced by assumptions that constitute a set of codes. These codes or canon may be cultural, social, linguistic, educational, economic, political, psychological, religious, aesthetic and others. Habits of mind become articulated in a specific point of view – the constellation of belief, memory, value judgement, attitude and feeling that shapes a particular interpretation. Points of view are more accessible to awareness, to feedback from others.” – (In Illeris, 2009, p. 92)

Distinguishing between two separate parts in frames of reference makes it easier to understand the difference between accommodative learning and transformative learning. Based on the description of accommodative learning Illeris gave (2009), it is possible to apply that kind of learning to points of view, but then and only then when the change solely appears in a point of view. Transformative learning, as seen by Mezirow, can consequently be applied to the habits of mind. Changing a particular interpretation demands less mental energy than changing the way you came to that interpretation, that is, the very source of it.

Mezirow distinguishes two important elements in transformative learning. On the one hand that is critical reflection on assumptions (on our frames of reference), whether they are your

own or someone else's. On the other hand that is participating in dialectical discourse and being open to other ways of thinking, to come to the best reflective judgement (in Illeris, 2009, p. 94). This combined with the fact that going against a frame of reference demands a lot of mental energy, transformative learning is the most difficult way of learning but also the most rewarding, as we have seen in the types of learning by Illeris (2009) and will also see with the next author. If we take Jarvis' 1987 model of learning (figure 2 above), we can add dialectical discourse as a box below box 7 and connected to box 7 with a double arrow. This would allow for a division between accommodative and transformative learning in box 9. This way, it becomes clear that the theories discussed so far are compatible. (This paragraph and the one before are personal suggestions to the discussed theories).

Robert Kegan

Robert Kegan came up with a stage model of human development in a book called The Evolving Self (1982) and thereby got interested in Mezirow's theory of transformative learning. Kegan and Mezirow have worked together for the book Learning as Transformation: Critical Perspectives on a Theory in Progress by Mezirow and associates (2000).

Kegan worries about transformative to lose its proper meaning. More and more is put under this header and so the essence is at risk of being lost (in Illeris, 2009, p. 41). He sums up a few factors that he thinks need be more explicit and in that he dives deeper into the theory of transformative learning. I will discuss some of the factors Kegan thinks are essential for a proper understanding.

Kegan, as the other authors we have already seen, thinks there is some kind of structure of our mind. Frames of reference or mental schemes also appear in Kegan's approach. He calls them 'forms'. This makes it possible for him to distinguish between two types of learning. These are informative learning and transformative learning (in Illeris, 2009). The way Kegan names them, tells a lot about what they entail. Informative learning is based on increasing the contents of our form, or frames of reference. Assimilative and accommodative learning (Illeris, 2009) fall mostly in the scope of informative learning. It adds knowledge into the existing 'form of our way of knowing'. Transformative learning on the other hand goes beyond simply adding knowledge. It even goes further than changing the form of our way of knowing; it increases the capacity of the form itself. It doesn't renovate but it expands the building in which we house our knowledge. "Both kinds of learning are expansive and valuable, one within a pre-existing frame of mind and the other reconstructing the very frame" (Kegan in Illeris, 2009, p. 42). Kegan rightly points out that both types of learning absolutely

have value and can both be preferred over the other, depending on the circumstances. In some cases informative learning can have more practical value than transformative learning and it's exactly the same vice versa. Kegan also explicitly states that we should not be too eager to use the concept of transformative learning:

"Transformation should not refer to just any kind of change, even to any kind of dramatic, consequential change. […]. Changes in one's fund of knowledge, one's confidence as a learner, one's self-perception as a learner, one's motives in learning, one's self-esteem – these are all potentially important kinds of changes, all desirable, all worthy of teachers thinking about how to facilitate them. But it is possible for any or all of these changes to take place without any transformation because they could all occur within the existing form or frame of reference." – (Kegan, in Illeris, 2009, p. 42-43)

It is clear now that to Kegan, transformative learning is a really big deal. This illustrates the statement I made in the part on Mezirow, that accommodative learning is applicable to points of view if it results in change of the point of view only and not in the habit of mind that lies beyond it. For Kegan, this means that a frame of reference, with both the habit of mind and the point of view in it, is a way of knowing. It is not *what* we know but *how* we know. Through transformative learning, we change our epistemologies (in Illeris, 2009).

3.2.4. Bente Elkjaer

Bente Elkjaer is a Danish expert that was inspired largely by philosopher John Dewey. Her works on learning theory are based on his (philosophical) pragmatist views. Compared to the earlier mentioned theorists, Elkjaer takes a rather different approach. Her own works focus on working life learning and her interpretation of the philosophy and learning theory of Dewey presents an interesting view for this study.

Important to acknowledge is that Dewey's view on pragmatism or philosophical pragmatism, so says Elkjaer, is different from the way everyday pragmatism is interpreted. Philosophical pragmatism, according to Elkjaer, "concerns the understanding of the meanings of phenomena in terms of their consequences. That is, meaning is not ascribed in a priori terms ('if-then'); rather, it is identified by anticipating 'what-if' consequences to potential actions and conduct" (in Illeris, 2009, p. 76). Philosophical pragmatism interprets things based on their possible results, whereas everyday pragmatism is focused mostly on achieving those results.

This is an important difference and in the context of this study, I use pragmatism in the philosophical sense. In the next chapter, pragmatist views will prove very valuable.

Another difficulty in the theory of Dewey is his terminology. Especially the concept of experience is ground for a lot of confusion, as it is not the concept of experience Descartes, Locke, Hume and other philosophers use. Even the other learning theorists have a different view on experience. In short, because it is not relevant here to do a complete explanation, the Deweyan concept of experience is comparable with life as an experience in itself. Experience in Deweyan sense is not gained and extracted through living, but the experience of life as lived by us. So being in the world with others (as seen in chapter 2) can be seen as this experience. Elkjaer points out that:

“Experience is a series of connected organic circles, it is transaction, and it is the continuous relation between subject and worlds. Experience is an understanding of the subject as being in the world, not outside and looking into the world, as a spectator theory of knowledge would imply. The subject-in-world is the foundation for becoming knowledgeable of the world and of selves, because it rests upon a bond between action and thinking, being and knowing.” – (In Illeris, 2009, p. 79)

Metaphorically it can be seen as if we, as individuals, live inside the book that tells the story of our life (the Deweyan experience) while at the same time being the author of said book.

As became clear in chapter 2, we are still an unfinished product. We are ever changing through our relation with the world around us. Being is always becoming and this is applicable to the Deweyan interpretation of life. Where the existentialist approach takes learning from the interaction with our surroundings as its basis (learning from past events), the pragmatist approach takes learning from an anticipated interaction with our surroundings as its basis (learning from future events). Dewey provides a perfect combination of both in his claim that “to ‘learn from experience’ is to make a backward and forward connection between what we do to things and what we enjoy or suffer from things in consequence” (1980 [1916], p. 147). For Dewey, learning cannot only happen through past events, but also from an “anticipatory imagination of consequences, which may be tested in action” (1986 [1933], 1986 [1938]). It is that forward connection specifically that will prove vital in the next chapter.

4. The Learning Organization

4.1. Introduction

“During the last 10-15 years, learning has become a key topic, not only for professionals and students in the areas of psychology, pedagogy and education, but also in political and economic contexts. One reason for this is that the level of education and skills of nations, companies and individuals is considered a crucial parameter of competition in the present globalised market and knowledge society. It is, however, important to emphasize that the competitive functions of learning are merely a secondary, late-modern addition to the much more fundamental primary function of learning as one of the most basic abilities and manifestations of human life.” – (Illeris, 2009)

There is no single theory of learning that, in its whole, is applicable to both the learning person and the learning organization. There are, however, elements of multiple different theories that, if combined, can show how an organization is capable of learning. Perhaps there is some room for a chapter in the framework of theories of learning that Jarvis (2006, 2007, 2008) and Illeris (2009) were trying to create that discusses organizational learning instead of human learning. This chapter tries to find out if these two are compatible. I already wrote about Jarvis’ aversion against this in chapter three (Jarvis, 2006). I will first look into the similarities and differences of both. Then I will discuss the most influential theory of organizational learning by Peter Senge and show where and how elements of the earlier mentioned theories of human learning have their influence on it.

4.2. Similarities and differences in learning

Jarvis, as mentioned above, saw some similarities, but made the important point that an organization itself is not able to see an apple fall from a tree and implement that knowledge. It takes a person to do this (2006).

Reconsider the definition of learning Jarvis proposed:

"*Human learning is the combination of processes whereby the whole person – body (genetic, physical and biological) and mind (knowledge, skills, attitudes, values, emotions, beliefs and senses): experiences a social situation, the perceived content of which is then transformed cognitively, emotively or practically (or through any combination) and integrated into the person's individual biography resulting in a changed (or more experienced) person.*" – (Jarvis, 2006, p. 13)

It is not difficult to imagine a definition where the human part is replaced by an organizational part without changing the scope of the definition.

Organizational learning is the combination of processes whereby the whole organization – body (genetic, physical and biological) and mind (knowledge, skills, attitudes, values, emotions, beliefs and senses): experiences a social situation, the perceived content of which is then transformed cognitively, emotively or practically (or through any combination) and integrated into the organization's individual biography resulting in a changed (or more experienced) organization.

It becomes even easier in the definition Illeris proposed:

"Any process that in living organisms leads to permanent capacity change and which is not solely due to biological maturation or ageing. This very open definition is, as I see it, in line with important modern understandings of learning as something much broader and more complicated than the traditional conception of learning as 'the acquisition of knowledge and skills'" – (Illeris, 2007, p. 3)

Replacing the human part by an organizational part actually makes sense and it even accounts for the broader and more complicated understanding of learning as 'the acquisition of knowledge and skills'.

Any process that in organizations leads to permanent capacity change and which is not solely due to organizational maturation or ageing.

It is an entity that has a material and an immaterial part, like we do. It is always evolving, continually interacting with its surroundings and trying to adapt to it. Even in the existential perspective, the similarities are huge. We can easily apply the three dimensions of learning Illeris wrote about (2007) and an organization also fits Jarvis' 1987 model of learning. An organization also has learning types and barriers to learning. It can also take a philosophical pragmatist approach to learning, as we will see later. But still, Jarvis has a vital point. We cannot personify an organization. It's not an entity with sensations and emotions. It takes a person to implement learned things into the organization. We can and must not de-humanize what's at the core of our humanity. If we were to do so, we are forced to reconsider the definition of what is human. Humanity would lose its uniqueness. In chapter 3 I wrote that I did not fully agree with Jarvis' distinction between human and organizational learning. Why is that?

The theory I hold is based on three levels of learning. The first level is individual learning, or the learning person as discussed in chapter 3. The second level is collective learning and the third level is organizational learning. The latter will be dealt with later, but I would like to focus on collective learning very shortly first.

It is one of the basic principles in sports teams. You can have the best players in the world in your team and still lose the match. You can also have a team of not-superstar-proportion players and become world champion. Teamwork is essential in collective learning. The next section will have a part on team learning as well, but my point here is that a collective can get better, more capable, without any real change to occur in the individual members of the team… The whole is more than the sum of its parts. This capacity change occurs without new things being implemented by members of the collective, but it still takes those members to change the capacity of the collective. Thus, the human part is essential also in collective learning, even if the learning does not occur in an individual within the collective. The edges between a person learning and a collective or organization learning are not as sharp as Jarvis says (2006). He makes an explicit distinction between human and organizational learning. It takes a member to have improved capacity (the member learned something) and then implementing that into the organization. I think organizations learn by proxy. This addition would make it possible to use learning to also refer to change in organizations

without de-humanizing what's at the core of humanity. The organization learns, or acquires improved capacity by proxy.

Peter Senge agrees with Jarvis that "organizations learn only through individuals who learn. Individual learning does not guarantee organizational learning. But without it no organizational learning occurs" (Senge, 2006 [1990], p. 129). The term, 'learning by proxy', I propose, also fits Senge's theory as we will see in the next section when we deal with that topic.

4.3. Peter Senge and the Fifth Discipline

Peter Senge is a learning organization specialist known for his not so academic, but highly influential and widely used book The Fifth Discipline: The Art and Practice of The Learning Organization (2006 [1990]). It's a book on what a learning organization demands to be able to learn and is often used by managers of commercial organizations as a tool to make the organization more efficient and more profitable. As the title of the book reads, for Senge, an organization needs five key elements to become a learning organization. In this section, I will discuss these five elements and show where and how they relate to the theories of learning I wrote about in chapter 3.

4.3.1. Personal Mastery

Earlier I wrote that learning is a lifelong path. It is what makes us human. We are constantly changing and becoming. Senge picks this up and gives it more depth in relation to self-development. In agreement with the constantly learning person, Senge argues, it is possible for the person to set targets. To have understanding of what is really important to us. When one can distinguish what is and what is not really important in one's life, one is able to create a desired path instead of just going with the flow. The person takes active control over the course of his or her life and thereby takes control over what he or she learns. Personal mastery means to strive to live in a continual learning mode and 'actively creating oneself endlessly'.

"Personal mastery is the phrase we use for the discipline of personal growth and learning. People with high levels of personal mastery are continually expanding their ability to create the results in life they truly seek. From their quest for continual learning comes the spirit of the learning organization. Personal mastery goes beyond competence and skill,, though it is grounded in competence and skill. It goes beyond spiritual unfolding or opening, although it requires spiritual growth. It means approaching one's life as a creative work, living life from a creative as opposed to reactive viewpoint." – (Senge, 2006 [1990], p. 131)

Senge distinguishes two movements in this discipline. One is about having clear what we want and what is important. The other is about having clear where we are right now. The philosophical pragmatist view kicks in here with a connection between past and future. For Senge, the difference between these two movements creates a 'creative tension'.

“The essence of personal mastery is learning how to generate and sustain creative tension in our lives. Learning in this context does not mean acquiring more information, but expanding the ability to produce the results we truly want in life. It is lifelong generative learning.” – (Senge, 2006 [1990], p. 132).

Illeris advised to seek mental resistance and accommodative and transformative learning, because these offer valuable learning chances (2009). Through these learning chances and a future oriented view, it is possible to keep up creative tension and through creative tension, one strives to constantly improve one’s life, on the work floor and in personal space. Supporting personal growth in an organization creates a vision beyond the self-interest of the person and that is one of the strongest driving forces available (Senge, 2006 [1990]).

4.3.2. Mental Models

Mental models, mental schema’s, frames of reference, they all come down to the same idea. I have already said a great deal about this. Senge writes:

“New insights fail to get put into practice because they conflict with deeply held internal images of how the world works, images that limit us to familiar ways of thinking and acting. That is why the discipline of managing mental models – surfacing, testing and improving our internal pictures of how the world works – promises to be a major breakthrough for building learning organizations.” – (Senge, 2006 [1990], p. 163)

As Mezirow (in Illeris, 2009) wrote, it is through critical reflection on assumptions and dialectical discourse that we could come to better reflective judgments. We can improve our mental models by being open for other points of view and critically reviewing our own and other people’s assumptions. Again, through raising and then overthrowing the barriers to learning (Illeris, 2009) we can create chances to improve our capacity and our mental models.

4.3.3. Shared Vision

This discipline builds forward on personal mastery. A shared vision is, according to Senge:

“Not an idea. It is not even an important idea such as freedom. It is, rather, a force in people’s hearts, a force of impressive power. It may be inspired by an idea, but once it goes

further – if it is compelling enough to acquire the support of more than one person – then it is no longer an abstraction. It is palpable. People begin to see it as if it exists. Few, if any, forces in human affairs are as powerful as shared vision." – (Senge, 2006 [1990], p. 192)

Where personal vision is the answer to the question 'what do I want to create?', shared vision is the answer to the question 'what do we want to create?'. It is not a shared vision if multiple individuals hold the same personal vision, just for themselves, as this could just be coincidence. Only if there is some kind of commitment to other individuals holding that same vision, it becomes a shared vision. It connects individuals in their passion for a common cause. I earlier mentioned the ant documentaries by David Attenborough. He shows that millions of individuals, biologically even as simple as ants, can rise far beyond what any ant could ever achieve by itself, through shared vision. Of course it's an instinctive version of shared vision that is not actively held, but it illustrates the thought of shared vision. This is the impact of being in the world with others.

4.3.4. Team Learning

What I wrote about in section 4.2, when a group functions as a whole, Senge calls alignment (2006 [1990]). He writes that when a team or collective becomes more aligned, it doesn't only share a vision, but also a direction. An unaligned team with superstar sportspersons can still lose a game against a highly aligned team with average sportspersons… Senge gives it this explanation:

"Team learning is the process of aligning and developing the capacity of a team to create the results its members truly desire. It builds on the discipline of developing shared vision. It also builds on personal mastery, for talented teams are made up of talented individuals. But shared vision and talent are not enough. The world is full of teams of talented individuals who share a vision for a while, yet fail to learn." – (Senge, 2006 [1990], p. 218-219)

One of the ways to achieve this, is yet again through open discourse to achieve the best reflective judgment in the age-old form of dialogue. It takes the conversation to a new level of depth through mutually trying to understand each others point of view instead of trying to convince the other of one's point of view as happens in most conversations today.

4.3.5. Systems Thinking

“There is something in all of us that loves to put together a puzzle, that loves to see the image of the whole emerge. The beauty of a person, or a flower, or a poem lies in seeing all of it. It is interesting that the words ‘whole’ and ‘health’ come from the same root (the Old English ‘hal’, as in ‘hale and hearty’). So it should come as no surprise that the unhealthiness of our world today is in direct proportion to our inability to see it as a whole.” – (Senge, 2006 [1990], p. 68)

The fifth discipline, according to Senge, is the cornerstone of the learning organization. It comes back in all four other disciplines and they only function to their full potential in combination with this fifth discipline.

“Systems thinking is a discipline for seeing wholes. It is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static snapshots. […]. Systems thinking is a sensibility for the subtle interconnectedness that gives living systems their unique character.” – (Senge, 2006 [1990], p. 68-69).

It doesn’t apply to organizations only. To fully understand climate change, we need to look further than a cold winter, a warm day in December or snow in the Moroccan desert. To fully understand terrorism, we need to look further than a radical ideology only. To fully understand our local economy, we need to look further than the resources our city, province or country has to offer and to understand our global economy, we need to look further than the Keynesian model. It is getting harder and harder to keep in track, not even mentioning to keep up with an ever changing and ever more complex world. The world changes so fast, reality has almost become ‘liquid’ (Bauman, 2000). To cope with this, systems thinking is getting more and more important.

“Systems thinking is a discipline for seeing the ‘structures’ that underlie complex situations, and for discerning high from low leverage change. That is, by seeing wholes we learn how to foster health. To do so, systems thinking offers a language that begins by reconstructing how we think.” – (Senge, 2006 [1990], p. 69)

Systems thinking offers a language that begins by reconstructing how we think. Senge’s main point is that we need a shift of mind. We need to change not what we think but how we think. We need to completely restructure our mental models, our frames of reference.

“I call systems thinking the fifth discipline because it is the conceptual cornerstone that underlies all of the five learning disciplines of this book. All are concerned with a shift of mind from seeing parts to seeing wholes, from seeing people as helpless reactors to seeing them as active participants in shaping their reality, from reacting to the present to creating the future.” – (Senge, 2006 [1990], p. 69)

Like Dewey, Senge sees the value of creating your own future. In the examples Senge gives in his book on organizations that learned, a philosophical pragmatist view comes up. Analyzing anticipatory scenario’s makes it possible to actively create a desirable future instead of just sitting and waiting for the future to pop up whether it is desirable or not…

Senge argues that most modern-day forecasting models and strategic plans are up to the task of dealing with ‘detail complexity’, that is, complexity with many variables on the short term. For the long term, there is, however, another kind of complexity that he calls ‘dynamic complexity’. This occurs when cause and effect are subtle or not even directly related. It is also active on the long term. Perhaps the best example of this is chaos theory and the butterfly effect as proposed by Edward Lorenz in which the flapping of the wings of a butterfly causes a tornado three weeks later (1963). Or as Senge describes it himself:

“When the same action has dramatically different effects in the short run and the long, there is dynamic complexity. Whan an action has one set of consequences locally and a very different set of consequences in another part of the system, there is dynamic complexity. When obvious interventions produce nonobvious consequences, there is dynamic complexity.” – (Senge, 2006 [1990], p. 71)

To solve these dynamically complex situations, we need systems thinking. It helps us to describe interrelationships, patterns of change and interconnectedness in a world that changes faster and faster (Senge, 2006 [1990]).

When an organization is capable of implementing these five disciplines combined with a future oriented approach, the organization is ready to learn, albeit by proxy.

4.3.6. Types of organizations

It is important to note that the concept of organization as used in the previous section was a broad concept. There are too many different types of organizations to discuss in depth here

and it would not benefit this study. This study is about the philosophy behind learning organizations. One can imagine that shared vision in an organization like Greenpeace or the WWF is present per definition. Some organizations exist by means of shared vision. A football club has more benefit from team learning than a bakery but the same bakery benefits more from personal mastery than an organization that produces screwdrivers on an assembly line. Each organization has its specific benefits from the five disciplines and also has its own barriers and grounds to conquer, but the idea behind the learning organization is more or less the same throughout organizations worldwide.

5. Conclusion

“The fact that learning is the single most significant element moulding our being suggests that all the different theories of learning should be able to be understood within a single comprehensive framework, […]. While all the theories can be fitted within this framework, the final conclusion to this study is that we do not know enough about human learning to be able to produce a single comprehensive theory. In fact, we might never know enough to be able to do this because, if we did, we would fully understand the mysteries of human functioning and even of life itself.” (Jarvis, 2006, p. xi-xii)

Let us hope the mysteries of life itself will forever be mysteries. Without it, we would end up with a very depressing kind of determinism. Anticipatory scenario’s are a good way to learn from possible futures, but if there’s nothing left to learn from those, we lose the drive to learn, we lose what’s at the core of our humanity. Perhaps we would even lose the drive to live… As the UNESCO Faure report states:

“Every individual must be in a position to keep learning throughout his life. The idea of lifelong education is the keystone to the learning society.” - (Faure, 1972, p. 181)

The idea of this study is to discuss the philosophy behind learning and the learning organization. Philosophy, as I have shown, is unquestionably of vital importance for the debate on the learning person. Questions asked for thousands of years still go unanswered, in biology, in psychology and in physiology. Philosophy, one might say, is the systems thinking that’s necessary to combat the complexity of the world we live in today and through that, is more alive than ever before.

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